
DETECTIVE DENDRO THE DIAGNOSTIC SLEUTH

By Guy Meilleur



The Case of the Gratified *Grandiflora*

Her rounded form was waving in the wind, dazzling me into submission. Her deep green, lustrous sheen pulled me helplessly toward her. I was lost in a tremulous trance. I had to experience oneness with this being, so I ardently ascended. Her long, spreading limbs enveloped me in their embrace as I thrust my way into her canopy. Through the layers of leathery emerald verdure, I glimpsed the Carolina blue sky. As I slithered farther out on her limbs, the delicious fragrance of the nectar glistening on her pure white flowers wafted up my nostrils and intoxicated my mind. I was hers—totally, completely, and not at all discreetly.

The ringing phone snapped me out of my reverie. It was a heavy-hearted call from a stressed-out Southern belle who told me her name was Lilly DuBois. Her anxiety adjusted my mood from rapture to action as she told me her tale of two southern magnolia trees. One was magnificent, but the other was getting suspiciously one-sided. I piled my gear into my oversized white pickup and toiled into the golf-course community. I really should wash this thing some day, I thought, as I parked the truck in front of her humble mansion across from the ninth fairway.

She poured my glass full of iced tea, then poured out the whole tragic tale. The pair of *Magnolia grandiflora* was planted in the 1940s with the dream that they would bring not only grand flowers but a solid, gleaming green canopy to grace the front yard.

In the early years, they grew toward fulfilling that vision—a pair of adolescent beauties that were the envy of the neighborhood. But some years later, just as they should have been delivering on that

promise, Ms. DuBois noticed that one of them started looking weak on the side away from its twin.

The change was subtle at first. The green in the leaves wasn't so deep and glossy, and their size was smaller. Then some leaves dropped, and barren twigs in the tips over the lawn began to show. Her yardman couldn't put his finger on the culprit. Her arborist had a hunch

about the perpetrator but had no plan to knock it out of commission. Each year, the magnolia looked a little worse, until she couldn't stand it any more. Driven to desperation, she finally called me, Detective Dendro.

I tested the trunk and climbed throughout the crown, searching for signs of some kind of disease or insect infestation. I assessed the soil to see whether it contained sufficient nutrients, air, and water. I poked around the outer roots, looking for fungal or drought damage, damage from trenching or compaction, and signs of silent, allelopathic battles with the turfgrass.

I finally looked where I should have looked first—and saw what was crimping this tree's style. A possum named Pogo had the answer, in a comic strip long ago.

What's the detective's diagnosis? See page 65 for the answer.



A gradual decline in the magnolia on the right, culminating in dropped leaves and barren twigs, prompted a call to Detective Dendro.



WHAT'S THE DIAGNOSIS?

Pogo said, "We have met the enemy, and he is us."

This magnolia's magnificence was being robbed by the stranglehold its own roots put on the trunk, squeezing hard enough to stop the circulation.



Circling roots were the culprit in this case.

I could see small roots lapping over buttress roots above the soil surface, so I swiftly solved that problem with my trusty loppers.

Next, it was time for a root collar examination. I shoveled away some soil and found deeper roots wrapped around the trunk. That's where things got real interesting—the squeeze was the tightest on the side that exhibited dieback in the top.

In past cases, I'd seen that oak branches are nourished by the roots right below them. Could it be that magnolias are also ring porous?

Some books say that you can do more harm than good by removing big, girdling roots. The tree needs roots for uptake, and it's hard to avoid wounding the trunk while removing those roots; therefore, some say it's best not to disturb them.

But the thought of this Southern belle spending the rest of her years watching her beloved magnolia slowly strangle itself was more than I could stand. I had to do something. But what?

I took a page out of the pruning book and figured that if I limited the amount of root pruning to 20 percent per visit I oughta be okay. First with chain saw, then handsaw, hand pruners, and finally with hammer and chisel I sliced out three root sections. My nerves were frazzled by the fear that I'd gouge the trunk or that the bark on the roots would be stuck to the bark on the trunk. Thankfully, the root sections came off clean with a "pop!"

I think I saw the trunk tissues gratefully swelling out as the circulation came back, but I mighta been imagining things. It had

been a long day. The next problem was, how could I tell what percentage I just took off? Branches you can see, but with roots it's a guessing game. I decided to call it quits before attacking the biggest girdler.

My plan is to come back in late winter to aerate, inoculate, fertilize, and mulch the soil in order to stimulate root function out around the drip line. Next fall, I'll return with the weapons and cut away some of the worst of the misguided roots that are putting the squeeze on my client's assets. Each year, I'll check to see that the roots don't get any funny ideas about growing back over the trunk. If they do, they're gonna get it good. After a while, I figure my Southern belle can watch her magnolia grow instead of dying a little each year.

Relief replaced the strain around her eyes as I told Ms. DuBois the plan. She told me to come back when the time was right, so I packed up my gear and drove the old pickup back across the tracks to my crib. I scrawled a reminder on the March page of my desk calendar to frazzle all the big roots on every tree that I ever plant, guiding them straight away from the trunk. I'd hate to see the next generation of Detective Dendros frazzling their nerves when they're forced to chisel girdling roots off a trunk just to stop a tree from strangling itself. Instead they should be coaxing the beauty out of trees—and making their clients' dreams come true.

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Photos courtesy of Guy Meilleur.