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Cover Photo:
Acer macrophyllum
(bigleaf maple) on the
Olympic Peninsula of
Washington State (U.S.).

Photo © Lee Rentz.

Your contributions to and comments about *Arborist News* are welcome. Please submit all materials to *Arborist News*, P.O. Box 3129, Champaign, IL 61826-3129.

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DETECTIVE DENDRO® THE DIAGNOSTIC SLEUTH

By Guy Meilleur

The Case of the Detectable Decline

The sound of the door slamming was followed by the thumping of boots. Codit entered the study and pointed to my headphones. “Hey Dendro, what-cha listening to? Is it true that Bach is best for reading comprehension?”

I set the book, pen, and clipboard on the table, pulled off the headphones, and clamped them over Codit’s ears.

His face crinkled with curiosity as he muttered the words he heard—“escape routes... treatments... arboriculture...”

“What’s better than Bach for reading comprehension?” I asked. “Try listening to a podcast on the topic, while you read about it! The next one in the Science of Arboriculture podcast archives is all about your favorite tree associates—fire ants!” Codit grimaced as he checked the welts on his wrists. I hit Pause, and lifted off the headphones. “We can hear the rest on the way to our next case.”

As Codit drove, I caught him up on the backstory. “I met Dagny Spirande while presenting to Master Gardeners four years ago. She had a deep appreciation for oak trees, as many Swedes do. Her questions on the structure of trunks were probing, and—well, she had a grand old oak that was hit by lightning, so I paid her a visit.

“Eyeballing the scar with my binoculars, I saw that it ended near the peak of the neighbor’s metal roof. Lower trunk and buttress undamaged, the oak seemed eminently worth conserving. The contractors that I referred said they had no problems with my specifications for sounding tests, bark tracing, and the lightning protection system, but I never did get back to see her—the tree, I mean...”

I blinked, and shook my head quickly to clear it. “Now her neighbor, who shares part of the trunk, sent her a report stating the tree should be removed. **Our job is to assess the tree, and review and respond to the report.**”

“Let me guess,” Codit turned to me, sardonically. “I do the aerial assessment, and you wear the white hat and point.”

“Something like that,” I laughed. “On a smaller assessment job, I’ll let you dictate a draft into your smartphone. According to Dagny’s e-mail, the neighbor’s arborist—I have a good idea who—noted ‘dieback in the upper crown, epicormic sprouting, limited rooting area, old age, and excessive pollen and acorn production. Wrong tree, wrong place. The only end to this mortality spiral is removal.’” I resumed the podcast for Codit, making time to mull over the conditions as I copied them onto our assessment form.

The podcast ended, so Codit switched on the jazz. “Diagnosing this oak’s decline will require deductive reasoning, pulling observations and analysis into a specified solution,” I added, “but enough speculation—back into that driveway, and we will see for ourselves.”

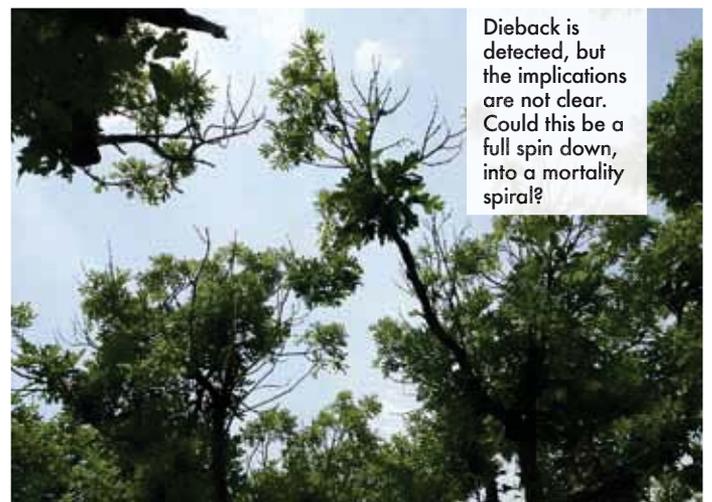
I hopped out and walked behind, confirming the coast was clear as Codit parked the car. He met me at the tailgate, looked up, and marveled as he grabbed his gear, “Wow, that tree sure is a beauty. I can’t wait to show you how it looks from above.”

“Me neither,” came a melodious voice from behind us. Dagny was not as tall or as brunette as I remembered, but the same air of amusement emanated from her. “That report caught me by surprise. I had no idea my tree had so many problems. I’d like to know your view, and the age of the tree.”

“You’ll get many views, Ms. Spirande,” Codit cinched his saddle and pointed upward. “I’ll ascend to that fork near the very summit to measure the height, then inspect these areas of concern. From the ground we can’t see the dieback with any detail.”

“Good plan, Codit—up you go.” I grabbed my binoculars and led Dagny to a better view of the crown, from the lounge chairs on the deck. “I love the way you have mulched your yard, and planted that stoloniferous groundcover to accompany your tree. It looks to be about 85 feet (25.9 m) tall. Size is so much more interesting than age, don’t you think?”

“Hmm... **your specifications on landscaping were easy to follow, but those dead branches in the top concern me,**” she replied, scowling



as she followed the jiggling green dot of my laser pointer. "There seem to be more this year. I thought that sprouts were good, but this report says they are signs the tree is in a mortality spiral."

"Not all sprouts are the same. Where they are grow may tell us why they grow—but we'll talk about that, and spirals, later," I assured her. The tape measure slid to the ground and I rose to retrieve it, but not fast enough. Dagny's limbs propelled her across the yard. "Under you," I called to Codit. She held the tape to the ground, nodded, and brought it back. I wished I had eight eyes as I watched her, and the tree, and Codit, breaking off dead twigs. He examined them closely as he pulled them apart. Codit then gripped the living branch around the sprouts with both his bare hands.

"How's it lookin' up there, limbwalker?"

There was a humming in my pocket. "Just fine," Codit said on the speakerphone. "I'll take pictures of these sprouts." He tapped his screen a few times. I opened Codit's e-mail and showed Dagny the image of the sprouting, as she showed me the tape. "87 feet (26.5 m)—taller than I imagined possible!" Her eyebrows raised. "May I sample a scalion from your garden, while you show me how you've carried out my specifications for root care?"

What kind of spiral is spinning around this veteran oak, and will our team get pulled down with it? Turn to page 60 for the solution.

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CORRECTION: Professional Affiliation

In the recently published series of articles under the title, "The Value of this Tree," we erroneously correlated a website to Landscape Economics, LLC. The website cited (www.treeandlandscapeappraisal.com) is neither the official web presence of Landscape Economics, LLC, nor of John A. Harris, the author of the article series, which the published text may have implied. To clarify, the website is a sponsor of the article series. The site is a free-to-use portal for the public as well as professionals to obtain information and advice regarding tree and landscape appraisal questions and concerns. We apologize and regret the error. **A•N**

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Arborcamp 2012

By **Florim Ajda, Arborcamp Association**

Arborcamp was created by a group of arborist tree climbers in eastern Switzerland in 2009. The creators of the concept had two goals: 1) to share knowledge and skills, and 2) to be a social, pleasurable event for everyone. The event has now developed into a platform for cultural exchange where arborists have the opportunity to share their perspectives on trees, climbing, and the environment. To further develop this idea, ten people have formed an association that organizes throughout the year to ensure a smooth operation.

What is Arborcamp?

Arborcamp is an event open to all arborist tree climbers, their families, and friends. The event is now approaching its fourth year and organizers look forward to welcoming new people with new ideas each year. In previous years, we had the chance to host arborists from Germany, Austria, Sweden, Italy, France, the UK, and even people from New Zealand who traveled thousands of miles to participate.

One of the concepts of Arborcamp is to enable its participants to design and create the content of the event. The basic structure of the event includes the following:

- Zip line. In previous years it stretched 120 m (394 ft) long.
- Climbing a tree (using Monkey Grips) up to 25–30 m (82–98 ft) high, the Monkey Grips make it possible for even non-climbers to climb productively (and imagine what arborists experience daily).

- A giant swing. One to three people can enjoy this at one time. This swing is a favorite among children as well as of the most experienced climbers.
- Several slacklines are made available.
- A children's park that includes a rope bridge, slackline, and a zip line.
- Treetop Café where guests can enjoy a coffee or tea with a bird's-eye view.

While Arborcamp is certainly a fun weekend filled with leisure activities, it is also an educational exchange. There are a number of workshops and presentations in both theoretical and practical formats. These workshops address issues regarding trees and nature, and the relationship between man and these two themes.

Presentations are conducted in German, French, and English, according to the presenters and the participants. By nighttime, participants enjoy the ambiance of the campfires and Swedish logs; the air is full with laughter and discussions.

Please look to our website to learn more and to view photos and videos (www.arborcamp.ch).

We look forward to meeting you this year in September in Bad Ramsach, in the city of Läuelfingen, Switzerland. Arborcamp runs from September 6 through September 8, 2012. **A•N**



WHAT'S THE SOLUTION?

I swallowed the last of the scallion and half-turned in the deck chair, one eye on the tree and one on Dagny. “The branch dieback is concentrated in the central leader, so it seems directly related to the lightning damage, which the report did not mention.”

Your tree has no epicormic sprouts, which typically arise between growth points, called nodes. These can indicate a strain, an intense demand on the tree system. The sprouts on the screen here arise at a node, next to a branch, where preformed buds lay dormant. This pattern of regrowth can go on indefinitely. Dr. Treevorkian’s report did not mention this.”

“No—so you can tell who wrote this! Some years there are more acorns than others, but last year was a bumper crop, and they complained about the noise on their metal roof. This report says the tree is in a panic to reproduce, another sign of this mortality spiral.” Her brows were knitted with worry. “Is death inevitable?”

“Many factors contribute to acorn production and tree decline, which creates the impression that it’s very complicated. But it is not!” I emphasized. “Treevorkian’s impressions are based on looking at the past, and jumping to the future. Such a reactive, one-way approach makes it hard to diagnose problems and prioritize solutions. We follow the ISA’s Best Management Practices on tree risk, systematically

examining the present biological state of organisms and ecosystems, then analyzing them in a multidirectional matrix. This approach reveals arboricultural escape routes for trees, out of decline spirals.”

“Dendro’s not so smart, we just heard that in the podcast,” Codit sauntered up sassily and slipped me a book on arboriculture. “Even spirals that seem inescapable can be slowed down. For instance, advanced basal decay, high winds, and overextended branches add to one such spiral. We can’t do away with the first two factors, but the third can change in a hurry, plus the possibility of propping, or other supplemental support. The matrix approach is more like real life, recognizing a number of causal combinations. These point to treatments that improve the tree’s condition, like managing the lightning damage and improving root health.”

My assistant really had been paying attention as he drove! I opened the book and read: “‘Old trees that are weak and dying back can be kept healthy and attractive for years by removing the weak-growing and dying limbs from the outside, especially the top. Remove weak and failing branches after leaves fall, so more resources can sink into the tree.’ No need to prune now; the dead ends are not large enough to hurt anything, in the unlikely event they should shed in one piece. They typically crumble from the tips.”

“The only person using the yard regularly is me, mitigating Treevorkian’s issue of limited root area by maintaining the mulch and plantings that you specified.” Dagny was looking relieved by our assessment. “As you told me at the time, that work is vital, considering

how the neighbors extended their house in their half I trust that I am safe under this canopy.” The time was right to wrap it up.

“I first heard of the decline spiral in a pathology class, way back when Codit was just a glow in his mother’s eye. Ecologists, and arborists like Dr. Treevorkian, exaggerate this trend as a “mortality spiral” for which they prescribe proactive euthanasia. But consider signs of adaptive growth and rejuvenation, like this interior sprouting, all around the crown, in tree time. Can you conceive that your tree may never grow beyond 87 feet, but that it is nowhere near death?”

Dagny leaned back in her chair and took it all in. “So my tree will grow upward no more.” Her eyes relaxed as she turned to me. “You know, my last name, Spirande, is Swedish for “sprouting.” As outer branches are shed and interior replacements arise, my tree is growing downward, as veteran oaks in Sweden do. Your report will describe this graceful and gradual aging, and dispel the myth of the mortality spiral.”

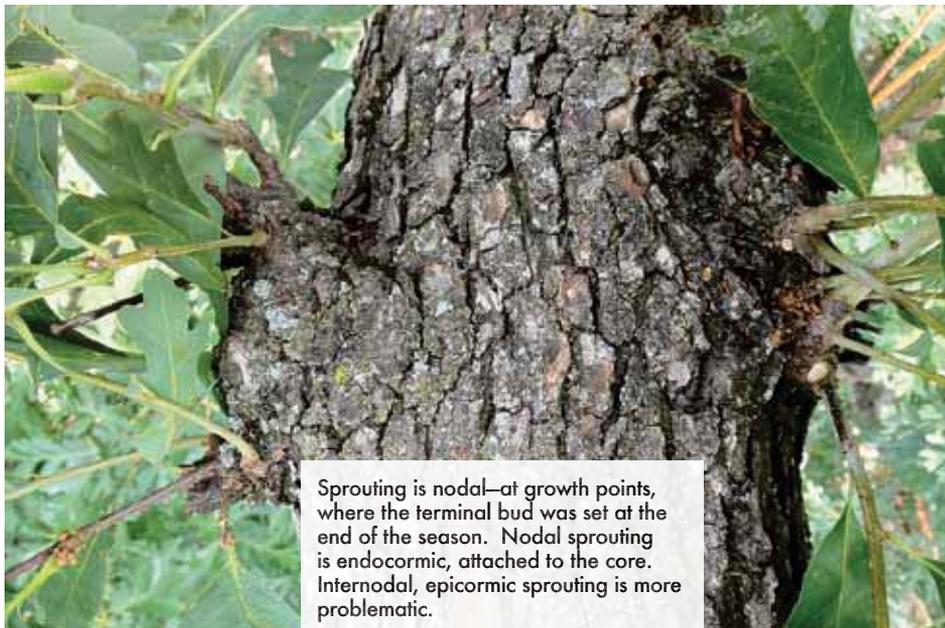
“Yes, ma’am!” I gushed, gratified by her grasp of the grand event slowly unfolding before us. I fell deeper into her eyes, at a rare loss for words.

Codit cleared his throat and stood up. “I guess I’ll sample some roots and soil, and get more pictures from different angles. We don’t want to ‘myth’ anything!”

Additional Reading

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Guy Meilleur is a practicing arborist and aerial consultant with HistoricTreeCare.com.



Sprouting is nodal—at growth points, where the terminal bud was set at the end of the season. Nodal sprouting is endocormic, attached to the core. Internodal, epicormic sprouting is more problematic.