Disposable Landscapes

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As a researcher and occasional teacher of tree biology and care, I've seen the landscape and tree care industry recently explode with how-to guides, commercial workshops, and proprietary products. These new products and services are superimposed over the folklore and tradition of old-time tree care. Some tree-care professionals jump onto the latest article or tradeshow demonstration as "the thing" while others work proudly within the boundaries of what dad or granddad did.

Whether we are a traditionalist or on the cutting edge of landscape care, we need to take a deep breath and think about what we are trying to achieve, before we select a specific treatment or practice for tree care. We should measure that treatment or practice against what we know about the tree system. I say "system" because the recent years of Modern Arboriculture (Shigo 1991) have demonstrated the value of seeing trees as responsive, integrated organisms and landscapes as living communities. To pick a few common treatments and practices, what are we trying to achieve when we plant, fertilize, or apply pesticides? A glib yet honest answer might be "to make some money and stay in business". That's fair, but do we view our business as supplying short-term fixes or as investments towards future veteran trees in keystone landscapes that will be cherished as future treasures? Most of us can be responsible for some of each.

There is plenty of responsibility to share, from the propagation of sound nursery stock to sustainable landscape design, implementation, maintenance, and renewal. Many of the real problems in tree care result from simply not being responsive to the biological needs of trees and landscapes.

These are not just abstractions! I continue to see fast-growing, potentially tall trees planted beneath overhead utility lines (Figure 1) and immediately next to buildings. Are trees being planted in inappropriate places with the intention that they will be removed and replaced in a few years, like out-of-style lawn furniture? Given the short service life reported for most urban and community trees, maybe that is only realistic. But we should be clear with clients and ourselves if that is what we want to do!

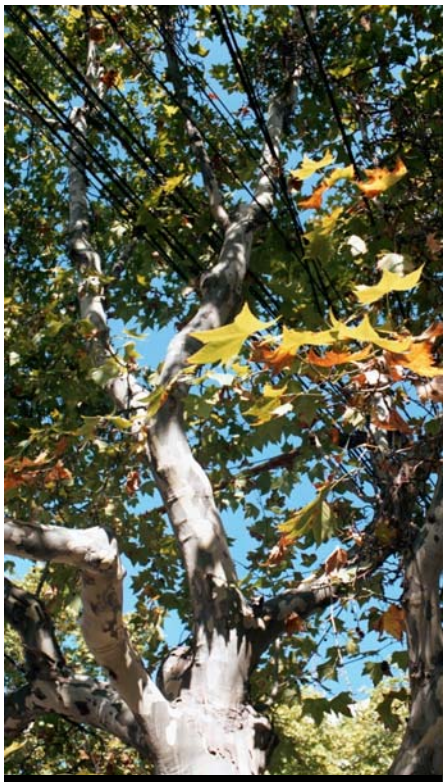

Figure 1. Branches growing into overhead lines

Growth in diameter as well as height can be a problem, particularly when stem guards or grates are used. The attactiveness of the grate is lost as it girdles the tree and supports the infection of wood-decay fungi (Figure 2). What were the landscape designers and installers thinking? This style of grate was not designed for easy removal, particularly not without harming the tree. Was this planting designed to be replaced after a few years of tree growth?

A current hot topic in arboriculture is when and how to support newly planted trees. Based on my own simple observations, more trees sustain lasting damage from inappropriate supports being left on far too long than by lack of support. I imagine that the installers

Figure 2. Decay fungus on trunk injured by "protective" grate

Figure 3. Scarring from "wire-in-hose

expected that the maintenance crew would remove the "traditional wire-in-hose" support well before the stem was injured, but this type of scarring is still commonplace (Figure 3). Other types of supports such as eye screws and aircraft cable (Figure 4) may not pose a risk of girdling, but are even more difficult to understand. This entire city block was lined with young trees and these attachments that appear to be better-suited to discourage theft than to keep the stem upright and stable. The diamond-shaped washers increase the risk of stem cracks and the heavy hardware will prevent wound closure and promote decay.

Sometimes, the story is one of failed opportunities and communication. Although trees can be protected at construction sites, these pines (Figure 5) were simply left unprotected. Left to die in the newly installed hardscape only increases the risk of structural failure and increases the cost of their certain removal.

In some ways, the examples above are the easy and obvious ones. A landcare professional may easily think or say "I'd never do that!" Unfortunately, disregarding the tree system is also possible in more hidden ways. Over-fertilization of trees can reduce the frequency and effectiveness of mycorrhizae and beneficial microorganisms in the soil, making trees more sensitive to drought, element deficiency and toxicity, and disease. Over-reliance on some chemical insecticides can quickly promote pesticide-resistant pests. Other insecticides may promote damaging mite infestations by eradicating the natural predators.

The proliferation of training aids and products is likely a good thing. The "how-to" prescriptions still require that those who design, install, and maintain landscapes to decide whether they are working for disposable and long-term landscapes.

Reference

Shigo, Alex. L. 1991. Modern Arboriculture. Shigo and Trees, Associates.
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Figure 4. Heavy hardware on young tree

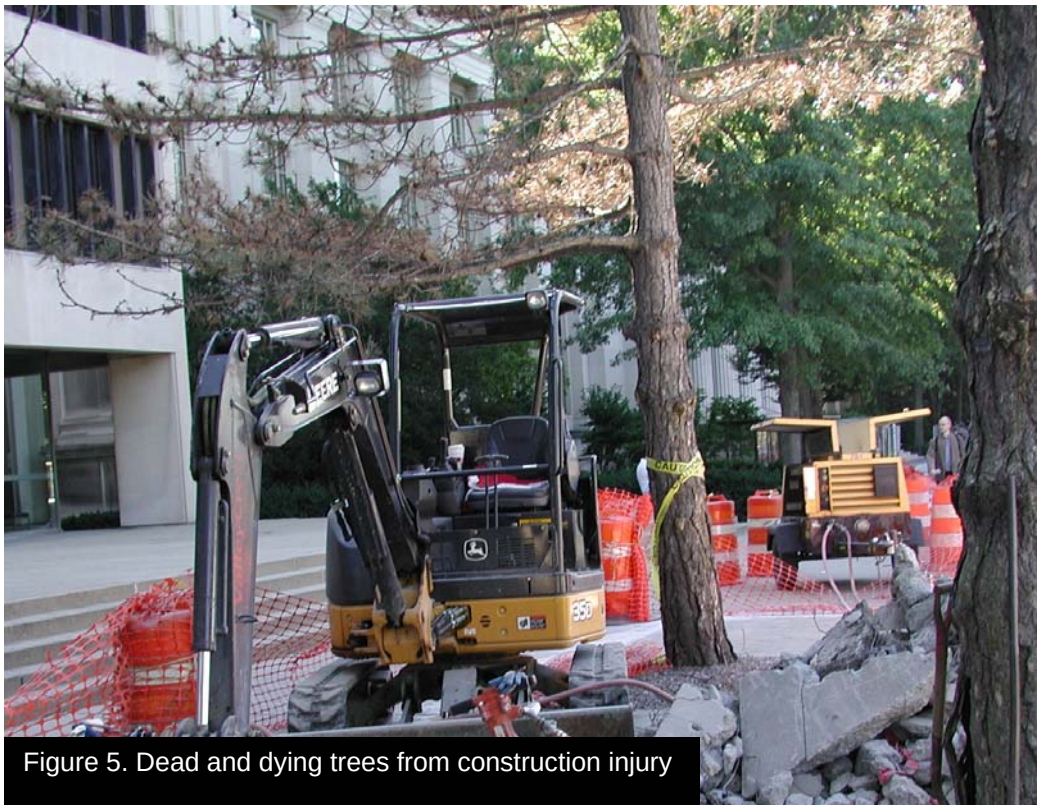

Figure 5. Dead and dying trees from construction injury

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