

Hope is a Tree, Part 3. The Urban Forest, Appendix

Six key observations for City Administrators tasked with managing their town's Urban Forest

Alan Siewert, long-time Urban Forester with the ODNR Division of Forestry, didn't mince words when expressing his views on the critical points City Administrators and Arborists need to keep in mind when carrying out their responsibilities for maintaining the town's "green infrastructure." Boiled down into Siewert's Six Theorems of Urban Forestry, they are:

1. Trees are not native to the urban environment.
2. As roots go, so goes the top.
3. Transplanting is not a natural process.
4. Relative time for trees is significantly different—slower—than relative time for humans.
5. Arboriculture is counter-intuitive.
6. The pest that causes the most damage to urban trees is humans.

All of the trees we typically like to see gracing the streets of our cities and towns evolved in forested environments where competition for light (for photosynthesis) was the limiting factor. As such, a typical maple, oak, elm or pine would grow with a straight trunk and few side branches in order to reach the canopy.

But in an urban setting, competition for light is replaced by competition for factors limiting root growth. Compaction of the soil and reduction of an open surface above the roots by sidewalks and streets, and even competition for water with grass, often means that poorly situated trees are destined to fail without routine mulching to replace natural annual leaf fall and periodic pruning to remove excess side branches.

So, the maintenance of a healthy urban forest begins with maintenance of its trees' root systems. And that begins with knowledgeable planting of new trees. Most urban trees begin life as seedlings in professional nurseries. But transplanting a young sapling is not a simple task; it's tantamount to major surgery. For example, only 10-30% of a tree's roots are typically captured in the root ball prepared by the nursery when readying it for transport to its new home.

Thus, the process of planting needs to be carried out by trained personnel with intimate knowledge of all the details for both the planting itself, and appropriate care for the new tree over the next several years.

A reasonably well-tended city tree can expect a life time comparable to your own—70 to 80 years or so. But within that time frame, it will suffer the "slings and arrows of outrageous fortune" a lot more slowly than we do. The demise of a seemingly thriving sugar maple in front of the house, for example, may have stemmed from the cutting of its roots five years ago when the city replaced the sidewalk.

The bottom line is that caring for a city's trees requires trained professionals who are up on current arboricultural practices. A lot of our old ideas about what's good for a tree have had to be

left behind as new research has enriched our knowledge base. For example, it's now understood that it's almost always a bad idea to fertilize a tree (unless you have proof of the soil's insufficiency of some nutrient). And it is usually counter-productive to paint over a wound with tar after pruning a branch,

OK, Siewert's last Theorem is a bit harsh. But his point is not that the average citizen is a problem, but simply that, by and large, most of us are simply ignorant of the function, growth habits and needs of the trees with which we share our towns.

However, across Ohio, municipal officials are coming to more fully understand the benefits to their communities of a healthy urban forest, and the necessary investments to develop an educated workforce to maintain those benefits.

It's worth remembering that trees are the only component of a city's infrastructure that increase in value with age.