

Theorem. Def.: an idea that is demonstrably true or is assumed to be so.

Siewert's Theorems of Urban Forestry.

Siewert's 1st Theorem:

Trees are not native to the urban environment.

Implication: The environmental factors which influenced the growth, development and function of a tree, principally light and the competition for light, are not present in the typical environment which we put urban trees. In the urban environment light is replaced as the limiting factor for tree growth and development by soil and root growth factors. Soil compaction, grass competition, poor soil nutrition, lack of organic matter and soil biotic activity and the basic reduction of root volume by the street and sidewalk are the factors that limit the growth and development of trees in the urban environment. Yet the trees we plant here have had millions of years of evolution to allow them to compete successfully in a light limited environment not a root limited one.

Hence: they are "Off Sight" or "Non-Native" and are predisposed to stress and destined to fail without the artificial replacement of the factors they have been designed to grow in. i.e. routine pruning to replace the natural light competition and shedding of branches and mulching to replace the natural annual leaf fall.

Siewert's 2nd Theorem:

As the roots go so goes the tree.

Implication: If the root system of a tree is kept healthy and functioning, the tree can be manipulated, pruned or trained, and the tree will continue to function within reason. Furthermore if the root system is kept healthy and functioning, the tree will be less susceptible, and even more resistant, to stresses and attacks. An important note to Siewert's 2nd is it does not apply to the top of the tree, the branches, trunk leaves, etc. If the top of the tree is kept healthy it does not necessarily mean the tree will be healthy.

Hence: maintenance of tree health begins with the maintenance of the root system.

Siewert's 3rd Theorem:

Transplanting is not a natural process.

"If God meant trees to be moved he would have given them wheels not roots."-anonymous

Implication: Tree seedlings **do not** go through a two stage development process in which for the first 5 years of life they grow dense short fibrous roots then after a violent geotropic disorientation and reorientation begin to expand and seek good stable growing conditions. If they did, transplanting would be simple.

Hence: Transplanting is major surgery, and as such it needs to be done correctly by qualified people with all of the small details looked after. The trees also need postoperative care.

Siewert's 4th Theorem:

Relative time for tree is significantly different than relative time humans.

Siewert's Last Theorem:

The pests that caused the most damage to urban trees are humans

Implication: The average person residing in a community is extrordanlry ignorant of the function, growth habit or needs of a tree in the urban environment. When combined with Siewert's First theorem we in the Arboriculture industry get lots of call about dead trees. We also have lots of "Stupid Human Tricks" stories.

Hence: Tree diagnosis basically involves telling people they are idiots and having them thank you for it. Often arborists find the experience less then fulfilling because of an enthusiastic approach in the first stage involving a great deal of personal gratification and over whelming demonstration of the homeowners shortfalls. This usually leads to the failure of the homeowner to complete the transaction with graduated and go to plan B which is to assume the arborist is the idiot and throw them off the property and call the competition.