



## *Tree Species Diversity in Alamosa: What and Why?*

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I thought about tree species diversity -- the variety and abundance of different types of trees that inhabit an area -- as I walked around Alamosa recently. We don't have a lot. Then Joel Kaufman asked me if I'd heard the recent National Public Radio article on the 42,000 London Plane trees that are being felled along France's historic Canal du Midi and I decided it was time to write about the issue.

The Canal du Midi is a 150-mile long canal built by King Louis 14<sup>th</sup> (of Versailles fame) in the late 1600's, well before the day of mechanized equipment. The plane trees were planted nearly 150 years later in 1830's. The leafy branches of the huge trees towered above both banks and arched across the water creating a dense, cool canopy in this warm region enjoyed by today's canal tourists. The canal, a marvel of engineering so long ago, helped cargo cross from the Atlantic to the Mediterranean without encountering the terrors of pirates along the Spanish and Portuguese coasts.

Five years ago, French agronomist Andre Vigouroux noticed a fungus that turns out to be lethal with no known remedy. The fungus has been traced to munitions boxes American soldiers brought over to Italy in World War II, which were made from North American plane trees, according to Vigouroux. The fungus is now spreading rapidly. Just a small scratch on a tree that comes in contact with canal water through boats tying up or leaves from infected trees touching non-infected tree leaves can spread the fungus.

Newport, Rhode Island, is losing their wonderful European beeches that dominate the landscape of elegant mansions and charming streets. Mostly planted in the town's gilded age about 120 years ago, the aging trees' demise has been hastened in that last two decades due to disease. Herculean efforts to treat the trees are only slowing the dying process a bit.

Since 2002, tens of millions of ash trees in the northern eastern United States and Eastern Canada have succumbed to Emerald ash borer. This is a lot of trees in a very short time! The borer probably arrived in the US on solid wood packing material carried in cargo ships or airplanes originating in its native Asia, according to the EAB site which is a collaboration of 15 states and two Canadian provinces.

Planting a variety of tree species in an area can help mitigate such devastation. For example, if the plane trees in France had been interspersed with other species direct infection by a neighbor tree would be less likely. And if a particular species dies off that represents only a small percentage of the forest population, the entire forest isn't devastated.

Alamosa, fortunately, has not been hit by a deadly arboreal pest or disease. More than 50% of our trees are Chinese Elms or crabapples. As stated in previous articles, many of our downtown elms were planted in the 1930's and are coming to the end of their life spans.

Good species diversity is a common measure of community forest health. I've heard that no single tree species should make up more than 10% of a community forest (I haven't been able to confirm the percentage). I do think we're out of balance with only two species accounting for more than half our trees.

Our downtown also has a lot of aging boxelders (some boxelder species are prohibited in many cities due to their susceptibility to box elder beetles and brittle branches that are prone to break in high winds), blue spruce, and willow.

We need to mix this up a bit. Alamosa's environment is a challenge so our tree palette is not as extensive as cities such as Denver. However, there are options. In the last three years, the City and Tree Board have planted a variety of species including New Horizon elms (which are felt to be Dutch Elm Disease resistant), Autumn Blaze maples, various species of ash (so far the Emerald Ash Borer hasn't been found in our area), Bur Oak, Canadian cherry, and Shade Master Honeylocust.

Our three local tree purveyors: Green Spot, North River Greenhouse, and La Garita Nursery carry a good variety. Also, check out the tree lists at [AlamosaTrees.net](http://AlamosaTrees.net). Colorado State Forester Keith Wood suggests knowing where the trees you buy come from. Ask! Wood warns that some lots of trees brought in from Asia have shown to be more diseased.

The point of this article isn't to scare people away from planting new trees. Rather, foresters have learned a lot in the last 20 years and we can apply this knowledge to create and sustain a beautiful, healthy Alamosa community forest.

“To plant trees is to give body and life to one's dreams of a better world. “ Russell Page