

Tree E-News
Colorado State Forest Service
December 2013

Urban and Community Forestry

American Tree Disasters: Prior to the arrival of Emerald Ash borer to the United States in 2002, there were two other notable American tree disasters. The first was the Chestnut Blight fungus introduced into the United States in 1904 from Japanese and Chinese chestnuts planted in New York City. This fungus canker killed the cambium and phloem of the native American chestnut, the dominant tree in the forests of the eastern United States. The nuts produced by these trees were an important food source for humans and domestic and wild animals. The lumber from chestnuts is light, strong, and extremely resistant to wood rotting organisms and it is estimated that by the 1940's, three and a half billion chestnuts had succumbed to the blight fungus. The American Chestnut Foundation is currently working hard to develop a Chestnut Blight fungus resistant tree and is making progress toward the reintroduction of the American chestnut to its native environment.

The second tree disaster was the Dutch Elm Disease (DED) fungus, which was first discovered on American elms in Cleveland in 1930. Unpeeled elm veneer logs from Europe were the suspected source of the fungus inoculum into the U.S. Two elm bark beetle vectors were responsible for moving the fungus from elm to elm. This fungus killed trees by initiating the plugging of the tree's water conducting sapwood. Like the chestnut, the elm wood was useful for lumber to make furniture and flooring. However, the most important use of the American elm was for landscaping. The distinctive vase-shaped form of this tree made it the preferred choice for planting along streets. This tree had the reputation for being the "perfect street tree" and was overplanted in many cities. The American elm had a much wider growing range than the American chestnut, and was planted in cities throughout the Midwest and Rocky Mountain states. Front range Colorado cities lost thousands of American elms to the DED fungus in the 70's and 80's. Researchers also started projects to locate DED resistant elms. Today, there are numerous hybrids and other true American elms available for urban tree planting that are resistant. Here are some examples: Valley Forge, New Harmony, Accolade, Independence, Cathedral, Frontier, Pioneer, Prospector, Homestead, New Horizon, Regal, Patriot and Princeton.



On September 23rd of this year, Emerald Ash Borer (EAB) was positively identified in Boulder, Colorado. Like Chestnut Blight and DED, EAB is a tree killer. Emerald Ash Borer adults feed on the foliage of ash and the female lays her eggs in the crevices of ash trees. The young larvae girdle the ash by feeding on the phloem and outer sapwood. All ash species, which includes white, green, and black are susceptible. The Colorado Department of Agriculture (CDA) has instituted a quarantine zone around Boulder County hoping to contain the insect. Movement on ash (i.e., *Fraxinus* species) from the quarantined area can only be done with proper treatment and compliance under the agreement with the CDA/APHIS. The CDA has set up a very informative website to raise the level of EAB awareness in Colorado: http://www.colorado.gov/cs/Satellite/ag_Plants/CBON/1251646251641

Over planting of any tree species creates monocultures in our community forests, which are then vulnerable to tree pest outbreaks. Planting and promoting tree species DIVERSITY protects the urban forest from the effects of invasive pests.

Important Dates

- December 31, 2013 is the deadline for submitting Tree City USA applications.
- February 11 – 14, 2014: ProGreen EXPO in Denver, Colorado. This annual gathering of the green industry will feature Dr. Ed Gilman and Joseph Murray, two nationally known tree speakers.