

Barb Boysen, Forest Gene Conservation Association

Aug 19 Response to following article



Right plant, right place

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There are many interesting points in DiGiovanni's article, and I respond to 'several excerpts' in detail below. To sum up though it appears to be a plea to sell more of whatever some growers decide to produce, especially Norway Maples. Thankfully other growers are starting to respond to consumers, from individual people to planners, who are responsible for our future urban forests and are increasingly setting long term objectives based on health and locally adapted diversity. They are recognizing the need to be good neighbours to our natural forests – the forests and their services that are increasingly important in our climate change threatened future.

"These are native-only planting policies, seed zone restrictions and banning certain trees because of their "invasive" qualities. In my view these ideas and policies are costing the public millions of dollars in failed landscapes."

The same argument can be made for many landscaping projects with exotic species. There is huge need to improve all urban tree planting efforts from site selection and amendment to species and seed source matching to tending and more tending.

"They [native-only planting policies etc.] are also causing serious damage to the environment and reducing bio-diversity."

This is an extremely serious statement – it requires facts be produced to prove it. Actually there are facts that support this assertion, but as the result of the overplanting of exotics, reduced diversity via clones of exotics, and especially invasive exotics.

"The Norway maple debate"

The very poetic picture painted by Tony of Norway maples along the highway can be painted for any tree species that can tolerate such conditions. Due to Norway's' extreme over planting to date and its invasiveness in neighboring natural areas, it is past time to explore other species for these sites, as well as improve such sites with site amelioration, and quality operations from planting to tending. It is also past time for people to realize that they are creating non-tree sites.

"The emerald ash borer is taking an overwhelming toll on the ubiquitous ash tree."

This statement is misleading and out of context. Yes ash was overplanted after the loss of elm, also overplanted, but both are eclipsed by Norway maple's dominance in the urban forests which has created a huge vulnerability to the very real threat from the Asian Long Horned Beetle.

Many native trees do not do well in unnatural conditions found in the urban environment.

And many native species can do well. In southern Ontario there is a great diversity of species and it is again past time to explore native species that have not been tried. We have relied too much on a few exotics which are made up of an extremely narrow genetic base of clones and cultivars. These species were provided by an industry with no plans or objectives for overall urban forest health and long term benefits. This vulnerable exotic forest also creates barriers in the continuum from urban to rural forests and natural evolutionary processes - the latter increasingly necessary to help us adapt to climate change.

"It is time to reconsider the policies that discriminate against trees that deserve to adorn our landscapes. All trees have their place; native or not, invasive or not. It depends on the site and the context. We need to increase diversity in our urban forest. More importantly we need to plant trees that survive."

These statements, apart from the invasive argument, are very true – but only in the context of how the policies will help meet the objectives that have been established for an urban forest and its effects on the neighbouring native forests. And again if we start to really respect what site conditions a tree needs to survive and thrive in, not just slowly die in.

"Seed zone restrictions Another policy that does not make sense to me is "seed zones." The idea is that only plants propagated from a specific seed zone should be planted within that zone. Perhaps this makes sense in forestry, but it is difficult to see the benefit in an urban setting especially when most of the plants have come from other locations. I would love to see the science supporting this approach. Let's start the debate."

The Seed Zone approach is based on centuries old science supported by very new science that highlights the importance of seed source, and describes how a species can be made of up populations that are genetically adapted to different conditions – in climate and in some cases sites/soils. Unfortunately, for most species we do not know

how far any one population can be moved without suffering from poor growth and resulting insect and disease effects or effects on flowering and seed set. Humans have experimented widely and had wide ranging results. When in doubt look to what has thrived locally over many years. Every so many years in southern Ontario there will be a normal if infrequent, severe winter that will result in damage to exotic species such as Japanese maples or magnolias. Lack of attention to seed source is just one of many reasons why the average life of an urban tree can be so very, very short – just years, not the many decades most trees can thrive. The Asian Long Horned beetle's initial effects in Toronto were not noticed for years – have we gotten too used to seeing half dead urban trees?

Seed zones are a tool that helps describe our climate so you can judge what risk you want to take. But it relies on growers knowing the source of the material they are selling, and telling you so you can judge the risk. It's your money, your objectives for the tree and site, your attention and labour to plant and tend an unfit tree versus a fit tree.

Climate change does not change the importance of seed source – it actually heightens the need to know it, so we can be strategic about movement of trees – possibly, in fact likely, beyond current seed zone boundaries.

The other aspect we need to address to adapt to climate change is diversity. Many exotic species sold are made up of a narrow range of clones based on controlling aesthetic qualities – colour, shape, size. Strategic use of diversity though is what will save us. Planting a wide suite of native species each with a diverse makeup of hundreds or more unique individuals will help ensure that even though some trees die the species will survive, or if one species dies the forest, urban and rural will live on.

“The horticulture industry is based on spreading plants as far as they can go.”

This is an objective based on sales and special interests. For anyone responsible for managing a forest – urban or rural, on a decades-long horizon, it makes no sense economically or ecologically.

But increasingly and fortunately people are managing urban trees as an urban forest and recognizing the links to rural forests. A healthy urban forest can provide services that will help the rural forest; a poorly planned urban forest can place big pressures on it. The planting of Norway Maples alongside ravines, streams, forests and farms has resulted in this invasive species becoming established and threatening the local plant and tree diversity and even soil stability.

Anyone contemplating planting a tree in any landscape has a big challenge these days. It is a complex undertaking – from looking at the depth, fertility and drainage of soils; the potential pressures of heat, drought and pollution, and insect and disease effects; a species suitability to those conditions; the seed source's suitability to the local climate and the one projected to be here in 20, 40, 60 years' time. The effects can be far reaching but hopefully beneficial - in time and space; beauty and shade and wildlife habitat for many decades in your yard, in your neighbourhood. And a supportive link via pollen and seed to the forests beyond in space and time.

Dare to demand better sites and practices so planted trees can thrive for decades.

Dare to investigate native species:

- learn their needs and strengths;*
- ask growers to supply them;*
- ask about seed source and ask the FGCA to help you determine what sources to try (www.fgca.net)*

Dare to plant no more Norway Maples – seriously, they've had their time in Ontario and it wasn't great.
