I am a gardener at heart and I’ve had many opportunities over the years to indulge my passion for plants. I also am not a purist when it comes to the use of natives in developed landscapes, since I believe there is a difference between restoration and landscape plantings. The various landscapes I’ve had the opportunity to play in have combined plants from diverse regions of the state, when I can meet their microclimate and habitat needs effectively and when using them seems to make sense in order to achieve a landscape goal. Sometimes, increasing habitat diversity and wildlife habitat value means adding species that would not normally exist in the same ecosystem. If such an approach does not require a concomitant need to water, fertilize or “fuss” more, I see that as a gain. Thus, I have added strictly north and south Florida natives to landscapes in my central Florida home, in Pinellas County, since 1987.

Pinellas County is an ideal location to experiment with a diversity of Florida natives as it, in many ways, is a microcosm of the state. As a peninsula that juts out into the Gulf of Mexico, climate near the coast is ameliorated by warm water. The south end of Pinellas contains elements of south Florida flora; white stopper (Eugenia axillaris), sea grape (Coccoloba uvifera), saffron plum (Sideroxylon celastrinum), and gumbo limbo (Bursera simaruba) to name a few. At the south end of Pinellas, mangroves achieve their typical stature and many south Florida natives are incorporated into landscapes. At the north end, mangroves typically freeze to the ground with regularity and salt marsh is found more regularly than mangrove forest. The typical low temperatures near the coast are often higher by several degrees than seen 10-20 miles inland, 3-4 counties south of us.

My greatest playground has been the Pinellas County Cooperative Extension office in Largo, where, since 1990, I have worked on the native plant collection. This has allowed me to experiment with a wide variety of plants and has provided a place to show the public what these plants look like “in the bark.” More than 160 species of woody natives have been incorporated into this landscape, growing together in an area of about 30 acres, and this includes a small area of native trees and shrubs that are typically considered south Florida species.

Because all of the plants are in the same general area, it is easy to evaluate their relative growing needs – including their tolerance of cold. Over the last several decades, this collection of plants has experienced temperatures below freezing. Most significant were the two consecutive winters of 2009/10 and 2010/11, when extended periods of freezing temperatures regularly dipped for hours to about 26°F. What followed in the months after was an ideal opportunity to compare the responses of many semi-tropical species growing side-by-side under the same conditions. The data set on page 10 may be valuable to homeowners and landscapers interested in pushing a few of these species outside their typical range in developed landscapes. It is definitely not intended to be used to extend their use in natural areas outside their native range.

For simplicity, I have lumped plant responses into just a few broad categories. Some are obvious. Plants that died never recovered in the months following the coldest weather (i.e. 26°F). This list included species native to Pinellas County. A few species did not die immediately and some tried valiantly to recover, but in the intervening months they declined and...

MODERATE DAMAGE: Long Key locustberry (Byrsonima lucida)
NO DAMAGE: Black ironwood (Krugiodendron ferreum)

SEVERE DAMAGE: Pond apple (Annona glabra)

LIGHT DAMAGE: Marlberry (Ardisia escallonioides)

LIGHT DAMAGE: Limber caper (Capparis flexuosa)

NO DAMAGE: Cinnamon bark (Canella winterana)

LIGHT DAMAGE: Bitterbush (Picramnia pentandra)
passed to the great beyond. Plants that showed no sign of damage were also obvious. Such plants did not drop leaves or show leaf scorching; if they were blooming or in fruit, like wild cinnamon (*Canella winterana*), they kept right at it without any bud or fruit drop. Intermediate categories were a bit more subjective. Plants with light damage showed some evidence of leaf scorching and new growth was often killed at the tips of branches, though the body of the plant was visually unaffected. Moderate damage occurred when medium branches were killed back to the primary stems. Severe damage was assessed if the plant was nearly killed to the ground, leaving only a small portion of the main trunk which recovered in the following months. The photographs which accompany this article depict the various categories I have used, showing typical damage.

Of course, cold damage will depend on a variety of factors that will change depending on specific location and the genetics of the plants. A northern exposure will increase cold damage and protection from the wind, regardless of exposure, will decrease it. The value of the data is that it came from one landscape under the same general conditions. The responses observed have been similar over a number of winters with freezing temperatures in the past two decades. Individual plants of the same species can show different responses as well. Of three red berry stoppers, planted next to each other, one has consistently lost its outer branch tips during the coldest temperatures, while the other two have had very little noticeable damage. Of two red stoppers, one had little damage while the second lost all of its side branches, nearly to the trunk.

We must give consideration to the cold hardiness of the plants we decide to use in our landscapes. Global climate change does not mean we will not experience atypically cold winters in the future. That concept seems to be lost here in Pinellas where so many cold sensitive plants are being installed – both native and non-native – with the idea that this practice is now acceptable due to “global warming.”

Although this landscape has not seen truly cold temperatures since it was first installed, chances are it will someday see a winter like the one of 1987/88 when temperatures dropped into the high ‘teens. If your site rarely experiences freezes below the mid-20’s, this data may be of value to you. Good luck with your landscape.

**About the Author**

Craig Huegel has a Ph.D. in Animal Ecology from Iowa State University. His interests include exploring the concept of creating habitat in developed landscapes. Craig is the author two books on Florida’s native plants – *Native Wildflowers and Other Ground Covers for Florida Landscapes* and *Native Plant Landscaping for Florida Wildlife*, published by the University Press of Florida.
The purpose of the Florida Native Plant Society is to conserve, preserve, and restore the native plants and native plant communities of Florida.

Official definition of native plant:
For most purposes, the phrase Florida native plant refers to those species occurring within the state boundaries prior to European contact, according to the best available scientific and historical documentation. More specifically, it includes those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape.

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