

A QUIXOTIC GARDENER

Trying to Grow Palms Outdoors an Hour's Drive From Lake Superior

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Foolish or bold? Bravely attacking the seemingly insurmountable challenge of windmill palms surviving outdoors in northern Wisconsin, or ignoring expert advice and wasting time, money, and energy in a futile endeavor? You decide.

What could possibly have steered me into experimenting with palms this far north? Well, two things. First, it has been reported in the horticultural literature that certain palms, of several genera, have survived temperatures well below 0°F (-18°C). Secondly, our winter-long snow cover acts as an insulating blanket, allowing plants from many hardiness zones southwards to overwinter here. For instance, Florida yew (*Taxus floridana*), native only to the state of Florida, has thrived here for decades.

Of course, I never expected palm trees to grow here, only those that are low-growing, or which stay that way for a long time were considered as standing a chance. If this topic intrigues you, I suggest reading David Franko's book *Palms Won't Grow Here and Other Myths*, in which he discusses growing several kinds of palms successfully in Ohio.

Even if palmettoes won't survive here, there are always the two species of eastern yuccas, *Yucca flaccida* and *Y. filamentosa*, which resemble these fan palms but are fully hardy here in USDA Zone 4a (formerly 3b). However, western species of yucca (except for *Yucca glauca*) and agaves, even though they are hardy far below 0°F (-18°C), do not survive here for much more than a year because winter conditions beneath the snow are usually too wet for them. The same goes for the Mazari palm (*Nannorrhops ritchieana*) from central Asia. In its native deserts, winter temperatures can drop below 0°F (-18°C), but conditions are dry there. My plants, which I grew from seed of Iranian provenance, all died their first winter beneath our thick snow cover. That said, they did not prove hardy at the Denver Botanic Gardens either, so moisture was not necessarily the sole factor in their demise.

Winter wetness, which either suffocates and/or causes cellular rupture in the roots, can doom some palms. Additionally, lack of sufficient heat duration during the growing season, or excessive length of winter dormancy this far north can factor into mortality. This appears to be the case with the shrubby palmettos native to the southern United States. Both dwarf palmetto (*Sabal minor*) and the taller Louisiana dwarf palmetto (*Sabal minor* var. *louisiana*) thrive in Oklahoma City and are reportedly hardy exposed down to -14°F



Yucca filamentosa (on the left) and *Y. flaccida*

(-25°C). Dwarf palmetto even does well in Wichita, Kansas, where it recovered from -24°F (-31°C). Once I learned of this, I daydreamed of rows of palmettoes surviving here. Repeatedly I made valiant/foolish efforts to grow these plants, raising numerous seedlings from the northernmost wild populations (of var. *minor*) native to southern Arkansas near Warren and along the Red River, and also those found wild near the towns of Duncan, Tom, and Harris in southern Oklahoma. My seed for var. *louisiana* came from cultivated Oklahoma City plants. Sadly, time after time, none ever came through their first winter alive. One batch was exposed at -5°F (-20°C), which may or may not have been their *coup de grace*.

By far, my greatest hope was generated when a needle palm (*Rhapidophyllum hystrix*) overwintered perfectly in our shade garden here in northern Wisconsin. It thrilled me to have it sail through -25°F (-31°C) with only about an inch (2.5 cm) of snow over the tallest frond. This was the same winter when a southern African iceplant (*Delosperma congestum*) survived beneath barely an inch of snow to bloom spectacularly the following season. Needle palms are native to the southeastern U.S. and are considered a relict species, with their nearest relatives in East Asia, indicating a preglacial connection. The following spring, I ordered several



Rhapidophyllum hystrix in March, 2005, after successfully overwintering.

more of these palms and planted them in various shaded locations. The next winter arrived with deep, early snow cover, which I smugly assumed was perfect for having them overwinter. I was sadly mistaken. You see, the first winter was highly unusual in that snow accumulated on dry soil. The second winter was more normal, with wet snow falling on wet ground early in the season. None of the needle palms, including my original plant, could tolerate this. Nor did the iceplant. What a letdown!

The only other species of palm that I have overwintered successfully is the windmill palm (*Trachycarpus fortunei*), native to China. Unlike other relatively cold-hardy palms, these can handle moist conditions beneath deep snow quite well. Seedlings survive winters when snow comes early, protecting them from bitter cold. Unfortunately, in our region, one cannot count on such gentle winters, and none of these baby fan palms ever made it through a second winter so far. Exposure to -5°F (-20°C) will kill the seedlings. I believe that they would survive in nearby regions with reliable lake-effect snow, such as in the Upper Peninsula of Michigan, but as this species eventually becomes a palm tree, it would even there remain just a temporary wonder.



Trachycarpus fortunei in snow.



Top: *Trachycarpus nanus* fronds covered with snow.

Bottom: Seedling from *Trachycarpus wagnerianus*

Although it is reportedly only hardy to 0°F (-18°C), the beautiful dwarf windmill palm (*Trachycarpus nanus*) might be a better choice for such fortunate regions as it does not form a trunk, thus remaining low to the ground. The one specimen that I planted out originated in Panzi, Sichuan, and had the misfortune of having its first and only winter be particularly harsh. There are other species of windmill palms worth trying. The Himalayan windmill palm (*Trachycarpus takil*) may or may not be hardier

than the Chinese species, but mine died at -5°F (-20°C) during an open (virtually snowless) winter. Currently, I have forty seedlings of miniature windmill palms (*Trachycarpus wagnerianus*) being tested out in our woods. Initial results at -3°F (-19°C) perhaps, hopefully, look promising. They are such gorgeous palms; it would be a shame if they all died. Too bad I don't know a kindred plant nut in Michigan's Upper Peninsula that I could have shared some with.

No matter how many times I charge at the windmill palm hardiness problem, I may not best it anytime soon. So if palms aren't reliably hardy in the ground, one could always cheat and grow them in a pot. The palms chosen should not be arborescent (at least not those for the home gardener) and should be tough enough to look good in the snow. Two that I've grown for decades are a dwarf windmill palm and a hardy bamboo palm (*Chamaedorea microspadix*). The former is single-stemmed and a mere



Potted *Chamaedorea microspadix* in the snow.

20 inches (50 cm) tall, while the latter has multiple stems which can reach nearly 6 ft. (1.8 m). Native to the Sierra Madre Oriental of northeastern Mexico, it grows there as undergrowth in temperate deciduous forest. Some individuals are reportedly hardy down to 8°F (-13°C), likely making it the hardiest of the feather palms. My plant was uninjured after being frozen solid for four days, with temperatures never going above freezing and dipping to 17°F (-8°C). The key to transitioning to indoor conditions when frozen is to place the plant into a large plastic bag, preferably moistened, until the soil has warmed to room temperature. This prevents the foliage from desiccating.

Just as some yuccas are passable replicas of fan palms, so too can other plants create the appearance of feather palms in one's garden. Some of our native woodland wildflowers are dead ringers for *Chamaedorea* palms, which are an abundant and diverse undergrowth in the forests of Latin America. For a long time, I suspected that these wildflower species, common to our Wisconsin Northwoods, might actually be herbaceous palms, but DNA analysis has proven otherwise. The Solomon's plume (*Maianthemum racemosum*), for instance, has an uncanny resemblance



Maianthemum racemosum (left) has an uncanny resemblance to *Chamaedorea* palms (right)



Polygonatum (left) is good visual substitute for *Chamaedorea* (right).

in its foliage, inflorescence, and fruit to certain members of the genus *Chamaedorea*. Not only Solomon's plume but also Solomon's seals in the genus *Polygonatum*, which closely resemble still other species of *Chamaedorea*, can substitute for these feather palms to create a tropical summertime effect in colder gardens.

These woodland wildflowers are fascinating, not only because of their grace and beauty but also for displaying a remarkable example of convergent evolution. What would be cooler than to have a woodland garden reminiscent of a tropical getaway, with clusters of ersatz palms swaying beneath the trees?



Palm-like *Polygonatum* foliage