

# *the* TROPICAL GARDEN

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# PLANTING THE PRIMITIVE GARDEN

## WE PLANT EDIBLE GARDENS, ROSE GARDENS, CACTUS GARDENS—SO WHY NOT A *PRIMITIVE* GARDEN?

Consider primitive plants as those whose lineages can be traced back into the deep past, whose anatomy hasn't changed all that much in millions of years, or that retain some ancient, relict features.

But remember, primitive in no way means inferior—often, it's quite the opposite. Primitive plants are survivors, their forms and functions well-adapted for their environment. They're a little lucky, too. A catastrophe can change the environment in a flash, and plants can't pick up and run, fly or swim to a better location. Here are just a few we can grow and contemplate:

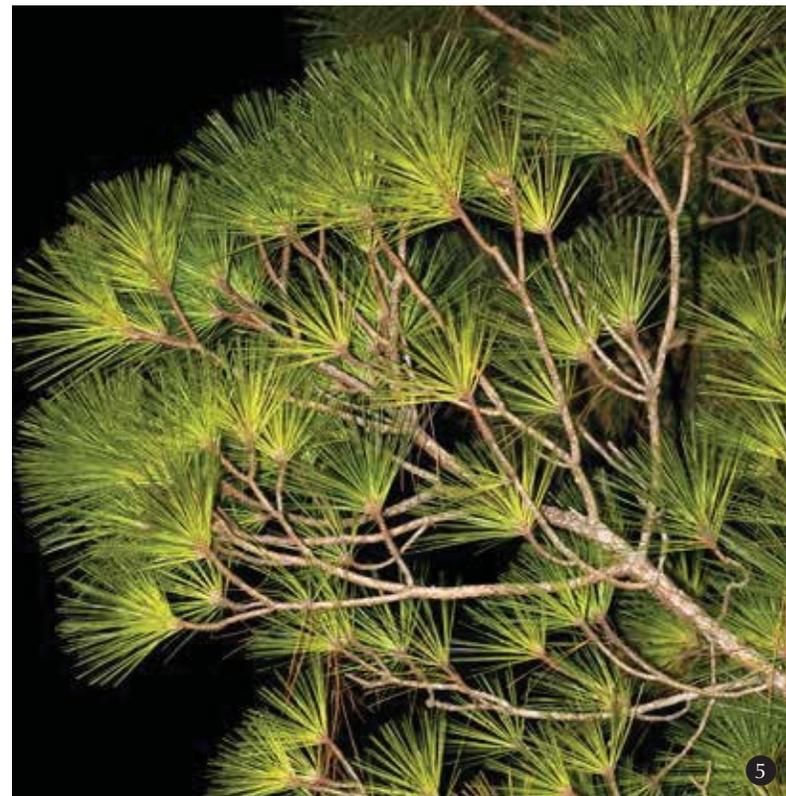
Conifer means “cone bearing,” as in the pine cone, but there are plenty of non-pine conifers. Araucarias are conifers now native only to the southern hemisphere, but they were widespread in the Jurassic Period. Forests of them are sometimes filmed as

backgrounds for dinosaur documentaries. The surviving populations of them are relicts, having made it through the massive extinction that took the dinosaurs.

The wonderfully primitive-looking monkey puzzle tree (*Araucaria araucana*), with its overlapping, scale-like leaves, sadly won't grow in South Florida, but the Cook pine (*Araucaria columnaris*) and Norfolk Island pine (*Araucaria heterophylla*)—both of which are not pines, but araucarias—are common here. Their ancestry stretches back to the early Cretaceous. But beware: They can become massive! In temperate areas, plant a *Metasequoia*, aka dawn redwood, once thought long-extinct but rediscovered in 1941. This deciduous conifer resembles our own cypress, another primitive.

Cycads are often called “living fossils.” With their pinnate fronds and colorful cones, they lend an otherworldly air to any landscape. Though recent

LEFT: 1. *Encephalartos* sp. 2. *Selaginella willdenowii* 3. *Equisetum hyemale* 4. *Nymphaea* sp.  
ABOVE: Cone of the cycad *Encephalartos ferox*



5. *Pinus elliottii* 6. *Nymphaea* sp. 7. *Marchantia* sp. 8. The lycopod *Huperzia squarrosa*

research claims living cycad species date back only about 12 million years, cycads' ancient lineage dates back about 280 million years. Our native coontie (*Zamia integrifolia*) makes a great garden addition for its ease of care; I enjoy wondering how it got to its now-restricted range in the extreme southeast.

Lycopods, called club moss or tassel ferns, are just plain cool. They bear no flowers, no seeds; they are cryptogams, i.e. reproducing via spores. Some are upright little terrestrial plants looking just like tiny pine trees, sometimes called ground pine. Others are epiphytes, and hang down from trees and rocks as bright green tassels, dichotomously branching. Nowadays they get to a few feet long, but about 300 million years ago their late ancestor, *Lepidodendron*, reached upwards of 100 feet! Perhaps only the tallest dinosaurs could reach the tender new foliage.

Ferns are another ancient wonder. Certainly they must have dominated before the upstart angiosperms took over, though given their reproductive complexity, it's a wonder to me that ferns manage at all. With thousands to choose from, so-called tree ferns have a great "primitive" look—larger and thus suiting a lost world of giants. The native tree fern, *Ctenitis sloanei*, isn't very big (maybe 3 feet tall), but thrives in our alkaline soil. The Australian tree fern (*Cyathea cooperi*) can get 10 times as tall, but seems to need a bit more acidic soil. It's also an invasive in Hawaii.

Various *Selaginella* species look like they sprouted from a fairytale garden. What else could possess emerald green and electric blue iridescent feathery foliage? From the groundhugging mound of the chartreuse *Selaginella kraussiana*, to fronds of the blue-tinged peacock fern, *S. willdenowii*, they're all related to primitive lycopods. The blue is believed to allow them to absorb more light while growing on dimly lit forest floors.

*Equisetum*, the horsetails, are the only survivor within the class Equisetopsida. Horsetails usually prefer moist, sandy soil, and some grow partly submerged, so they make a nice pond margin plant. Horsetail is considered an invasive spreader in some parts of the world, but oddly, not in South Florida. It's a bit hot here for it, I suppose, but I've had moderate success growing the common *Equisetum hyemale*, scouring rush.

While in the pond, include some *Nymphaea* water lilies. They diverged very early on from some of the first flowering plants, so you can grow primitive and have flowers. Also try *Magnolia virginiana*, sweet bay, found in wetland areas, and probably the most primitive flowering plant native to Florida.

If you want to get really primitive, cultivate bryophytes like moss and liverworts. They make ferns seem like garden newcomers.

