

# Secret to ancient tree's success: Shedding leaves

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Bare it to bear it.

If Palm Beach County's oldest hurricane survivor could tell us its secret, that would likely be it. The ancient green buttonwood tree on the northern end of Palm Beach has withstood an estimated 500 hurricane seasons — by getting naked.

When the wind picks up, this champion tree, which is the state's largest green buttonwood, drops its leaves faster than a sweaty hurricane survivor doffs his clothes when finally offered a hot shower.



The gnarled 51-foot tall Florida native did it again during Frances. "Every single leaf is gone, but there's no branch damage at all," reports Terry Mock, speaking late last week on his cellphone from the street in front of the tree. (Since it's on private property, its owners have asked that the exact location not be disclosed.)

Mock is the executive director of the Champion Tree Project International, a Palm Beach County-based nonprofit organization that seeks to preserve and clone specimens from the world's old-growth forests.

This twisted jigsaw puzzle of intertwined bark is one of the last remnants of the old-growth subtropical hammock that once covered Palm Beach. Today, its branches seem to embrace the small house below.

Sprouting before Columbus first spied the New World, it has survived half a millennium of hurricanes, Mock believes, because of a genetic trait. The tree responds to strong winds by dropping its leaves to reduce wind resistance. Hundreds of pounds of wind-catching green matter hit the dirt, and the tree lives to endure the next storm.

Mock regards champion trees with a druid-like reverence.



TAYLOR JONES/Staff file photo

This green buttonwood in Palm Beach is Florida's largest. This photo was taken in 2001; when winds from Hurricane Frances picked up, the tree dropped all its leaves as a defense mechanism. Without them, the tree suffered no branch damage during the storm.

"It makes sense that these trees have this defense mechanism (for the tree) to have survived as many storms as it has," he says. "It has to be a genetic trait."

Not all buttonwoods have this trait. Mock says he has seen many throughout Palm Beach County that held on to their leaves during Frances and suffered broken limbs as a result. But clones made from the Palm Beach tree dropped their

leaves during the storm and emerged intact. There are two in Lake Worth's waterfront Bryant Park, each about 12 feet tall. Both are leafless but unharmed.

"Part of (the secret) is structural, the way the tree has grown and the give in the wood, but there's something else at work," Mock insists.

He believes an old strangler fig, a native that shades the picnic area

of Bryant Park and is a Florida state champion tree, contains a similar trait.

"It released all of its small branches," he says. "They're all gone, but the major trunks and branches are intact. All these things are genetic traits specific to a particular tree because not every tree in the species does that."

Mock doesn't understand how a tree "knows" to release branches or

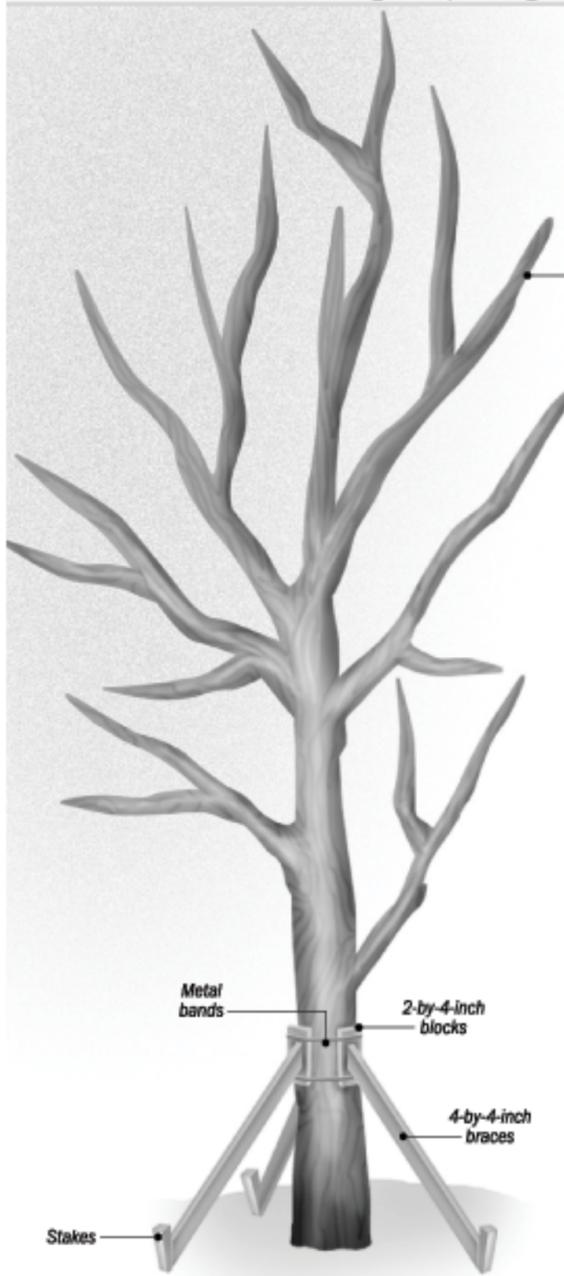
leaves to reduce wind resistance in a storm, but he hopes research done by (his organization) will help find the answers.

"We know more about the surface of Mars than we do about these big trees," he says.

For more information about champion trees, visit [www.championtreeproject.org](http://www.championtreeproject.org).

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## HOMEWORK This week: Staking and pruning trees



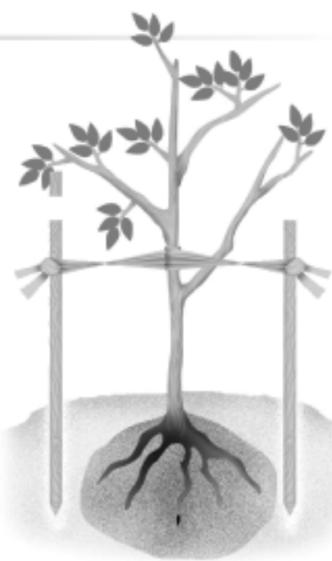
### Five ways to stake a tree

#### Staking a large tree

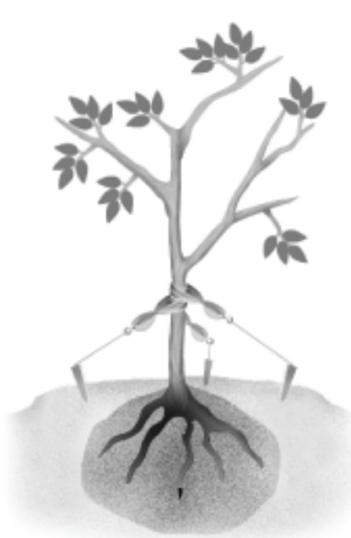
Take three 12-inch lengths of two-by-fours and strap them, evenly spaced, around the tree (boards should be vertical, parallel to tree trunk). Strap them in place with metal bands or webbing. Nail these blocks to 2-by-4-inch or even 4-by-4-inch braces, then brace them against the ground at an oblique angle. Secure the braces with a wooden or metal stake at their base (on the outside, so the brace doesn't slide).



Stakes that anchor a tree near its base keep the roots in firm contact with the soil.



Stakes that anchor a tree high on its trunk prevent it from bending.



Using webbing material, create a loop around the trunk. Attach a rope to the loop and pull it tight against a stake (a tent stake or two-by-two), in the ground.



Using webbing, form a figure eight, wrapping once around tree trunk, then crossing again before looping it around a stake placed on the outside of the root ball. Use a sheetrock screw to attach the webbing to the stake so it won't move up or down.

#### Do's and don'ts

- Never drive nails into a tree.
- Don't use wire inserted into a garden hose. It creates too much pressure on the trunk.
- Avoid driving stakes into the root ball by spacing them the width of the tree's canopy.
- Stakes should be driven 18 to 36 inches into the ground.
- Tie-downs should be firm — but loose enough to allow slight movement of the plant.
- Inspect trunk regularly to ensure that tie-downs are not injuring bark.

## Pruning large tree limbs

The three-cut branch removal method prevents damaging the tree further and encourages its natural healing processes:

**First cut:** Saw halfway through the bottom of the branch.

**Second cut:** Saw halfway through the top of the branch. Without these two cuts, the weight of the branch might tear and damage the branch collar.

**Third and final cut:** Saw completely through the branch, leaving the branch collar untouched. Chemicals in the branch collar encourage rapid healing and prevent rot from entering the heart of the tree.



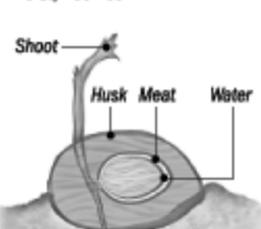
## Germinating a coconut palm

### In the ground

Did you lose your coconut palm but not the coconuts? Try planting a new one. ■ Take a fallen coconut and shake it. If you hear water sloshing inside the nut, it is an ideal candidate for germinating. ■ Soak the coconut in a pail of water (leaving the husk on) for two to three days. ■ Find an area where the soil has good drainage and partial shade. ■ Place the coconut on its side, burying the lower third.



The germination process should take three to six months. The root should push through the husk, while the shoot will emerge from the top of the husk as a sharp green spear. Water frequently, keeping the soil moist, not wet.



### In a pot

Use a pot with several inches of space on either side of the coconut. Be sure the pot is deep enough to contain the plant's taproot — or about 10-12 inches below the nut. Plant in the ground soon after the first frond emerges.

