

Commercial Transplanting of Wild Cabbage Palms, *Sabal palmetto*, in Florida

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The authors used a residential landscaping project as an opportunity to document the transplanting of cabbage palms from their selection in the wild to planting at the job site.

Of all the native palms occurring in the southern United States, none compares in popularity with the cabbage palm, *Sabal palmetto*. Tolerating wide extremes of temperature, soil conditions, and sunlight, the plant is a favorite among landscapers. Mature specimens up to 80 feet in height have been transplanted by the hundreds of thousands during the last century. Their ability to withstand temperatures to near 0° F and tolerate soils ranging from pure beach sand, to sour muck, to clay makes the cabbage palm one of the most adaptable in the world. *Cocos nucifera*, *Phoenix* sp., and *Washingtonia robusta* may claim more total numbers in the world, but none can tolerate as wide a range of conditions as *Sabal palmetto*.

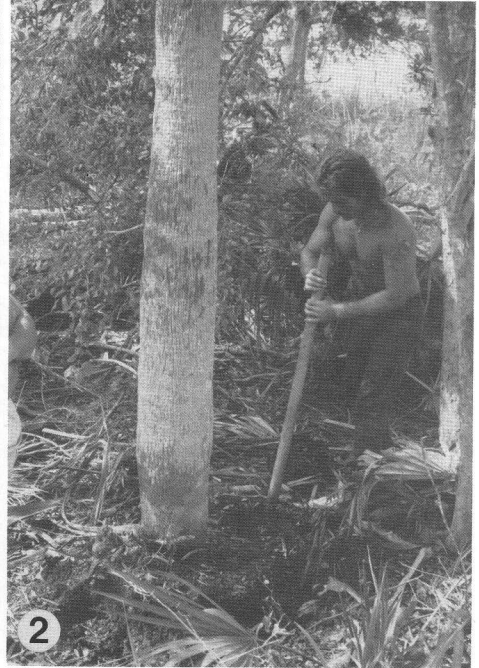
In April 1990 the authors drove to Steinhatchee, Florida, located on the Gulf coast. This remote area of Florida, known as the "Big Bend," is far removed from the fast-paced more populated regions of the state. Much of the area is undeveloped and is used primarily as a source of raw materials for the pulpwood industry.

Upon arrival at this picturesque fishing village we made our way to the comfortable country home of the Hugh Markham family where we were warmly welcomed. The Markhams are one of the few families still in the palm digging business in this part

of Florida (Fig. 1). Hugh has been in the business since 1964 and has passed on his skill and knowledge to his sons.

After a short tour of the palm holding and loading area, we sat down for a delicious lunch of "home cooked vittles." Fortified by lunch and accompanied by plenty of cold drinks, we headed for the woods. It was a beautiful, very warm, spring day and we had much to learn about harvesting cabbage palms. We soon came to appreciate the difficulty in finding good mature trees that are accessible. Miles of driving over rough logging roads turned up only one suitable site. Palms are obtained from large property holdings, usually corporate commercial timberlands. Over the years a very small stumpage fee (\$2-\$5) has been paid to the owner for each tree removed. Recently, things have changed. Stumpage fees have increased dramatically, but more importantly, many of the large companies no longer wish to be bothered by the local palm diggers. Forest management philosophies and liability problems have closed off many previously accessible areas.

Even when permission is granted, the job can still be very difficult. Many different transplanting methods have been tried, but most equipment is limited by whether it can be taken into heavily wooded or steep areas. A large tree spade works very well in accessible areas. Bulldozers with special blades and Ditch-Witch machines are used by some palm diggers. In the Steinhatchee area hand digging is the most common method.



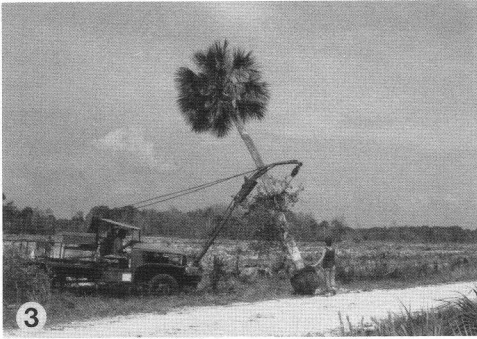
1. A natural setting of *Sabal palmetto* prime for harvest. 2. Hand digging with a special shovel is usually accomplished in about 15 minutes.

Once we had settled on a suitable area, the digging crew went into action. A special shovel with a length of pipe welded to it, in place of the normal handle, is the standard digging tool. This stout, heavy, and very sharp shovel cuts through the ground and roots quickly and easily. A trench is dug around the tree about 12–18 inches away from the trunk and 24–30 inches deep. The best diggers, when rested, can cut out a tree in three or four minutes, but working all day, 15 minutes is closer to average time (Fig. 2). Diggers prefer palms growing in shallow soils on limestone rock, as these palms tend to pull right off from the rock once the lateral roots have been cut. Once the tree is dug or “trenched” it is ready for “snatching.” Using an A-frame mounted on a truck or log skidder, a power wench driven cable is wrapped around the trunk and the tree is then slowly pulled (snatched) from the

hole. The palm is then dragged or carried out to the nearest road to be cleaned and groomed (Fig. 3).

The fronds, locally called suckers, are removed from the tree to compensate for the large amount of root loss (Fig. 4). Usually five to seven fronds are left while the three or four closest to the emerging spear are cut as they draw the greatest amount of energy from the palm. The remaining fronds are then tied with twine and usually left tied for at least 30 days. Some installers prefer to remove all of the fronds, leaving only the terminal spear. These trees tend to have a higher survival rate, but most landscapers do not engage in this practice as the defoliated palms are not very attractive when set into a finished landscape setting.

Boots (old persistent leaf bases) are removed from the trunk with a modified shovel that has been shortened and sharp-



3. Using a "skidder," the palm is pulled from the wooded area to a road for loading. 4. Trimming excess fronds and cleaning old boots. 5. Hugh Markham separates the palms by size in the loading yard. 6. A truckload of palms arrives at the job site.

ened. Depending on the location, some specimens retain all their boots. Landscape architects often specify palms to be left this way as the boots, when trimmed properly, provide an interesting geometric design on the trunk.

After harvesting two beautiful (25 and 30 foot) specimens, we had to quit for the day as the A-frame broke while removing the second tree. This is a common problem and caused Hugh very little concern. It is a simple matter to "crank up" the arc welder and "patch it up" again. So we returned to the house and selected the remaining trees for the load to be sent to Jacksonville.

A refreshing glass of iced tea and some idle chatter about the dim prospects for the future of palm digging in the Steinhatchee area just about wrapped up this

most interesting day with the palm digging Markhams. One more chore remained, to load the truck with needle palms and Florida coonties, *Zamia integrifolia*, which the Markhams also harvest from the local woods. Hugh and his sons are trying to "rescue" as many of these plants as possible before they are destroyed by modern forest management procedures. It is sad to think about how many of these unique little plants are being needlessly destroyed in the conversion of natural woodlands to sterile pine plantations.

Soon we were on our way home from Steinhatchee, but the story continues. In a few days our cabbage palms were on their way to Jacksonville and a new home. Using the repaired A-frame truck, the Markhams had loaded the trees on a dual tandem, two-ton flatbed truck (Fig. 5). This



7. Unloading with a backhoe/front-end loader. 8. Setting the palms in place. 9. A simple temporary irrigation system. 10. The same landscape one year later.

small truck is typically used for short hauls of 300 miles or less and can carry 20 to 22 palms. For longer hauls, for example to Texas or Virginia, a tractor-trailer rig is more economical as 40 to 48 palms can be transported. On the shorter runs, the palms are shipped uncovered as the unique folded shape of the costapalmate fronds and their being tightly tied makes for insignificant windburn in transit.

About mid-morning on the appointed day, the palms arrived at the job site (Fig. 6). Special care must be taken in unloading to prevent bud damage. Weighing from 600 to 1,500 pounds each, the palms are virtually impossible to handle without mechanized equipment (Fig. 7). A combination backhoe/front-end loader is perhaps the most versatile machine, as it can be used to dig the holes, then unload and set the palms. A commercial nylon sling is

preferred to a logging chain when cinching the trunk prior to lifting. This prevents ugly trunk scars. Cinching the trunk just above the balance point is best so the tree will remain upright when lifted. It can then be easily set into the prepared hole (Fig. 8). Cabbage palms should be planted as quickly as possible, although it has been observed that the palms become dormant for a time after being dug. There have been numerous instances where unplanted palms have been exposed to the hot summer sun for two weeks or more and have begun growing once planted and properly irrigated. It is common practice for dug trees to be "heeled in" in nursery holding areas with their rootballs covered with sawdust or wood shavings. Trees may be stored in this way for up to several months and often form new roots in the process.

Cabbage palms can be planted deeper

than they originally grew. For taller palms, 20 feet or higher, deep planting may eliminate the need for bracing against the wind. Very tall specimens have been planted as much as three feet deeper than the original depth with no apparent detrimental effect. Once the palm has been lowered into the hole, soil and amendments, such as commercial cow manure, are backfilled slowly while watering liberally. Many palms are lost at this critical stage in the haste to fill the hole. Careless backfilling can create air pockets around the roots that can kill the palm as surely as neglecting regular watering. "Mudding" the hole to the consistency of a thick soup is the best way to assure all air pockets are removed. When the hole is approximately two-thirds filled, the sling and tractor can be backed away and the palm then pushed to its proper upright position manually. If the palm has an interesting curve to the trunk it may need to be turned to achieve maximum visual effect. This can be done by tying a rope loosely around the trunk about four feet above the ground, then placing a shovel handle, board, or other object of similar size and strength between the rope and trunk. After twisting the "handle" until tight, the tree can be rotated by hand (this usually takes several people) using the handle as a lever. After final positioning is achieved, the rest of the soil is mudded in. To help insure proper watering of the palms during recovery, a temporary dike about six inches high is built around the outside of the planting hole to form a shallow basin. On well drained

sites this basin should be filled with water at least once a day. On poorly drained sites the watering is reduced to no more than three times a week. A very successful temporary irrigation method has gained popularity of late whereby an inexpensive garden hose is looped around each palm. An ice pick is used to punch three or four holes facing each palm trunk, then water is turned on at very low pressure and allowed to "drool" for two to three weeks (Fig. 9).

Once the palms are in place and final grading is done, the remaining landscape plants and sod can be installed (Fig. 10). Proper landscape planting with cabbage palms can give a tropical look in areas otherwise too cool for tropical plants. Throughout the sunbelt region of the United States, *Sabal palmetto* is unmatched in its versatility. The only drawback is that existing supplies will probably be depleted in less than 30 years. Every effort should be made to avoid transplant losses due to careless handling and neglect after transplanting. The once seemingly unlimited natural supply of cabbage palms has led to a rather cavalier attitude about the plants at times in the past. Now people are becoming more conscious that they are a limited resource and could become threatened in the wild. Since the plant is the state tree of Florida and South Carolina, one would hope that steps are taken to protect the cabbage palm in many areas of both states.