Palms in Dallas, Texas

GORDON D. HINTZ

One does not normally consider Dallas, Texas, to be a palm growers' paradise. However, several species do quite well here in spite of winter cold and intense summer heat. The purpose of this article is to acquaint the members of our society with our conditions and how they affect the growth of palms in Dallas.

Dallas lies in North Central Texas approximately 260 miles inland from the Gulf of Mexico. The close proximity of the Gulf has a moderating effect on our weather, actually causing a semi-monsoonal type of climate. In spite of this, each year we are visited by what we call "blue northers" of varying intensity which annually bring us our coldest weather. The "blue norther" is an Arctic front which is capable of plunging temperatures many degrees in a few short hours. More often we are visited by Pacific cold fronts, with more moderate temperatures. The Pacific fronts account for much of our rainfall.

The chart in Table 1 gives the major climatic data for Dallas. From my observations, the most destructive climatic condition to the growing of palms here, is the cold desiccating winds of the Arctic fronts. Protection, whether it be a wooden fence or a south wall, is a must in trying to grow any but the most hardy species.

The cold severity data is worthy of further explanation. Since duration of cold is important in palm culture, the chart shows that in the Decade 1960–1969, there was an average of three days per year when the temperature failed to rise above freezing during the entire day. Freezing conditions occurred on an average of thirty-seven days per year, generally at night, with thirty-four of these days having temperatures above freezing at some time during a 24-hour period.

The data also shows that the Decade 1940–1949 experienced lower minimum temperatures, but each decade had some minimums below 10° F. In spite of these extremes, there are mature specimens of *Washingtonia filifera* and *Sabal texana* living and fruiting today which were planted prior to 1940.

We normally get a gradual cooling down of temperatures in the late Fall. This allows tender plants to "harden off" to the cold. Freezing temperatures on an actively growing palm are much more damaging than if the palm were dormant.

Most of Dallas County lies in the Texas blackland belt, a narrow strip running from Oklahoma south to near San Antonio. The soil is a heavy, black alkaline clay. It is quite shallow in some areas with outcroppings of white caliche sedimentary rock. Since the soil is tight, considerable sand and peat moss has to be worked into it to keep it friable. My palms have not shown any ill-effects from this soil and seem to thrive in it.

Planting location is a prime consideration. A good portion of Dallas is on low, rolling topography. The best winter protection occurs on the south slopes with good air drainage. Exposed, hill-top sites should be avoided, as well as frost-pockets. These can be termed micro-climatic considerations and they are important. In choosing a site around a home, preference should be given to the south side of walls and solid fences for the more tender species. Areas be-

TABLE 1. *Climatic data for Dallas, Texas*

Decade	Minimum Temperature	Number of years in which minimum temperature was			
		20–32° F.	15–19° F.	10–14° F.	below 9° F.
COLD SEVERITY					
1960–1969	8° F.	2	3	3	2
1950–1959	7° F.	1	5	2	2
1940–1949	2° F.	1	1	4	4

	Average number of days per year when temperature was at a	
	maximum of 32° F. or below	minimum of 32° F. or below
1960–1969	3	37
1950–1959	2	33
1940–1949	4	34

Coldest temperature on record since 1913 is –3° F. in January, 1930

OTHER WEATHER DATA

Average mean temperatures (1931–1970)
- January 45.5° F.
- July 85.0° F.
- Annual 65.9° F.

Average annual precipitation (1931–1970)—34.90 inches
Date of average first freeze in Fall—November 22
Date of average last freeze in Spring—March 18
Normal sunshine—66% of possible

tween houses retain day-time heat longer and thus remain warmer during the night. Naturally, trees will act as a partial blanket when the air is calm. Only the most hardy species should be planted in open, exposed areas.

The following species are presently being grown in Dallas. I do not say that this is a total list, but these are the more commonly seen palms.

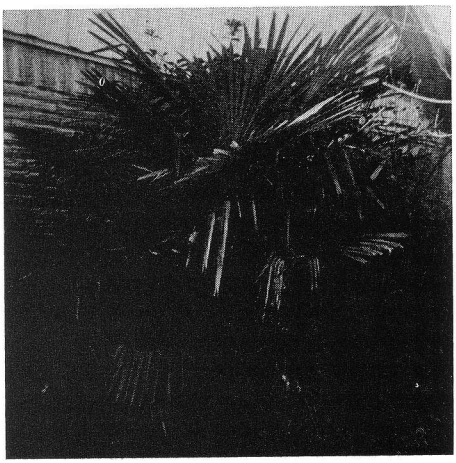
Sabal minor. The dwarf palmetto is the only palm native to Dallas County. It is completely hardy here. Local nurseries do not handle it because it is so slow growing, which is unfortunate since it does make such a beautiful plant. Fig. 1 shows several plants growing in a

1. *Sabal minor.* A beautiful clump of several plants. Numerous seedlings can be found around the base of these palms.

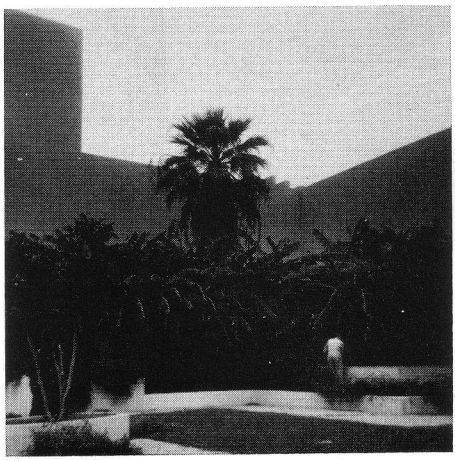
2. *Trachycarpus fortunei.* A group growing at Marsalis Park Zoo. Some of these are producing fruit.

clump near the Flamingo pond at the Dallas Marsalis Park Zoo.

Trachycarpus fortunei. I would class the windmill palm as being as hardy as the dwarf palmetto. It is carried by most nurseries and is the most common palm seen in Dallas. Figs. 2 & 3 show some examples of this very beautiful species.

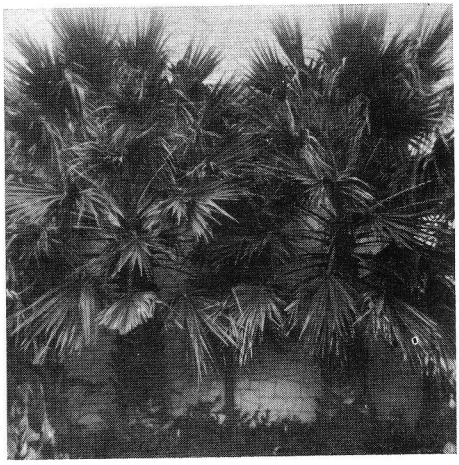


3. *Trachycarpus fortunei* growing at the author's home.



4. The tallest palm in Dallas is this *Washingtonia filifera* growing in Fair Park. The wall behind the tree is approximately 35 feet high; banana plants are in the foreground.

Washingtonia filifera. This palm is quite hardy, once established. In some severe winters, frond burn can occur, particularly in young plants. Figs. 4, 5 & 6 show examples growing in the city. Both the *Washingtonia* in Figure 4 and the *Sabal* in Fig. 7 were planted for the Texas Centennial in 1936. Seedlings grown from these trees appear to be



5. *Washingtonia filifera.* Seedling trees from the tree in Fig. 4.

6. A seedling from the *Washingtonia filifera* in Fig. 4 planted in 1965 at the author's home.

7. *Sabal texana* growing in Fair Park. This tree is approximately 25 feet tall.

more cold hardy than those grown elsewhere and transplanted to Dallas. *Washingtonia* is found quite regularly in local nurseries, but many are the *W. robusta* which is tender and frequently lost during severe winters. The *W. filifera* is our fastest growing palm as evidenced by the six year old plant in Fig. 6.

Sabal texana. The Texas palmetto is very hardy but found mainly in commercial plantings, such as at motels. It is extremely slow growing, but is a beautiful tree with the dull green costapalmate leaves. (See Fig. 7). This species deserves wider usage. Seedlings from the Fair Park tree are growing in various Dallas Parks.

Butia capitata. This palm is sold under the name of *Cocos australis* in Dallas nurseries. It has only been readily available for the past five years. It appears to winter well, but only time will tell if it is completely hardy. It is the only pinnate-leafed palm available to us in quantity at the present time.

Other species. Occasionally, one sees *Phoenix canariensis* and *Erythea armata*, but their occurrence is rare. I have both of these (plants and seedlings) but it is much too early to comment on their potential hardiness. *Chamaerops humilis* is now starting to appear in nurseries and this one should prove hardy. Other species currently undergoing test for winter-hardiness are *Jubaea chilensis*, *Phoenix dactylifera*, *Sabal palmetto*, and *Sabal etonia.* Seeds of *Serenoa repens* have been planted and I hope to soon obtain seed of *Rhapidophyllum hystrix.* The latter two should adapt to our climate. I would be most happy to hear from other members who may have suggestions of other species to test.

Palm culture is increasing in Dallas, mainly through the efforts of the Dallas Park Department. As these plantings increase, the public becomes more aware of the beauty of palms and their place in any landscaping plan. Our hope is that someday Dallas will truly become a "City of Palms."