

The Mountain Cabbage Palm of the Antilles

W. H. HODGE

Few West Indian palms are as gregarious or wide-ranging as *Euterpe globosa*, the mountain cabbage palm, which inhabits moist montane sites throughout the Antilles from eastern Cuba (Oriente Province) to Grenada. On certain islands, such as Puerto Rico, square miles of the higher mountain slopes are dominated by this species forming a plant community known to the tropical ecologist as "palm brake". A curious thing is that the mountain cabbage palm, so abundant and widely dispersed in nature in a tropical area so relatively accessible and well-known, has not to my knowledge been brought into cultivation as an ornamental, at least not outside its native Antillean range. Its horticultural potentialities should be tested, for the species is certainly an attractive one.

A medium-sized palm, *Euterpe globosa* sports a rather slender (to 6 inches in diameter) erect stem which may rise anywhere from 15 to 70 feet tall depending in part on whether the growing conditions are sheltered or windswept. There is no definite crownshaft and the pale green pinnate leaves, 6 to 8 feet long, with their attractive arching pinnae form crowns which, to the person below, make attractive silhouettes against the sky. The slender, branched infrapinnate flower clusters (spadices) average about half the length of the leaves and at maturity produce an abundance of black globular (hence the specific name *globosa*) fruits averaging about half an inch in diameter.

Euterpe globosa is of special interest to the plant taxonomist. It represents the

first or type species described in the neotropical palm genus *Euterpe*. Joseph Gaertner, the botanist who wrote the first account of this palm (1788) in his classical work on fruits and seeds of the world, knew only the globose fruit, which formed the basis of his original description. Moreover he did not know the origin of his plant material. We now realize that Gaertner's specimens must have come from somewhere in the West Indies for this species is now known to range for 1500 miles throughout all the mountainous Antilles (with the apparent exception of Jamaica) including Cuba, Hispaniola, Puerto Rico, St. Kitts, Nevis, Montserrat, Guadeloupe, Dominica, Martinique, St. Lucia, St. Vincent, and Grenada. As might be expected, *Euterpe globosa* is known by a variety of vernacular names in the islands—*palma azul*, *palma boba*, *palma justa* and *yagua justa* in eastern Cuba; *macoutouca* and *palmiste a chapelet* in Haiti; *manacla* or *palma de manacla* in the Dominican Republic; *palma de la sierra* in Puerto Rico; *palmiste montagne* in the French Antilles; and mountain cabbage palm in the British Lesser Antilles. Most euterpes, with palatable buds tasting like raw cabbage, are known as cabbage palms, hence the origin of the common English name of this species.

The wide Antillean distribution of the mountain cabbage palm is of much interest to students of palms. As has been shown above, the species, though a variable one, occurs on many of the West Indian islands. Each insular population of this palm has been well isolated for





8, top left. Mountain cabbage palm and *Cecropia* on a high ridge near the Freshwater Lake, Dominica. The windward Atlantic coast is to be seen in the haze in the background.

9, bottom left. *Euterpe globosa* seen from below in "elfin forest" near summit of Morne Trois Pitons, Dominica.

10, above. *Euterpe globosa* approaching higher ridges of Mount Britton, Luquillo Mountains, Puerto Rico. Note how the palms tend to occupy more sheltered slopes (left background) and ravines (right foreground).

centuries by water from even the nearest adjacent island population. In time, with such geographic isolation, one would expect evolutionary changes to have resulted in the origin of a number of distinct endemic races from the original mountain cabbage palm. Such evolution has taken place in a number of other Antillean genera having a similar dispersal. The royal palms (*Roystonea*) and the gru-gru palms (*Acrocomia*) are good examples of palm genera with closely related yet obviously distinct species or varieties described for the major islands or areas in the Antilles. *Euterpe globosa*, on the other hand, although definitely recognized as a variable species, apparently has not evolved recognizable geographical variations within its range—or perhaps it hasn't received intensive enough botanical study as yet.

Wherever it occurs the mountain cabbage palm occupies an altitudinal niche which is affected very much by precipitation brought on by the constant north-east trade winds. These winds, deflected upwards on the mountain slopes, are cooled as they rise bringing at elevations above 1500 to 2000 feet rather constant and well distributed precipitation throughout the year. The kinds of plants found at the higher levels of the islands are thus quite distinct from those which occupy the drier lowlands or slopes below. In this montane climate rainfall may run anywhere from 100 inches to probably as much as 400 inches a year, especially on the heights of islands as notably wet as Dominica. Vegetation is lush with tall rainforests at the more sheltered mid elevations (1500-2500 feet). These forests diminish in height on the upper mountain slopes until they are replaced by a dwarf, often impenetrable form of vegetation generally known by the de-

scriptive terms elfin woodland or mossy forest (*fangales* is a Spanish name used locally for similar vegetation in the Sierra Maestra range of eastern Cuba). It is in these wet tropical forest formations—rainforest and elfin forest, that one finds the mountain cabbage palm at home.

In the lofty rainforest where the dominant trees may attain heights of 100 feet or more, *Euterpe globosa* is an "understory" species growing almost completely beneath the dominating canopy of giant trees. Even then this palm is recorded as attaining a maximum height of from 60-70 feet. Although a secondary species under such conditions, it is often so abundant on certain of the islands (especially St. Kitts and Nevis) as to represent as much as 50 per cent of all trees in the rainforest stand. On the other hand this palm is almost completely absent in the rainforest belt of such islands as Dominica, though the species is relatively common at higher elevations.

Above the belt of rainforests, on the more steeply pitching mountain slopes, *Euterpe globosa* really comes into its own and on a number of the Antilles forms extensive dense pure groves of palm forest generally called "palm brake". The line of demarcation between rainforest and palm brake is often sudden and indicative of the ecological reasons for the existence of palm forests: they seem to occupy the unstable soils of steeper slopes which either because of their physical properties or the constant saturation from rain are prone to landslides. These forests are examples of what ecologists call a disturbance climax (disclimax).

At elevations above 2000 feet in the Luquillo Mountains of eastern Puerto Rico palm brakes (here called "sierra palm forest") are especially imposing,

forming as they do more or less continuous bands around the slopes and extending up to the elfin forest-clad ridges near the summits of the highest peaks (3500 feet). These impressive forests of palms tend to occupy more sheltered sites and *Euterpe globosa* noticeably falls off in numbers as the upper windy ridges are reached or on the windward slopes. Here temperatures may average 10° or more cooler than at sea level, the soil is perennially soaked, and atmospheric humidity is high. These should all be clues to the successful culture of this palm species when it is attempted.

These Puerto Rican forests of mountain cabbage palms are about the only ones readily accessible to the casual traveler. Elsewhere, particularly in the Lesser Antilles, stands of *Euterpe globosa* can usually be reached only by

strenuous climbing on slick mountain slopes or often through the well-nigh impenetrable thickets of the elfin forest. In Puerto Rico, on the other hand, one can drive by car from San Juan on good roads right up into the belt of palm brake in the Caribbean National Forest. The visitor to this area will be surprised to find how relatively open this forest is under foot with a rather poor representation of shrubs. The abundant moisture and humidity precipitated from rain clouds make mosses abound and these cover many of the palm trunks thereby serving as a fine medium for a wealth of epiphytic plants—chiefly ferns, orchids, and bromeliads. It will probably be from these accessible palm forests of Puerto Rico that propagation material can ultimately be gathered to establish *Euterpe globosa* as a new ornamental.

Pseudophoenix in Florida

R. BRUCE LEDIN¹, STANLEY C. KIEM², and ROBERT W. READ³

I. THE NATIVE PSEUDOPHOENIX SARGENTII

*Pseudophoenix Sargentii*⁴ is the rarest palm native to Florida. It has also been found on certain islands of the Bahamas, and is possibly the species found in northern Cuba, and Hispaniola, but in Florida it has been accu-

rately recorded for only three stations, all of which are on the Florida Keys.

Its discovery, "rediscovery", taxonomy, and relationship have been given by Sargent (13), Cook (4), Small (17), and Bailey (1). Additional information recently come to light concerning this palm in Florida is herein recorded along with notes on the palm's discovery and history.

Early History

Charles S. Sargent, the authority on American trees who for fifty years was director of the Arnold Arboretum of Harvard University, was the botanist who announced the occurrence of the palm in Florida. On one of his few trips

1. University of Florida Sub-Tropical Experiment Station, Homestead.
2. Fairchild Tropical Garden, Miami.
3. Cornell University, Ithaca, New York.
4. The following common names have been given to this palm: hog palm, hog cabbage palm, hog palmetto, buccaneer palm, wine palm, false date palm, false royal palm, dwarf royal palm, ram's horn palm, lost palm, Sargent's palm, feather leaf Florida cherry palm, but perhaps the best common name is Sargent cherry palm, a name which seems to have been originated by L. H. Bailey.