Gulubia costata – a Handsome Palm for the Warm Subtropics

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1. *Gulubia costata* in the author's garden, Miami, Florida.

***Gulubia costata* – a striking palm with distinctive pendant leaflets – is worthy of more widespread cultivation in the warm subtropics.**

2. *Gulubia costata* infructescence, full of pale orange-yellow fruit.

In October 1989 at a Fairchild Tropical Garden sale, I purchased a juvenile palm that I knew little about at the time – *Gulubia costata*. Later I discovered that two years earlier, the Garden had received seed collected from Cape York, Australia (FTG 87-525) and had grown the plants in quantity for their members.

In May, 1990, I planted the palm in a sunny but wind-protected location on the northwest side of my home – about six feet from the cement block structure. Soils in my garden are all derived from alkaline limestone marl but have been heavily augmented with mulch for over twenty years. This specimen was only 0.5 m tall at planting but I soon learned it was a fast-growing species. Unfortunately, when Hurricane Andrew hit South Florida in August 1992, the *Gulubia* was 3 m overall and was easily knocked down by the 100 kph winds that blasted our neighborhood. A week after the storm, I set the palm upright , staking it with a support tripod for the next year. Sadly, all the plants in the ground at FTG from this accession were destroyed.

In the past nine years, the *Gulubia* has grown to an overall height of 8 m and holds a crown of about 16 leaves with broad pendant leaflets (Fig. 1). Winter winds annually take their toll by shredding the relatively thin leaflets and browning their tips when the temperatures drop into the 5 – 7ºC range. In this regard, *Gulubia* shows greater susceptibility to cold damage than my 9 m tall *Pigafetta filiaris* planted 10 m away. In January 1996, a combination of cold and dry winds over a three-day period damaged the *Gulubia* so much that I was not sure it would survive. The following growing season saw a complete recovery. Then, from late December, 2000 to early February, 2001, South Floridians experienced the fourth coldest winter on record with temperatures lingering for many days in the 12–15ºC range before warming slightly. Interestingly, in the week immediately following two consecutive nights of temperatures barely above freezing, this palm dropped the four oldest fronds that had previously not shown any signs of senescence. Eight months later, during the June–October rainy season, the plant has recovered and is again pushing out new leaves and two inflorescences.

3. Fresh *Gulubia costata* fruit; note the distinctive striping.

In November 1999, the *Gulubia* flowered for the first time and set three infructescences with over 500 fruit each. Cream flowers were followed by pale yellow-orange ovoid fruits (Fig.2) that ripened to a blue-grey background with prominent longitudinal charcoal grey striping (Fig. 3). Within two days of harvesting, the fruits turned black. As if this color change was not dramatic enough, the thin pulp was raspberry-red in color.

Fruits range from 6–10 mm in length and because the pulp, while thin, is difficult to remove by hand, I have simply soaked the fruit in water for two days and sowed them on the surface of a standard nursery mix (peat moss/perlite/silica sand). Two community pots of about 100 seeds each were held in the FTG Nursery at about 30ºC from December 1999 until June 2000 when the first seedlings emerged. Within a month, approximately 75% of the seeds had germinated and by September 2000, all had a second leaf. Most of these seedlings were donated to FTG for future planting and distribution to members.

The subsequent fruiting in December 2000 resulted in over a thousand fruit which were distributed to collectors and nurseries in South Florida. At that time I cleaned the fruit by hand by adding some silica sand to a handful of seed and vigorously rubbing my handful of sand and seed to remove the pulp. This process yielded very clean seeds in less time than any other methods I had tried. These seeds were sown on 8 January 2001, but upon dissection in October 2001 all the ungerminated seeds I sampled were desiccated or showed signs of fungal activity. Despite my hope that depulping the seeds would improve germination, this was not the case. I wonder if the act of removing the endocarp somehow promoted fungal infection or speeded up desiccation before the seeds germinated.

This year, I shall clean some seeds but not the entire batch to see if epicarp removal is the limiting factor in germination.

Of all the pendant leaflet palms that are so graceful and so reminiscent of the tropics, *Gulubia* seems to be the best adapted for cultivation in warm areas outside the tropics. As attractive as they are, I have found *Euterpe oleracea*, *E. precatoria* and *E. edulis* to be even more cold-tender and intolerant of our alkaline soils and dry winter winds. Although *Gulubia costata* has been rarely available to collectors in South Florida, we now know that this species can be raised to maturity in our area with only minimal cold protection when young and can become a welcome addition to the landscape. Once the germination problems are solved, cultivated seedlings of this palm may be available to more palm enthusiasts than ever before.

Palm Research in 2001, cont'd from p. 121

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continued p. 129