Observations on the Flowering of *Marojejya darianii*

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1. Group of three *Marojejya darianii* growing in my nursery. The one on the right has a staminate inflorescence.

In this note, I report on the apparently unisexual behavior of *Marojejya darianii* in cultivation on Hawaii.

As an ardent collector of palms and a palm nursery owner, I have had the pleasure to observe many genera of palms in a different manner from that of most botanists. Unlike the botanist who sees a plant in the field at one time, a snap-shot in the life of the palm, we growers have the complete experience of raising palms as parents raise children, from birth to adulthood.

Marojejya darianii, named after the famed Californian palm explorer and collector Mardy Darian, has become a palm that I strongly feel needs more analysis. On my property in Kurtistown, Big Island, Hawaii, I planted two individuals of *Marojejya darianii* in 1994 and one more in 1999 in a designated area of my garden where they were first shaded as younger palms by guava trees. After three years, I became impatient and cut down the guavas around the *M. darianii*, exposing the palms to more light, after which they really started to grow (Figs. 1 & 2). I appeal to those who grow *M. darianii* elsewhere not necessarily to follow my lead. The temperature in my area of the Big Island is 26.5–29.5°C (80–85°F), and I have 317–381 cm (125–150 in) of rain in a normal year. Clouds that roll through in all shapes and forms filter the sunlight and give us the ability to expose the palm to full sun without harming the plant. Enthusiasts in South Florida or Equatorial Queensland may not be able to expose a young *M. darianii* to full sun until it is much older.

Starting in 2006, one of my *M. darianii* began to flower. This is when my curiosity began to develop. *Marojejya darianii* is extremely

2. The same palm in Fig. 1, in full bloom.

3. The buds of the staminate flowers of *Marojejya darianii* are purple.

endangered in Madagascar, and the thought of producing seed in Hawaii was a goal of mine. While reading the bible on Madagascar palms, *Palms of Madagascar* (Dransfield & Beentje 1995), I learned that this particular palm is monoecious and has separate staminate (male) and pistillate (female) inflorescences that are borne on the same plant. During the first year that my plants flowered only staminate flowers were produced and there were no signs of pistillate flowers. I figured this was just a first year anomaly and that in the next year they would produce flowers of both sexes and set seed.

In November and December of 2007 my largest tree again began its flowering process with beautiful purple-colored staminate inflorescences occurring between the leaf sheaths (Fig. 3). Excitement was stirring in my palm-obsessed mind. Maybe this would be the year for seeds. The purple staminate inflorescence went snow white (Front Cover) and was covered with honey bees dusted all over with pollen (Fig. 4). I collected pollen in anticipation that a pistillate inflorescence would be coming and that maybe I would need this pollen. The inflorescence whithered to a brown, dried dreadlock and eventually fell to the ground. The two larger *M. dariani* flowered together for the next three years in this November–January time frame. As of January 2010, it had just completed its staminate flowering, and still no female flowers were produced. In my frustration I have decided to share this observation and have checked with a few other enthusiasts in Hawaii. They report that either no flowers have occurred on large trees or the same thing I am experiencing has happened.

John Dransfield assures me that, as with *Marojejya insignis*, *M. darianii* produces both staminate and pistillate inflorescences on the same plant in the wild in Madagascar. Why are mine not doing the same thing? My conclusion is that there needs to be more work on *Marojeya darianii*. Perhaps some populations are dioecious, as mine appears to be, but then if dioecy occurs, why have no pistillate plants been observed in cultivation? Perhaps my over-fertilized palms are freaks. Or perhaps these

4. At full bloom, the staminate flowers are covered with white pollen.

palms must be older and larger before they can afford to produce female flowers and bear subsequent fruits. I encourage anyone to communicate their experiences with me. I still wait impatiently for pistillate inflorescences to appear so that I have a chance of producing seeds.