# *Chamaedorea tuerckheimii*
## (Dammer) Burret

**Status**: **not listed by but likely to be Critically Endangered**

### Common name

Potato-chip palm, Guonay (Mexico).

### Natural range

*Chamaedorea tuerckheimii* is native to Alta Verapaz, Guatemala, Copán, Honduras, and the states of Veracruz, Chiapas, and Tabasco, Mexico. The native populations of *C. tuerckheimii* in Veracruz closer to the coast than the more inland populations in Guatemala and Honduras. This species is found in the northern ranges of tropical moist forest (according to the Holdridge system) or rainforest on Atlantic slopes at 900–1500 m in elevation. This species appears to have an affiliation with karstic topography and limestone substrates.

### Recognition characteristics

This is one of the smallest palms known, ranging from 0.3 to 1 m tall, and has a solitary stem. The most striking vegetative character of this palm is its entire, prominently plicate (corrugated) leaf. Apparently the species has two forms that differ in vegetative features. Found in montane rainforests and cloud forests, the Guatemalan-Honduran form has bright green leaves that are slightly narrow, strongly plicate, and have a white margin. In Mexico, *C. tuerckheimii* has mottled green, somewhat broader, ovate leaves that are not as strongly plicate and have green leaf margins.

This species is traditionally included in Hodel's (1992) subgenus *Chamaedoropsis* due to the distinct petals that are thickened and persistent in fruit and staminate flowers that are singular in the inflorescence with petals that are spreading or erect but not connate apically. In recent molecular phylogenies of the genus, *C. tuerckheimii* was recovered in different subgenera (*Stephanostachys* and *Eleutheropetalum*) depending on the nuclear gene used, so its relationship within the phylogenetic tree of *Chamaedorea* is still disputed.

### Natural history

Much is unknown about the general ecology of this extremely rare species. Pollination has been studied in other species of *Chamaedorea* with results generally pointing towards wind pollination. Insect-induced wind pollination has also been suggested for certain *Chamaedorea* species, such as *C. pinnatifrons*. Seed dispersers have not been well characterized for *Chamaedorea*; although their red-brown fruits on light-colored rachillae probably serve as an attractant to potential animal dispersers such as birds or small mammals.

### Threats to survival

*Chamaedorea tuerckheimii* is attractive to collectors and horticulturists due to its dwarf nature and striking leaf shape. There is evidence of native populations being exterminated by collectors and the international plant industry. For this species to survive in its native habitat, intervention is needed. It remains to be seen whether Guatemala, Honduras, or Mexico can sustain this species as an

economically sustainable crop, which would provide plants for the plant trade, as well as ensure its survival/recovery in the wild.

The conversion of land from forest to agricultural and ranching areas has also caused loss of habitat, along with the loss of potential pollinators and dispersers.

**Current Conservation Measures**

*Chamaedorea tuerckheimii* is designated by the Mexican government as a species for Special Protection (Protección Especial).

It is distributed in protected lands and preserves in Mexico, Guatemala, and Honduras. Some of these larger areas include the Los Tuxtlas Biosphere Reserve (Mexico), the Sierra de las Minas Biosphere Reserve (Guatemala), and the Ruinas de Copán Park (Honduras). Even in nominally protected areas, the species is subject to exploitation or extirpation.

**Additional Necessary Conservation Actions**

Population genetic analysis would provide inbreeding and genetic diversity coefficients that would shed light on the genetic health of the remaining populations. Additionally, further ecological research is needed to understand the pollination and dispersal of this species.
Because this species is difficult to cultivate, horticulture studies would boost *ex situ* conservation efforts. *Ex situ* conservation collections are also needed and do not yet exist.

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