

A Little Palm, a Lot of Palaver

HEATHER DUPLOOY

AND

BRETT ADAMS

Belize Botanic Gardens

Po Box 180,

San Ignacio

Cayo, Belize



1. (left to right) leaf from *C. elegans*, *C. ernesti-augusti* and *C. oblongata*.

Xate (shah-tay) describes the *Chamaedorea* species, *C. elegans*, *C. oblongata* and *C. ernesti-augusti* (Fig. 1), used in the floral industry. The palms' attractive leaves stay fresh for up to four months, making them ideal for use in decorations and flower arrangements. Sadly their desirability has led to over-harvesting in Mexico and Central America and jeopardizes the health of their populations in the wild.

Such a threat is not new to this group of palms. The smallness and characteristic beauty of *Chamaedorea* species have long led to their exploitation, mostly in the form of potted plants, but also for leaves and, to a small degree, for inflorescences, such as with *C. tepejilote*. Unregulated gathering of seeds, leaves and the palms themselves from the wild has led to dramatic decline in several *Chamaedorea* populations (Vovides & Garcia 1994). Even plantations of farmed palms, often touted as saving non-timber forest products from overharvest, can add to, rather than relieve, the problems when initial stocks of seeds or plants are collected from the wild in such abundance as to upset the plants' ability to repopulate naturally.

Chamaedorea species are in trouble, and they are also causing some trouble for Central

American neighbors, Belize and Guatemala. Guatemala exports *xate* from the Petén region bordering Belize. The demand is great, and over-collection has depleted natural supplies of Petén's *xate* species (Oyama 1992). Relying on income from the plants the men who collect the leaves, called *xateros*, risk illegal incursions over the border into Belize where the supply is greater. The two countries already have a history of border tension, and reports of illegal entries and resulting arrests put a strain on emotions on both sides of the border.

An estimated 600–700 *xateros* make use of the Belizean forest, and *xateros* camps have been found as far as 40 km into Belize. They travel over several days camping out and hunting for food while they search for leaves. Because *xateros* are paid for quantity rather than quality, unsaleable leaves are cut from the

2. Belizean
'fishtail,'
Chamaedorea
ernesti-augusti.



palms to bulk up earnings. As supplies grow scarce in one area, the *xateros* move on to the next, increasing the amount of forest affected.

The *xate* harvest is carried on the backs of the *xateros* in bundles and taken to drop off points where horses pick up the accumulated loads. From the forest the leaves go to processing plants for sorting. Here the leaves are sorted into several grades, according to the price they will fetch on the market. Cutting unusable leaves plus wear and tear during transport means that as much as 60% of the *xate* collected winds up discarded. The sorted leaves are stored in refrigerated units until they are shipped to international floral wholesalers.

At present the demand is greatest for *C. ernesti-augusti*, locally called *fishtail* or *cola de pescado* (Fig. 2), and it is being cut at an alarming rate from Belize's forests. One area where *xateros* collect is in Belize's Chiquibul National Park, a forest reserve where the British Natural History Museum operates Las Cuevas Research Station. Dr. Nancy Garwood, Scientific Coordinator of the station, was concerned about the effects of the Guatemalan *xateros* in the reserve. Little is known about the long-term effects or recovery of *xate* species, and

Dr. Garwood wanted to increase knowledge about the Belizean *xate* situation, find out how much *xate* was in the Chiquibul forest and determine if a sustainable *xate* industry could be established in Belize. She applied for and received funding from the UK Darwin Initiative to research these issues.

The Darwin-funded project involves two major parts. The Natural History Museum, working with the Government of Belize's Forestry Department, is studying wild *xate* populations and the effects of wild harvest in the Chiquibul reserve. Belize Botanic Gardens is promoting sustainable *xate* farming in Belize. The botanic garden is exploring the economic potential of the palms grown in conjunction with other agroforestry products. The goal is to provide cultivation and marketing support to farmers so that they get the best crop and receive fair prices for their leaves. As of June 2004, initial germination experiments are complete, and a demonstration plot of the three most economically viable species established (Fig. 3). Farmers and the general public can visit the demonstrations, view information on growing *xate* and register to attend workshops later this year.



3. *Chamaedorea elegans* seedlings at Belize Botanic Gardens.

Representatives from three communities close to the botanic garden, San Antonio, Cristo Rey and El Progreso, work together as ITZAMNA society. The members of ITZAMNA manage a farmer's co-operative and are guardians of the Don Eljio Panti National Park. The farmers are interested in implementing organic farming techniques and finding alternative crops to replace or supplement income from slash and burn and vegetable farming. They are also worried about the evidence of *xateros* in their national park. Already 30 farmers from the three communities are willing to participate in the Darwin project.

There are many environmental benefits to farming *xate*. The palms are native to Belize. They can be grown organically at relatively low costs. They require heavy shade so farmers can keep existing forest mostly intact rather than clearing land to plant, or they can plant into existing agroforestry crops such as cacao and black pepper. The diversity can create a more stable income than relying on a single crop.

With careful management, *xate* could become a profitable industry for Belize. It will need properly educated producers, an infrastructure and a careful study of what it will take to keep the industry going. Unfortunately recent press about the Guatemala-Belize *xate* situation has convinced some that planting acres of *xate* or cutting leaves from the forest will guarantee a prosperous future. Would-be entrepreneurs in Belize are jumping aboard the *xate* bandwagon with no indication that they have weighed the environmental or financial risks. Without strong government policy and enforcement,

Belize could wind up in the same situation as Guatemala, where demand exceeds a degraded supply, or like Mexico where other palms have been overexploited to the point of extinction.

Many international organizations are willing to assist in solving problems of over-exploitation of the plants and people involved in *xate*. Groups such as Rainforest Alliance, Asociación Coordinadora Indígena Campesina de Agroforestería Comunitaria Centroamericana (ACICAFOC), Alianza para un Mundo Justo and Belize Community Service Alliance are also involved in projects focusing on the social, economic and environmental aspects of *xate*. The groups are looking at the problem from different angles such as linking conscientious buyers of leaves with sustainable sources, trying to ease border tension, job training to provide alternative income, community farming endeavors and sustainable farming projects. With their efforts and the Darwin project leading to heightened public awareness, buyers may begin demanding sustainable *xate* for their flower arrangements helping to change the fate of the plants and the people involved.

LITERATURE CITED

- OYAMA, K. 1992. Conservation and exploitation of tropical resources: The case of *Chamaedorea* palms. *Environment Update. Evolutionary Trends in Plants* 6(1): 17-20.
- VOVIDES, A.P. AND A. GARCIA BIELMA. 1994. A Study of the in situ situation of four species of threatened understory palms of the genus *Chamaedorea* in the wild in the state of Veracruz, Mexico. *Principes* 38: 109-113.

CLASSIFIED

PERMANENT BOTANICAL GARDEN SIGNS FOR PRIVATE OR PUBLIC COLLECTIONS. Call or write for brochure. Phone: (760) 723-1354; Fax: (760) 723-3220; e-mail: <palmnut@pacbell.net>. Gary Wood, PLANT SIGNS, 960 El Caminito, Fallbrook, CA 92028. Web Page: <http://www.plantsigns.com>

AMAZONIA. Palm, cycad and exotic fresh seeds. Catalog: 707 palm species. Tell us your preferences, we will advise you when seeds are available. Amateurs (10 seeds minimum) and nurseries. <http://www.amazonia-online.com> Our address: amazonia@amazonia-online.com