

Exploring for *Persea* in the Cuchumatanes, Guatemala

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Introduction

The "Cuchumatanes", known also as "Cubre de los Chuchumatanes" or "Altos de los Cuchumatanes", is a mountain range as high as the Guatemalan volcanoes, reaching 3,837 meters above sea level. It crosses two Departments, or Provinces, in northern Huehuetenango and northern Quiché, extending from the Mexican border almost to Alta Verapaz near the Rio Negro. The majesty of the Cuchumatanes, like a chain of volcanoes, is seen from its base at Chiantla and Zuculeu (Fig. 1). On its summit (Paquix), there is a monument to the poet, Dieguez Olaverri, who wrote a famous song to his Cuchumatanes. Of interest, two Guatemalan Nobel Laureates were born in the Cuchumatanes, a record for all of Latin America.

One of the sections presented in this paper is about Todos Santos Cuchumatanes. A classic book was written in 1950 by anthropologist Maud Oakes, who lived almost three years in that remote village of the Chuchumatanes without roads and electricity. After a road was opened in 1954, I visited the primitive town by Jeep, after a Catholic priest went for the first time to work there, also by Jeep with a four-wheel drive. Now back to *Persea* explorations.

It was in this region that we encountered a dense forest of an important species we have studied for two decades. Here also we found several centers of *P. drymifolia* (some very primitive) and many Guatemalan criollos. Here, too, we found the Quetzal

bird living among a high population of *P. donnell-smithii*.

Discovery of the Nubigena Forest

Early in 1972, seven months after starting to collect wild avocados for the UC/Riverside project, the first author went by four-wheel drive Jeep to the other side of the Cuchumatanes, accompanied by Dr. Lee Huhn— then working for famous Dr. Carroll Behrhorst in Chimaltenango.

We camped first in San Mateo Ixtatan, a town of salt mines and production, at about 8,400 feet above sea level. The next morning, after following the rough road toward the other side of the Cuchumatanes, we suddenly spotted a dense forest of *P. nubigena*. Close to a hundred old trees of this species were glowing with the first rays of the sun shining in this cold region. As I stopped the Jeep, like a miracle in this remote region, a man who would be my guide for the rest of the day appeared from the forest. He brought immediately some seedlings with the typical oblate seed of *P. nubigena* still attached to the root system.

Our guide-to-be, a Mam-Mayan from Nuca (a locality or hamlet named after the cloud forest), told me that this avocado is known as "on" or "onte" in the Mam dialect. It is also called "on de la montana": "avocado of the mountain."

(This first encounter with such a forest of *P. nubigena* motivated me to return to it in 1973, with Martin Grande. On that occasion, we collected over one hundred of the fruits that are characterized by their typical oblate shape when mature.) We regard *P. nubigena* as one of the ancestors of the avocados.



Martin Grande

The Quetzal and *Persea donnell-smithii* in the Cuchumatanes

As we drove from the forest toward Barillas, we passed a hamlet with the appropriate name, "El Quetzal." Here we encountered for the first time the resplendent Quetzal bird that abounds in this region. The Quetzal found in some cloud forests from Chiapas down to Nicaragua is of the Sub-species *Pharomacrus mocinno mocinno*. In contrast to the one found in Costa Rica and Panama, these belong to the Sub-species *Pharomacrus mocinno costarisensis*. The wild *Persea*, *P. donnell-smithii*, is the main food of the Quetzal, symbol of Guatemala, and abounds in the Cuchumatanes between the hamlet of El Quetzal and Barillas. The bird and its food source are shown in a photograph by Thor Janson.

Wild Matulojs in the Cuchumatanes

Two "wild" matuloj (*P. drymifolia*) trees were discovered in the Cuchumatanes in the decade of the 1970s. These were studied in the company of Martin Grande and Martincito during several trips made to two distinct and very distant areas within the Cuchumatanes.

The Wild Matuloj of Cunen

On the east side of the Cuchumatanes, near the town of Cunen, alone in 1973 with a local Mayan guide, Cristobal, I [E. S.] entered a forest of wild oak and pine trees in a limestone area with a little river running through it. Cristobal showed me an old tree off! *drymifolia*, growing above the stones and wild bushes and flowers. I took the strange round, anise-scented fruit to Dr. Wilson Popenoe at Antigua. He smiled while we drank coffee on the porch of his famous house. Then he said, "Gene, as you said, it is a wild one, since I always thought that a true wild *P. drymifolia* must have round-shaped fruit." We were also amazed by the large, scented leaves.

I have never returned to the area since 1979 when the violence broke out. Only God knows if the tree is still standing there. Cristobal's brother, I learned in the '80s, was tragically killed. Very close to this area is where Guatemala's second Nobel Laureate was born—a true Mayan lady.

The Wild Matuloj of San Juan Ixcoy

In 1972, I drove with some friends from Holland in a Jeep I had then to see the Cuchumatanes. (He was an agronomist.) A few months earlier, I had found by accident a matuloj tree near San Juan Ixcoy in the Cuchumatanes—a town on the north side of this mountain range. The fruit of this very old tree, over 100 years old, was oblong, with a strong anise scent, and with typical arachnoid inflorescence. Since for many years I

had heard of a similar *P. drymifolia* that Professor Zentmyer (the second author) had found in northern Mexico, I considered this also to be a wild matuloj. It is also known in the Huehuetenango region as "matulito." This Mexican-type avocado has previously been considered native only to Mexico. Some of these matuloj collections in the Cuchumatanes have the aspect and appearance of being indigenous trees.

I conclude this section with the comment that we are studying four interesting *P. drymifolia* trees near Chiantla, all different but growing in the same valley at the foot of the Cuchumatanes.

The Guatemalan Criollos of Todos Santos

For two decades, we have been studying several trees of Guatemalan criollos in the famous town of Todos Santos and its vicinity. As mentioned in the introduction, this town was studied intensively by anthropologist Maud Oakes several decades ago. Both authors visited Todos Santos and surrounding montane areas in 1978.

One interesting fact is that the Guatemalan criollos (*P. americana* var. *guatemalensis*) grow here under severe cold climatic conditions. Todos Santos has some frosts every year, since its altitude is close to 8,000 feet about sea level.

These Guatemalan criollos grow very vigorously in sandy soils in the midst of potato and corn fields.

We are presently studying two of these criollos as having possible special interest for the UC/Riverside project.