

COLLECTING PERSEA IN THE REPUBLIC OF EL SALVADOR

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The Republic of El Salvador with its 21,200 sq. kilometers, is located along the Pacific Coast of Central America. It borders with Honduras to the north and with Guatemala to the west.



Before the Spanish "Conquista," El Salvador was known in the nahuatl language as *Cuscatlán*, meaning "land of riches." El Salvador is crossed by the "Sierra Madre" and the "Cadena Costera." Even with its size, the country has 20 volcanoes that start near the Guatemala border and extend to the gulf of Fonseca towards Nicaragua.

The first collections of *Persea* were made by G. A. Zentmyer in previous years starting in 1956. One of these collections of interest was the "Aguacate de Mico" that he collected at the summit of volcan El Boquerón (volcan San Salvador) 1,887 meters high. Recent collections were made starting in 1971 and explorations were continued during 1972, 1973, and early 1974.

In recent years, four distinct regions were explored as can be seen in the map of El Salvador. These regions are: Santa Ana volcano, Monte Cristo, Chalatenango, and the Izalco and Sonsonate region.

Santa Ana Volcano Region

Volcano Santa Ana is 2385 meters in altitude and is the highest along the "Cadena Costera" and in the country. When reaching the original cloud forest at Los Andes (Figure 1), a large population of trees of "Aguacate de Mico" or "Aguacamico" as locally known, was found by Schieber in June 1972. Trees are located very near to the crater of Santa Ana volcano. This interesting primitive *Persea* is a true *P. americana*, and possibly a close ancestor of the edible avocado. The fruit is round, dark green, very hard-shelled, with irregular skin and bitter flesh. Animals like squirrels will eat these fruit. The seed is large and oblate like the "Guatemalan criollos" and somewhat larger than that of *Persea nubigena*.

Trees that were over 100 years old were found in this region. These are very tall and vigorous and the trunk has a white-gray appearance from the distance. We have collected in recent years many seeds of these trees of "Aguacata de Mico."

The cloud forest of Santa Ana volcano has also some species of *Phoebe*, which is not a true *Persea*.



Figure 1. First trees at edge of cloud forest at Volcan Santa Ana, are true wild *Perseas*.



Figure 2. Fruit of *Persea nubigena* collected at Monte Cristo in El Trifío.



Figure 3. Very old trees of *P. nubigena* in the Monte Cristo cloud forest.



Figure 4. Branches and fruit of "Cola de Pavo" that we know as "Aguacatillo" in Guatemala.



Figure 5. Scene at the Sonsonate market.

Monte Cristo (Tifiño) Region

This region is located between the borders of Honduras, El Salvador northern border and the eastern border of Guatemala. It is a very high (for the country) cloud forest at about 2200 meters above sea level. The region belonging to the "Sierra Madre" is called

also the "Trifiño" since all borders come here together.

In the cloud forest of Monte Cristo, several trees of what is locally named "Aguacate pequeño" (also wrongly named as "Aguacate de Mico") were identified as *Persea nubigena*. The same trees located by B. Waite previously, were observed at the entrance of Hacienda Monte Cristo, near the Honduras border.

Trees are very old (Figure 3) and abundant through the whole region. Some younger trees were also located. Fruits (Figure 2) are similar to the *P. nubigena* trees of Xixoy-Tecpán in Guatemala.

In this region, *P. Vesticula* has been also reported, but has not been seen by us (1).

Chalatenango Region

In the high mountain range (2000 meters) of the Esesmiles, north of the Department of Chalatenango, and close to the border with Honduras, *Perseas* were explored. At Ojo de Agua, on the left side of Rio Chiquito, and on the road to San Ignacio, driving towards Las Pilas, at the Salvador-Honduras border; two different types of trees of Lauraceae were located.

The first trees known locally as "Cola de Pavo" are actually the same as the "Aguacatillo" trees found by Johnson and Schieber in 1971 on the slopes of volcán Acatenango in Guatemala (Figure 4). The other trees found here at Ojo de Agua, were of *Persea nubigena*. In this region, *P. Steyermakii* was found and collected by Standley located at Standley Herbarium in El Zamorano, Honduras. However, the forest here near the border with Honduras, has been cut down in recent years. This is why we could not find any trees of *P. steyermakii* during our explorations.

Izalco and Sonsonate Region

On the Pacific Coast of El Salvador, one of the most important trading centers is the city of Sonsonate. Here at the market, several collections were made. These were from Apaneca (see Figure 5). Nahuizalco and Ahuachápán. Before reaching Sonsonate, two collections were made in the town of Izalco near volcano Izalco.

Some of these interesting collections included round, green semi-hard-shelled types that are locally known as "Guatemaltecos" and are true Guatemalan criollos. These come from the slopes of volcanos like in Apaneca (1854 m) and Laguna Verde (1851 m). These come then from cooler areas of the "Cadena Costera" in western El Salvador, and are an interesting and different type of native avocado for our collections in the search for resistance to *Phytophthora* root rot.

In the "Flora Salvadoreña" (2) published in 1941 by Salvador Calderón and Standley, they list the following *Perseas* for El Salvador: *P. americana*, *P. drymifolia*, *P. amplifolia*, *P. caerulea* and *P. schiediana*.

In our explorations, we have found several specimens of *P. schiediana*, however, no *P. drymifolia*, *P. caerulea* or *P. ampifolia*. Also a tree called "Cachimbo" was believed years ago to be a true *Persea* however, it is rather a *Phoebe* or *Nectandra*.

LITERATURE

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