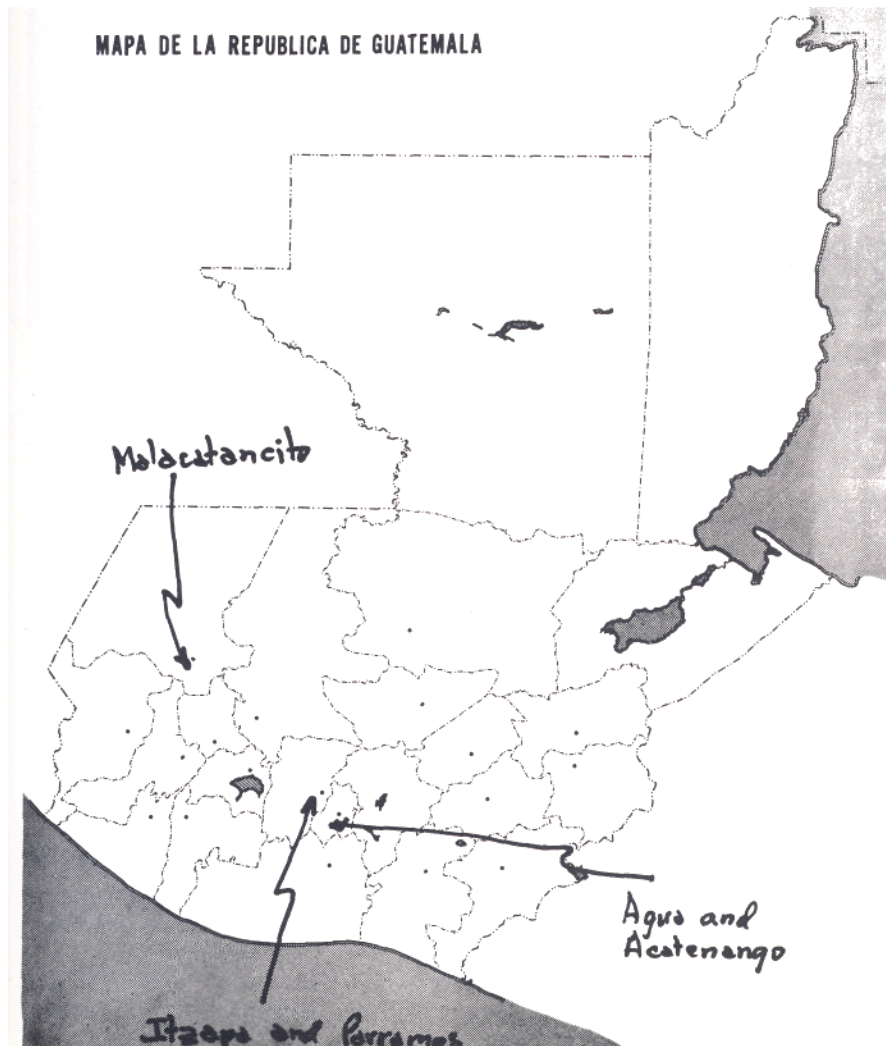


COLLECTING "MATUL-OJ" TYPES OF PERSEA IN GUATEMALA

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Introduction

During the year 1973, collections made in Guatemala included many types of "Matul-oj".

This word in cakchikel (a Mayan dialect in central Guatemala) means: Matul = small or little, and oj = avocado. Spanish speaking people in the region also call these types "Aguacate de Anís". All "Matul-oj's" belong to *Persea americana* v. *drymifolia*. Matul-oj's are characterized by having a very small fruit, ranging from red-wine in color to almost black in certain types. These fruit can be round, ovoid, or pear-shaped and somewhat pointed (Fig. 1). The base of the fruit where the peduncle starts has the persistent perianth segments. The other characteristic is the anise odor of the leaves when these are crushed, also sometimes the green fruit. On the underside, leaves show a bluish-green color. Trees even when old are broadly spreading and do not become very tall.



Figure 1. Different Matul-oj types collected in central Guatemala.

Matul-oj trees are typical of the cooler climate (sub-tropical region). In the Guatemalan highlands, three important centers have been located where Matul-oj trees and types are in abundance. These centers are: 1) Malacatancito in the province of Huehuetenango near the Mexican border, 2) Itzapa and Parramos region in the central highlands, and 3) the slopes of Agua and Acatenango volcanos in central Guatemala. In this article we want to describe some of these trees located in the above mentioned centers.

1) Malacatancito, Huehuetenango

The region of Malacatancito is about 5,000 feet above sea level and belongs to the province or department of Huehuetenango that borders Mexico. Soils are sandy and the rainy season is short compared to other areas in Western Guatemala. Many Spanish speaking people called "ladinos" live here in small farms scattered in valleys and mountains. Oak and pine trees are the typical vegetation of the region, and corn plantings are seen between forests of these trees. Mainly at the edges of these

plantings is where we have located trees of "Matul-oj" or Aguacate de Anís.



Figure 2. Collection Gu-165, a Matul-oj collected at Malacatancito, Huehuetenango.

Three important collections were made in the area. The collection labeled Gu-165, is a tree over 60 years old according to natives of the region. The fruit and vegetative parts have strong anise scent. Fruit is first red-wine in color, later turning black and shiny with very thin skin. The average size of the fruit is 6 cm. long x 4 cm in diameter (Fig. 2).

Close to this tree a contrasting type was collected and labeled as Gu-166. Eighty fruits of this strange looking type of Matul-oj were harvested. Fruit is small like other types of Matul-oj's, ovoid pointed, however, with dull purple-black color and striking irregular skin. Fruit average 6 cm. long x 3-4 cm. in diameter. Local people believe that the tree is over 70 years old.

Recently a third type Gu-335, was located in the property of doña señora Francisca Argueta, across the river at the entrance of Malacatancito town. The tree according to doña Francisca is over 80 years old. Fruit is larger than others in Malacatancito area, and vegetative parts have a strong anise scent. Fruit is purple-black and with a striking red peduncle, with a very pointed seed. Average size of fruit is 6.5 x 4 cms. We harvested 44 fruits of this tree that doña Francisca calls "Matulito".

2) Itzapa and Parramos Region

During the month of August, an intensive collection was made of Matul-oj types in the Chimaltenango valley, covering the towns of Itzapa and Parramos and vicinity. During this time of the year, Matul-oj trees are bearing fruit. This region is at 6,000 feet elevation in the Central Guatemalan Highlands.

Two new Matul-oj trees of different types were located in the Joya del Aguacate (meaning in Spanish = small valley of the avocado) that is located about three miles

southeast of Parramos in the province of Chimaltenango. At the base of the mountain Cerro San Gabriel, is this area with corn and pine trees and some oaks. The two types here described are different from all other "Matul-oj" types collected previously in Guatemala.

The first collection, labeled as Gu-332 in our records, has an ovoid fruit, pointed, with purple (wine) color and smooth skin. Vegetative parts have a strong anise scent, and the tree is about 50 years old. Natives eat the fruit in this region.

The second collection (Gu-333) at the Joya del Aguacate has almost round and purple fruit, however the color is dull. Vegetative parts including fruit have an anise scent. The tree is believed to be over 50 years old.

Also near the montaña de San Gabriel, a third collection (Gu-346) could be made. Fruit is purple-wine in color, with rough skin. Flesh of the fruit has striated pink lines; fruit is 7 x 5.5 cms. in average size. In Los Encuentros, in this region, another collection was located (Gu-347) with its fruit purple, shiny and with very smooth skin. The flesh is very green colored and fruit is 5 x 4 cms in average size.

A fifth collection (Gu-348) of Matul-oj, located in Chito, is one of the oldest Matul-oj trees collected, probably over 100 years old, with large leaves, with anise scent and bluish undersides. The trunk of the original tree is older than the Matul-oj tree described previously for Cunen, Quiche in last Yearbook.

In the Itzapa area, a Matul-oj tree labeled as Gu-349 was located (Fig. 3). This is a vigorous tree in the property of Señor don Salomón Barrera from Itzapa. The tree has vegetative parts with anise scent. Fruit is purple, shiny and larger than the other Matul-oj's in the area, with size averaging 6.5 cm long x 4.5 cm.

Another tree (Gu-326) was located in the Itzapa area on the property of Román Capiel. It has smooth black skin and with anise scent of all vegetative parts.

It is of interest that Dr. Wilson Popenoe always considered the region of Parramos as one of the centers where Matul-oj trees grow in central Guatemala.



Figure 3. A Matul-oj collection from Itzapa region in Chimaltenango.

3) The Slopes of Agua and Acatenango Volcanos

Acatenango with its 3959 meters and Agua, 3752 meters high, are the third and fourth highest volcanos of the 42 existing in Guatemala. The slopes of these volcanos are cultivated and as you reach two-thirds of the height the original forest (cloud forest) is found. On the slopes of both volcanos small towns where natives live are encountered.

At San Juan Obispo, a town between Antigua and Santa Maria de Jesús on the slopes of Agua volcano, one Matul-oj tree was located, recorded as Gu-271. Local people call it "Aguacate de Anis", a tree over 30 years old. The leaves have the typical anise scent, and the fruit is medium size, pear-shaped and of red-wine color. The branching of the tree is similar to the tree described on the Acatenango slopes.

One tree located above aldea Concepción on the northern slopes of volcán Acatenango, at an altitude over 8,000 feet in the edge of the cloud forest has been under study. The tree stands on cultivated land, and its vegetative parts have the anise scent (Fig. 4 and 5). Its black-purple fruit is ovoid. This collection is labeled as G-6 in the records of the University of California at Riverside.



Figure 4. Tree of collection G-6 of Matul-oj on the slopes of Acatenango volcano.



Figure 5. Leaves and green fruit of collection G-6 at the Acatenango slopes.