

Guatemalan Trip

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Mr. Chairman, Ladies and Gentlemen: Three of us went down to Guatemala—Carter Barrett, Carl Crawford, and myself. We left the last day of January and went by automobile to Nogales, Arizona. There we boarded a Lamsa (Lineas Aereas Mexicanas, S. A.) airliner and flew to Mexico City.

The airplane is truly a magic carpet. It takes you over vast country fast, and in Latin America, where the roads and railroads are frequently inadequate, the airplane makes a convenient and comfortable means of traveling. Your fellow passengers include whole families with many children. Our attractive stewardess was very proud of one woman passenger traveling alone with her two-weeks-old baby in her arms. The airplane is becoming the means of travel for all ages and all peoples.

We stopped in Mexico City only long enough to transfer to Pan American Airways for our flight to Guatemala City. We left in the middle of the night, getting what sleep we could in the comfortable reclining seats of our Douglas DC-3 plane. When daybreak came we were over the coastal plain with the Pacific Ocean on our right and the high mountains of Central America on our left. Underneath we could see the green patches of the banana plantations, and one of the volcanoes on our left was smoking. It was a spectacular sight with curls of smoke rising into the air.

Later in the morning we dropped onto the airport at Guatemala City. The airport was very modern, as were also all of the facilities. All arriving passengers were presented with a cup of Guatemalan coffee, compliments of the Guatemalan Department of Agriculture. Guatemala is very proud of its coffee, raised in the highlands of their country. Because of its superior quality it is used in coffee blends throughout the world to bring up the flavor.

From the airport we were taken by taxi to our hotel, the Colonial. This is not a tourist hotel, being more like our commercial hotels. Rooms were not available in the luxurious tourist hotels, but in any case we wished to avoid the tourists and mingle with the Guatemalan people. Our rooms were clean and the service very friendly. Our bath, or bano, had hot and cold running water. However the hot water came out of the cold water faucet and the cold water out of the hot water faucet. The plumbing fixtures were from the U. S. A. and the Guatemalan plumber had done the best he could using the "C" for caliente (Spanish for hot) which left the "H" for frio (Spanish for cold).

The Guatemalan back country is very primitive, but the city of Guatemala is very modern. When you are in the downtown section you might just as well be in the downtown section of one of our cities. They have the usual stores along the streets, with window displays and even neon signs. In the windows you see a lot of things we haven't

been seeing here—Arrow shirts and nylon hose.

The streets are kept very clean. Crews of men in uniform keep the city streets immaculate. They are so clean that when I wanted to spit in the street, I looked up one way and down the other wondering if I dared or not.

The residential section is in the Spanish mode. Most of you should be familiar with Spanish architecture. The houses come right up to the sidewalks and they are shoulder to shoulder after the manner of downtown sections in this country. In the back of each building is a patio with all rooms opening off of it. It usually has a fountain and a profusion of flowers. The life of the home is most active in and around this patio.

This type of architecture makes the streets narrow and deep canyons; consequently, all the intersections are blind corners. However, they control their automobile traffic very carefully. They have at every intersection of any importance a policeman who stands on a square platform placed a little above the street. He takes his job very seriously. When he stands facing you, or with his back to you, the traffic may go right on through the intersection, although slowly. If he is turned sideways so that you see his profile, you stop until he indicates you can go. If you wish to make a right hand turn or left hand turn, you come up to the intersection, stop, and indicate with a signal which way you want to go. Only when he gives the proper signal do you make the left or right turn. They do not permit fast traffic—a great deal different than in Mexico City where they drive like mad.

Most of the people who live in Guatemala City dress like we do. There are always a sprinkling of Mayan Indians on the streets dressed in their intriguing native costumes and usually barefooted. The Indian women carry their bundles—great big baskets sometimes—balanced on their heads. You often see them trotting down the street with their hands swinging at their sides, with these great big loads. The junior member of the family, a little baby, is often taken along swung on its mother's back in a large bandana-like sling. If it is dinner time, the infant is slung out in front, and the baby is nursing while they trot up the street.

The Indian men never carry their loads on their heads. They tie their loads on a wood framework carried across their backs. It is supported by straps running up and across the forehead, causing much of the weight to be supported through their necks. These Indians have incredible endurance. They are little fellows not much over five-foot one or two inches high. These loads on their backs—maybe it would be pottery they were taking to market—were sometimes one hundred fifty or two hundred pounds. They trotted with these great loads covering many miles on their trip to market.

A place is set aside for the native market where the Indians are allowed to bring in their produce or hand made articles and display them for sale. It is very interesting and very colorful. Each Indian community has a different costume. If you know these costumes you can tell from which village the natives came.

We spent several days in Guatemala City visiting the points of interest, looking at some of the beautiful buildings, cathedrals, etc. The climate there is quite similar to ours here, pleasantly warm in the daytime, and cool at night. I observed no equipment for heating the houses. It is milder and more uniform than our climate here.

After a few days we began to get restless and wanted to see some of the back country. We decided to take a trip to Antigua. Carter Barrett, who had been nursing a cold when we left this country, thought it advisable not to accompany us. Carl Crawford and myself got on a bus and went to Antigua. This bus turned out to be a large station wagon and we were crowded in with Guatemalans until every space was filled.

Most of the passengers had been shopping in the city and they all had considerable things with them. It was surprising how much produce and livestock and what not was on that bus. One man who was sitting quietly in the bus all the way, when he got off at his stop pulled out from under his coat, not one, but two live chickens. Another man had a very large net bag that he had brought along. This, of course, was too big to go in the bus, so they put it up on the roof. In this bag was a live pig with its feet tied, a large quantity of avocados and other produce, all in loose together, and the pig protesting very loudly.

The roads in Guatemala are well engineered but not surfaced, and as this was the dry season there must have been several inches of dust. Every time another car passed us we were enveloped in a cloud of dust. We continuously passed Indians walking, as they could not afford the bus ride. Their colorful costumes and great loads gave never ending interest to the picturesque country side.

As this was mountainous terrain, the roads had many turns and many steep grades. In places it was heavily wooded. These roads were constructed and largely maintained by hand labor and we frequently passed gangs of Indians repairing sections of the road.

We arrived at Antigua at dusk. We put up at the Alcazar Hotel which was an old restored colonial mansion. Our hotel was built around a magnificent patio with a brilliant array of flowers and bougainvillea. In one corner was a large pepper tree in which lived a live monkey. Our accommodations were modern and very comfortable.

Antigua is over four hundred years old. It was the original Spanish capitol of all Central America having been founded by Alvarado who conquered Guatemala for Cortez. It was abandoned as the capitol of Guatemala after having been shaken down repeatedly by earthquakes. Today it is partly restored but is only a sleepy Puebla surrounded by the ruins of its once great glory as the first city of Spanish Central America. There were eighty church cathedrals in this once great city; now they lie in ruins, only a few having been restored for use. The visitor is amazed by the architecture and great engineering feats of these ancient Spaniards. Aqueducts still bring water down from the mountains, feeding fountains everywhere about the city. Dr. Wilson Popenoe has restored an old mansion and has filled it with antiques of the early period. Unfortunately he was unable to be present during our stay, but we were shown through the house by his caretaker, Maria.

In the area surrounding Antigua are many coffee plantations or Fincas as they are called there. Coffee is grown in the shade of other trees. Under this canopy of planted shade trees the coffee grows on bushes about the height of a man. It is a spindly green bush with small green leaves with the berries developing along the slender branches. The harvesting and culture operations are largely hand labor, which is very cheap in Guatemala.

People that own these coffee fincas seem to be very prosperous, something like our larger citrus and avocado ranchers here. People who have these plantations usually have a home in the country on their plantations and usually a place in Guatemala City also. They are able to travel and send their children abroad for education. It is certainly an ideal life.

We spent five very delightful days there in Antigua looking around, walking up the roads investigating coffee fincas and Indian villages. One of these Indian villages is quite famous for its weaving. These Indians weave blouses, which the natives call a huipil, a very fine intricately woven garment. In this particular village we went up to this little home, where a very pretty Indian girl was working on her hand loom. This hand loom is a small affair fastened at one end to a convenient post and the other end attached to a harness around her hips, which leaves her hands free. She can vary the tension by how hard she leans against this harness.

The girl had a basket alongside of her in which her supply of thread reposed. The thread was DuPont rayon. Also in this little basket was a little printed booklet of Indian designs. The booklet was printed in Paris, France. The Indians like their Paris styles, too. Unfortunately, they are losing the art of their original designs.

After leaving Antigua, Carter Barrett joined us and we went up country to Lake Atitlan, which is one of the world's most beautiful lakes. It nestles in a valley with imposing mountains all around. It was very beautiful, the water deep blue in color. Across the lake there loomed two great volcanoes, giving an effect like a Japanese print. The sunsets were gorgeous. It was a delightful spot and we were reluctant to leave. We were able to stay there only two nights and one day.

We were anxious to go on up to one of the principal Indian cities and see one of the really big native markets. Every Indian Puebla had a market day once a week in which natives from miles around came into town for the day's selling, buying, and festivities. The day of the week on which market was held varied with different communities, but the custom was universal. We were taken by private car high up into the mountains to the Indian city of Chichicastenango. Here market day was on Sunday and there were supposed to be as many as five thousand Indians in this market. I could well believe it, because the plaza was swarming with Indians in many different but colorful costumes, with Indian wares and food displayed in great profusion.

At the end of this plaza was a cathedral. On the steps of the cathedral the Indians were doing some of their religious rites of a pagan nature— burning incense, asking their gods to bless the corn for the planting. Inside this cathedral were other Indians following the Catholic rites. On the floor were rows of burning candles with kneeling Indians saying their prayers in audible chant. Reluctantly we left these intriguing surroundings and returned to Guatemala City homeward bound.

As avocado growers, you will be interested in hearing about avocado culture in Guatemala. There are no orchards as we know them but many individual trees. These trees are everywhere, in back yards, among the shade trees in coffee fincas, and scattered as occasional trees throughout the country side wherever people are living. These trees produce plenty of avocados and the local markets are well supplied with fruit at a cheap price. We were told they sell as cheaply as a cent each with individual

fruit as large as two to three pounds. Guatemalans like their avocados large.

All their avocados are seedlings of the Guatemalan race. They bear heavy crops in alternate years. The soil in Guatemala is of volcanic origin, well drained, and alkaline in chemical reaction. We were shown many old trees which were of large size but if their age was stated correctly, they were not large for their age. This may be due to lack of irrigation in their dry season. The trees must get along the best they can during the winter dry season as no irrigation is regularly practiced on any of the avocado trees we observed. I saw no wilt on any except young trees.

Their methods of harvesting are very primitive. Sometimes they knock the fruit off, or let it fall to the ground from natural causes. We were shown a long pole on the end of which was lashed a forked stick, something like a youngster uses for a slingshot. This forked stick is placed over the stem of the avocado and given a twist, and down comes the fruit with part of the stem still attached. These avocados are all of the hard shell type and seem to be able to take a hard fall with little damage.

The avocados we were served did not seem to have as much oil content as we expect here. That may be due to the fact that in Guatemala the fruit matures early. We were there in February and the trees were coming into heavy bloom. It was about mid-season for the old crop. Here it takes about fifteen months to mature Guatemalan avocados, while in their home country it takes but twelve months. Perhaps the quicker development is due to the longer growing season, and this causes the fruit to mature rapidly without developing quite as much oil content.

Julio Montano, a government official in Guatemala City, has as a hobby, set out the only avocado orchard in the country. He has five acres planted to seedling trees about five years old. He looked us up and took us through his planting. He wanted to bud his trees to the best local seedling and Carter Barrett showed him the technique of budding.

As to the diseases and insect pests of avocados, I looked very carefully and saw surprisingly few. I did find an occasional *latania* scale and a few leaves infested with brown mite. As no pest control of any kind is practiced, these insects must be held in check by predatory insects. These predators are doing a better job in Guatemala than ours are here. They do have some insects we do not have here. One, a leaf insect, stings the under side of the avocado leaf and deposits its eggs, causing a warty growth to form. Most avocados in Central America have their leaves covered with these little warty growths. It is very unsightly, but apparently does not interfere with the avocado producing its fruit. They also have a seed weevil which bores into the fruit and tunnels all through the seed. This pest might be very serious if it were introduced into this country.

Wilson Popenoe, when he was doing experimental work for the United Fruit Company, imported several budded Fuerte avocado trees. We found them large vigorous trees but we were told they never matured a fruit. The fruit would reach about half size then drop on the ground. Examination of these fruits showed a little hole entering the flesh and extending into the seed. It was our theory that this was caused by the seed weevil which was able to enter the thin skinned Fuerte while still on the tree and caused it to drop as a result of the damage to the living seed. The native thick skinned avocados apparently could resist the weevil until the fruit fell on the ground, at which time the insect could

enter through the stem scar.

We saw no evidence of avocado decline in Guatemala. The trunks of many old trees had dried fungus growth left over from the warm summer rainy season. This fungus seemed to cause no harm to the trees.

In passing, I should like to make a few comments on citrus. Some of you are citrus growers as I am. Most of the oranges there are seedling oranges, and yet I examined orange tree after orange tree and for a long time I did not find any insect pests at all. As with the avocados, there is absolutely no pest control program. I did finally find a few specimens of red scale, purple scale and red spider. I was told that a few progressive coffee plantation owners had imported some budded Valencia and Navel orange trees from this country and they, unlike the seedlings, were just eaten alive with pests, so apparently these seedlings have some immunity or resistance to these insects. The Guatemalan station of our Department of Agriculture, intends to see that selected specimens of these seedlings are imported to this country with the hope that they might solve some of our pest problems.

On the way back from Guatemala, we stopped off for a little visit in Mexico. We went over to Puebla and then to Atlixco to see the place of the parent Fuerte or "padre avocado" tree. It is dead, as you probably have been told. There is nothing standing but the dead stump in the back yard of this Atlixco home. The plaque that was placed there in 1938 is still there. It is heartbreaking to see that dead tree and realize what it has meant to the avocado industry. Mr. Crawford, who has been down there many times, counted the rings just after its death and found sixty odd, so that makes this tree over sixty years old.

At Atlixco we were the guests of Mr. Gilly, the owner and Mr. De Choulot, the Manager of Hacienda Xahuentla. This old hacienda has been restored and a large acreage developed to cattle and avocado orchards. Mr. Crawford has been there repeatedly before and has been helping them with advice on how to start and develop a commercial avocado orchard. They are budding part of the trees to the Fuerte, importing the wood from this country, and the balance to selected seedlings from Atlixco. They are going to have at least six thousand trees and will market their fruit in Mexico City, using modern packing methods.