

LETTER FROM ECUADOR

WILSON POPENOE

Eighteen months ago I met with you at Santa Barbara, and immediately following that meeting I sailed for the tropics to continue the search for avocados which the Department of Agriculture commenced, at your instigation, some five years ago. This trip, however, as planned by my superiors at Washington, was to be somewhat broader in its scope than the earlier voyages: not only geographically, but also in regard to the plants studied. We have planned to cover all the interesting avocado territory between Guatemala and Chile; and it has been our intention not only to look for avocados, but to obtain for introduction into the United States many other plants as well. It has not seemed desirable to limit the present work solely to avocados, for the reason that we have already covered the best avocado territory, and are reduced to less promising fields. If we limited ourselves to avocados, and found nothing of value, the voyage would be unprofitable: but if we gather in as many promising plants of all sorts as we possibly can, the work may prove profitable even in those countries which yield nothing of value in so far as avocados are concerned.

Here I am, then, after eighteen months of this fascinating work, high in the Andes and precisely at the longitudinal center of the world; and from here I wish not only to send my cordial greetings to all of you, but also to give you a brief account of the work accomplished thus far.

My immediate destination, upon sailing from California early in November 1919, was Guatemala,—that country which seems destined to play a more prominent part than any other in the development of avocado culture in the United States. It was with a thrill of pleasure that I once again set foot on Guatemalan soil, after an absence of two years; and as I ascended into the highlands on board the little train from San Jose, and saw the glorious cone of the Volcan de Agua reveal itself among the clouds, I was fairly beside myself with delight. Some day, when all of you have made your fortune, as you of course will do if you grow avocados, I would recommend that you organize an excursion to Guatemala, for the members of the Association: not only will you see avocado regions which will have historic interest for us, but you will also see one of the most beautiful and picturesque countries of tropical America.

I remained in Guatemala nearly five months, but the last two were not very profitable: not only was I overtaken by a red-hot Central American revolution, but in addition I was confined to the hospital for nearly a month by an unfortunate accident to one of my feet. Of what value, may I ask, is an agricultural explorer without two feet?

We had not planned, on this trip, to do much in the way of searching for new varieties in Guatemala. I had come to this country primarily to obtain a large supply of pedigreed seed for use in connection with our experiments. At Antigua I obtained this, and landed

it safely in Washington. There were seventeen lots in all, each representing a different avocado tree whose character and location were carefully recorded. The original collection of Guatemalan varieties, obtained in 1917 and 1918, is now being budded at Washington on these different stock-plants. It is our belief that ultimately we will find certain Guatemalan varieties to be more valuable for stocks than other varieties, and the work now being carried on is the first step in this direction. I hope that some day they will send me back to Guatemala to obtain a much more extensive collection of pedigreed seeds; or if they don't send me for this purpose, that they will send me for another. I hate to think of dying without seeing Guatemala once more!

While collecting these seeds in Antigua, I happened to find several choice varieties which were not encountered on the first trip. It was precisely the wrong season to cut and ship budwood (we have found, in Guatemala, that we can only obtain good results when we do this work in April, May and June); but I thought it worth an attempt, and sent buds of these varieties to Washington. I believe there were four in all, and one of them, No. 40 in my collection, is a most excellent fruit. Unfortunately, none of the budwood reached Washington in such condition that it could be saved. Perhaps we will have another chance to get these varieties: I hope so.

There are two very distinct phases of this work of avocado introduction: the first is to obtain varieties of good quality and good commercial characteristics, and the second is to see how they will behave in the United States. And I have become convinced that the explorer in the field must confine himself to the first phase, for he can form no accurate opinion respecting the second. My Nimlioh, obtained in Antigua during the earlier Guatemalan explorations, looked to me like a very weak grower, when I saw the parent tree, and I was not confident regarding its ability to make a strong, healthy budded tree in the United States. But I understand that it has shown itself, in Florida, to be one of the most vigorous of the entire Guatemalan collection. And Chisoy, which appeared to me in Guatemala to be a very strong tree, has proved to be so weak, when propagated by budding in the United States, that it will doubtless have to be discarded.

Therefore, I feel that the explorer should not attempt to judge a variety except upon its productiveness, the character of its fruit, and the ripening season: and in respect to the last named, I may say that he will find himself at sea in many instances, for in some parts of the tropics the seasons of the year are not well defined, and trees lose their normal periodicity.

From Guatemala I passed through Salvador, which did not appear to me to have anything of interest for us in so far as avocados are concerned, and went to Costa Rica, where I remained about three months. The cultivated avocados of this republic, practically all of them West Indians, are of little interest to Californians. I sent in several for trial in Florida, and I learn that two of them were saved at Washington: these bear the numbers 42 and 45 in the series of varieties I have been obtaining in tropical America these last few years. They should, perhaps, be tested in California, for this work of Plant Introduction is full of surprises: but I do not recommend them to you for general planting nor even for extensive trial.

The incident of outstanding interest during the course of the explorations in Costa Rica was the discovery, by Oton Jimenez and myself, of a wild avocado on the slopes of the

volcano Irazu. We found it in fruit, but not in flower: hence we have not yet been able to complete the botanical study of the species. But basing my opinion upon the character of the tree and its fruit, I am inclined to believe that we have at last fallen upon the true wild avocado, the prototype of the cultivated Guatemalan race and probably also of the West Indian.

The fruits of this wild avocado are the size of small oranges, quite round, and dark green in color, the general appearance being similar to that of many Guatemalan varieties. The shell is thick and hard, and the flesh, which is very scanty and of gritty texture, has a strong flavor of anise. We sent seeds of this species to Washington, and I am informed that about two dozen plants are now growing in the greenhouses there. While this fruit is of little value for eating, the plant will be tested as a stock for our better varieties. It is well-known that the wild forms of fruits which have under intensive cultivation reached a high state of perfection, often make admirable stock-plants, having more vigor than the cultivated varieties.

From Costa Rica I proceeded via Panama to Santa Marta, on the north coast of Colombia. This is a great avocado region, from which much fruit is exported to New York, and where, I am told, the avocado grows wild in the mountains. I expected to find the same wild form which I had just seen in Costa Rica, but I encountered, instead, a commonplace lot of West Indian seedlings which have become thoroughly naturalized in the mountains some 15 miles inland from the port of Santa Marta.

Among the varieties cultivated in this same region, I selected one for trial in Florida, and named it the Fernandez (No. 46). This avocado has been successfully established at Washington.

In general, the avocados of Santa Marta, referring only to the cultivated trees, are a rather superior lot of West Indians. Since, however, we are not at present devoting much attention to this race,—practically none at all in California,—and since the season was nearly past when I reached Santa Marta, I did not long remain there. An early-ripening West Indian would be of value in Florida, but I was not in Santa Marta at the right time of year to search for such a variety.

I next proceeded to Bogota, the capital of Colombia, where I made my headquarters from August to November, while collecting in the eastern Andes. The avocados of this region proved to be inferior West Indians, and I made no effort to introduce any of them. The same was true of the varieties found in the Cauca valley of western Colombia, through which I passed on my way to the Pacific port of Buenaventura, whence I sailed southward to Guayaquil.

On this trip down the coast I was fortunate in being taken on board an American tramp steamer, owned by the Shipping Board. She was not allowed to carry passengers, but the captain signed me on the ship's articles as Assistant Purser. The boat had just come from New York, and everything which came out of the galley had an unmistakable American flavor. I had been living on poor rations while crossing the Andes of western Colombia, and if you could have seen the way I waded into the pork and beans, or the facility with which I dispatched the doughnuts and apple pie, you would have been surprised if not shocked. The officers were complaining of the food, but no one heard a whimper from me.



—Photo by Wilson Popenoe

Market scene at Coban, Northern Guatemala. It is to such markets in the tropical cities that the natives bring their wares, including fruits, for sale. This is one of many visited by Wilson Popenoe, in his exploration work to secure new and finer varieties of avocados and other plants and trees. Occasionally a superior fruit will be found on sale in such a market. It is then traced back to its place of growth, and the tree on which it was grown is carefully studied.



—Photo by Wilson Popenoe

Part of a lot of 10,000 avocados, gathered in the highlands of Guatemala by Wilson Popenoe, explorer for the U. S. Department of Agriculture. They are being dried at Guatemala City, preparatory to the extraction of the seeds, which are to be sent to Washington. There they will be grown in the Department greenhouses, to be used as stocks for the buds which are being sent up by Mr. Popenoe from time to time, as valuable varieties are discovered.

I have made no mention of the miscellaneous plants which I collected in the countries

referred to above; the beautiful dwarf palm of northern Guatemala, of which I sent a thousand plants to Washington; the giant blackberry of Colombia, whose fruits are two and a half inches long by an inch and a half in thickness; and many other things which will be of interest to Californians. In order to keep this report within reasonable limits as regards length, I will confine myself to avocados: but I wish to call your attention to these other plants, because it would be difficult to explain, otherwise, my relatively long sojourn in certain regions, such as the highlands of Colombia, where there are no avocados of interest. avocados of interest.

I was put ashore in Guayaquil, and the day before Christmas I reached Quito, where I have since made my headquarters, and which I shall continue to use as a base until June or July. For I am finding Ecuador one of the most interesting fields I have ever worked, from the standpoint of general collecting; and just recently I have stumbled upon a nest of remarkable avocados which I think are worth our attention. The highlands of this country are full of small-fruited Mexicans, this race doubtless having been introduced here at an early day. On the coast there is the usual complement of indifferent West Indians, with a few good sorts among them.

Three weeks ago I loaded my blankets, collecting kit, and a few tins of California fruit on a pack mule, and climbed into my saddle for a trip northward to the Colombian frontier. I had no idea what I was going to find, nor exactly where I would go. The first day we rode to a ranch called La Providencia, and there we stopped over night: at least, we stopped part of the night, for at two o'clock we were up, and by three we had the animals ready for the trail. It was pitch dark, but my mule-driver knew the trail as well as I know the road to the Altadena post office, and we struck out for Ibarra. We rode nearly sixteen hours, and made the town after dusk. Here, after the customary argument with the hotel keeper in regard to rates, I obtained a dirty room with a bed so hard that pine boards would have been soft in comparison. And the fleas! They swarmed upon me, and greedily devoured the flea-powder which I fed them.

I arose in the morning feeling stiff and lame, but all this was forgotten when I found in the market-place an avocado which appeared to be a Mexican, yet was of remarkably large size for that race, and altogether an excellent fruit. I asked whence it came, and was told that it had been grown at San Vicente, in the valley of the Rio Chota, about five hours' ride from Ibarra.

So I prepared immediately to visit San Vicente, to see the numerous avocado trees I was told were to be found there. But suddenly, as I was walking through the street, I was hailed by an officer of the law, and hustled off unceremoniously to the police station. The Chief abruptly asked me where I came from, why I came from there, and what I thought I was going to do in Ibarra. I enlightened him on all these points. He then asked for my passports. They were in the hotel, so I offered to send them over to him. He said this would be satisfactory, so, accompanied by the gallant Lieutenant Ortiz, I went to the hotel and turned over my precious documents. I was informed that I could have them back at three o'clock. It takes a long time to examine a passport in Latin America,—it was then about nine in the morning.

That afternoon at the specified hour I presented myself at the Chief's desk and asked if I might be permitted to receive my passports. "No," said he, "you are under arrest. I have

learned certain things about your past, and have telegraphed Quito that you have been captured, and I am awaiting instructions."

Ladies and gentlemen of the California Avocado Association, I ask you was this not a bit disconcerting, just when I was on the eve of locating a valuable avocado?

The Chief would not tell me just what he knew about my past. I tried to recall something that I had done, something very wicked and horrible which would justify these proceedings, but I could not; so I simply telegraphed our Minister in Quito that I was held on suspicion, and begged him to aid me if he could. That night at about ten o'clock I received an answer which said:

"Your telegram received and matter presented to Minister of the Interior tonight."

With this in my possession, I slept peacefully, and when, in the morning, I presented myself to the Chief the matter was quickly cleared up: it appeared that they were on the lookout for a German who had stolen some money from Bogota and had started for Ecuador; and since my passport bore the vise of the Ecuadorian Legation in that city, and since it was evident I was a foreigner (the Chief did not distinguish between the different brands: Germans and Americans were one to him) he immediately jumped at the conclusion that he had made a big catch. No doubt he already had visions of a congratulatory telegram from his superiors in Quito, when my message from the American minister arrived to dispel them.

So we started for the North. In Ibarra I had made the acquaintance of a splendid young fellow, Jose Felix Tamayo, and he offered to take me to his hacienda, which was not far from San Vicente. I went very gladly: but while I was up at his place it began to rain, and the roads, I well knew, would soon be in terrible shape. So I started down to San Vicente, and found it already bad going. My horse fell beneath me, and I thought it safer to get off and walk. After an hour of nasty work, I came to a ranch house. Here I stopped to inquire the distance to San Vicente, and to ask if the road in that direction was as bad as the one over which I had just come. The man laughed. "Caramba!" he said, "that road you have been traveling is a good one. Wait until you see the gullies and mud-holes ahead." Encouraging, wasn't it? But fortunately, the man had lied. The road was not bad, and I reached San Vicente at sundown.

Here I found plenty of avocados: a few of them West Indians, many Mexicans, and two or three which looked like hybrids between the two races. I spent two days examining the trees, and finally picked out five varieties which looked promising. After cutting budwood of these, I started for Ibarra, and at a small town on the road I sent a telegram to Quito asking when the next mail would leave for the States.

Upon reaching Ibarra I found a reply to this telegram, advising me that the mail would leave on Sunday afternoon. It was then Friday evening. I was frantic. With good animals, and by riding steadily, I could not reach Quito in less than 20 hours, and I had yet to find the animals. In vain did I search for them. Finally I had to give up hope of catching the mail. It meant, very likely, the loss of all my budwood,—for there would not be another mail in less than ten days,—and in this case I would have to make a second trip to San Vicente, better timed to catch an outgoing mail.

I came slowly back to Quito, and upon arrival found that the next mail would not leave

for nearly two weeks. The budwood is packed, and lies here in my room as I write these lines. I do not have much hope of its reaching Washington alive, but I shall send it; and then I shall go back to the valley of the Chota and cut more, and if this does not go through in better shape, I shall repeat the procedure; and I shall fight it out on these lines if it takes all summer!

Ladies and gentlemen of the California Avocado Association, this business of hunting avocados is hard work. I do not say this boastfully, nor in a spirit of complaint, nor even to elicit your sympathy: Andean fleas are not afraid of sympathy, nor is Andean mud made more pleasant thereby. I feel—and I hope I am not mistaken,—that this is a work which is worth while, and in doing it I believe I have your moral support. And after all, it is not only a privilege, but a pleasure, to serve the people of our United States of America!

Quito, Ecuador,

WILSON POPENOE.

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