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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.



June 9, 1960

Dr. Wilson Popenoe  
Calle de la Nobleza 2  
Antigua, Guatemala

Dear Dr. Popenoe;

Dr. Paddock suggested that you would be interested in knowing that we are <sup>re</sup>activating the work at Uyuca. I was very much impressed with the wonderful set-up there and the excellent opportunity to show the boys a different kind of horticulture than we have in the lowlands at the School.

As part of the program, a group of 15 or 20 boys spend each Wednesday morning on the mountain weeding, removing dead wood, and preparing a small area for the planting of potatoes. The two houses have been cleaned up and renovated, two double bunks brought up for the Guest House, and the water system overhauled to provide water.

I hope that we can begin week-end camping trips up there very shortly.

I look forward to meeting you sometime when an opportunity presents itself.

Sincerely,

A handwritten signature in blue ink that reads "Arnold Krochmal". The signature is written in a cursive style with a large, sweeping flourish at the end.

Arnold Krochmal, Head  
Horticulture Department

Antigua Guatemala, 15 June 1960

Dr. Arnold Krochmal,  
Apartado 93, Tegucigalpa, D. C.  
Honduras.

Dear Dr. Krochmal:

It is hard for me to thank you sufficiently for your letter of the 9th, which has just arrived. George Darrow, my friend of 45 years, told me when he came to Zamorano that he thought we had on Uyuca the finest collection existing of temperate zone fruit trees chosen for cultivation in the tropical highlands. We have achieved some interesting results; our job now is to provide propagating material, especially scions of that so-called "Reina Claudia" from Ecuador, a Japanese plum I feel sure. This may be the best commercial plum we have today in tropical America. And Mario Jalil got a lot of trees planted on Uyuca; though some of the last we brought from Ecuador are not the same thing, probably other plums of salicina Wood, but good.

When we were in Zamorano in March we tried to find the map of the Uyuca plantings which Mario Jalil prepared before he left. Octavio, who knew these trees pretty well, has gone. Can you find that map and have several copies made? Mario thinks it should be in the engineering office. If Dean Morcillo is back he will probably know. In any case, I hope you will try to get hold of it and have some copies made. When Chico de Sola and I were on Uyuca he was disappointed that many of the labels are gone and we could not identify the varieties. I was too, for it is my fault and I should have kept a copy of the map, but I didnt.

I am strong for your week-end camping trips on Uyuca; I am strong for continuing study of temperate zone fruits in the tropics, because many of our Zamorano boys are going to stay in the game.

Sincerely,

Wilson Popenoe

cc: Dr. Wm. C. Paddock

Antigua, Guatemala, 17 June 1960

Dr Arnold Krochmal  
Escuela Agrícola Panamericana  
Tegucigalpa, Honduras.

Dear Doctor Krochmal:

Referring to my recent letter regarding fruit trees at the little experimental planting on Uyuca, I would appreciate information as follows:

We have been much interested, in years gone by, in the so-called Reina Claudia plum of Ecuador. We got some few trees and from these Mario Jalil grafted a lot more. We got some more trees from Ecuador of which I brought two over here and they are now fruiting in my patio. Neither one of these is the "Reina Claudia" of Ecuador, but both appear to be plums with salicina blood which is what we need in tropical America. Mario was over here last Sunday and we looked at these trees. We are inclined to think one is Satsuma and other - quien sabe? But the point is this: when don Chico de Sola and I were up on Uyuca about 20 March there were a lot of plum trees in bloom, propagated from the original tree or trees (perhaps two or three) brought from Ecuador some 7 or 8 yrs ago. Many of these trees had been grafted by Mario, or under his direction, and were on root suckers of other plum trees or perhaps even peaches. Mario thinks there are nearly a hundred of such trees on Uyuca. What I would like to know is this, did you get a good crop of fruit from this variety? I would think the crop would be coming in right now. The so-called Reina Claudia of Ecuador, which has nothing to do with the Reina Claude group of domestica plums in Europe, is golden yellow in color (no red blush) with firm flesh, not too fine in eating quality but swell for shipping. The last lot of trees from Ecuador, as mentioned above, is not to be trusted, except that are probably all plums with salicina blood.

As for peaches, Glen Saint Mary Nurseries in Florida is now offering only Angel, Jewell and Waldo, all of which we have on Uyuca. The yellow-fleshed varieties seem to be too dry and mealy for people in Florida and more so for people down here. I think we can select some seedlings among the thousands of trees existing in these countries, which have the hard flesh and spicy flavor which people want.

As for plums, as I may have told you: here is our best bet. Santa Rosa is going strong, already. Satsuma is coming along. I think that "Reina Claudia" from Ecuador will take an important place. And as for pears, we will have to stay with Kieffer though the quality is not good, and we will have to stay with Sichel which is good. As for apples, give me Winter Banana and Golden Delicious and some of those Spanish Cider crabs which will produce fruit at much lower elevations than good apples. But after all, apples are apples.

Sincerely,



ESCUELA AGRICOLA PANAMERICANA  
TEGUCIGALPA HONDURAS

June 21, 1960

Dr. Wilson Popenoe  
Antigua, Guatemala

Dear Dr. Popenoe;

I was delighted to receive your letter and can appreciate your interest in Uyuca. We have been "harvesting" drops of peaches and some plums that are of excellent quality and fine size. Some time ago a representative of the Rockefeller Foundation, an agronomist, visited the School and in a rather startling fashion said, in effect, that if "Nature" had intended plums to grow in the tropics, they would have been here!

The young mango grove is in fine shape, and we are doing a small study of the characteristics of the fruits. After some burrowing, the National Art School in Tegucigalpa agreed to make simple line drawings of the fruits and seed for 1 lempira each- not works of art but adequate for the present. We will begin small harvests of these varieties this week, weigh them, measure them, determine the percentage of pulp as compared to seed, make some simple sugar determinations with a hydrometer, run some acid analyses and eventually perhaps have a report for CEIBA.

We have planted a new orange grove of 200 trees, Cleopatra rootstock for Hamlin and Pineapple. I have an idea to try some of the Muscadine type grapes here next year- they do well in humid climates without any real cold winter. I have seen some awfully nice European type grapes in Tegucigalpa, including a fine arbor at Santa Teresita School in town.

I have found a folder on Uyuca, but no map. As soon as Dean Morcillo returns I will see if he can help find the original.

I would like to check to Amado for him, if possible, to bring us some small, old

Sincerely,

Arnold Kroschmal

We have been bringing down from Yuca the drops of plums and peaches. The plums are of good size, greenish-yellow and quite good. We had about 40 pounds of drops this Wednesday which went to the cafeteria. The peach drops are not of high quality but Maestro Bourgos made some peach puree that the boys liked.

During my work in Afghanistan I introduced a good group of Santa Rosa trees from the Pakistan fruit station at Quetta- I have a feeling that plums are by far the most adaptable of deciduous fruits. We had them growing in a bitter desert in the southern part of Afghanistan.

I worked for a few years at the New Mexico Experiment Station which is hot and certainly not deal apple country- yet we managed to produce good crops of Black Twig, a middling good fruit, but well adapted to hot conditions and with a heavy wax covering that certainly kept it in good shape in storage. I haven't had a chance to look at the Golden Delicious, but I have seen that variety growing in unbelievable places in the Middle East- they are a favorite in Greece and Lebanon.

I shall keep you posted on the developments in our work at Yuca- I am trying to trade some cuttings of the fine blackberry up there for potatoes from Turialba.

AK

The young mango grove is in fine shape, and we are doing a small study of the characteristics of the fruits. After some surveying, the National Art School in Tegucigalpa agreed to make static line drawings of the fruits and seed for I temper each - not notes of art but photographs for the present. We will begin small surveys of these varieties this week, with lines, measure them, describe the percentage of pulp as compared to seed, make some simple sugar determinations with a hydrometer, run some acid analyses and eventually perhaps have a report for USDA.

We have planted a new orange grove of 300 trees, 1000 feet long by 100 feet wide and 100 feet deep. I have an idea to try some of the Macassar type oranges here next year - they do well in humid climates without any real cold winter. I have seen some really nice oranges here in Tegucigalpa, including a fine grove at Santa Catalina School in town.

I have found a patch of guava, but no mango. As soon as I have found a patch of guava, I will see if we can help find the original.

I would like to see you in Tegucigalpa, but I am sure you will be busy. I will see you in Tegucigalpa, but I am sure you will be busy. I will see you in Tegucigalpa, but I am sure you will be busy.

Antigua Guatemala, 6 July 1960

Dr. Arnold Krochmal, Head  
Horticulture Department,  
Escuela Agrícola Panamericana,  
Tegucigalpa, D. C. P. O. Box 23.

Dear Dr. Krochmal:

Many thanks for your letter of 21 June which has just come. Your friend from the Rockefeller Foundation has a lot of sense. The more I look into the matter the more I feel sure that plums are the things for us to grow here in Central America. We have peaches and we can grow them as low as 3,000 feet. I believe we cannot do much with plums below 5,000 feet. But I wish you could eat some of the Kelsey plums which we are getting right now from "Carmona", two miles from Antigua at 5,400 feet.

You mention the yellow plums from Uyuca. These must be some of the Reina Claudias from Ecuador, of which there are so many trees in the Uyuca planting. As I think I told you, this plum should be propagated and planted in many regions in tropical America, because it seems to be self-fertile and to require as little cold weather as any of the plums we grow. The way I see this plum business right now, I would choose Kelsey as the best, then take the Ecuador Reina Claudia and Sta Rosa. I'm going to get some trees of Wickson from California this next Winter because I believe it may be another good one for this part of the world.

I'm delighted to hear that the mangos are coming on well. I suggest you give that young orchard a shot or two in the arm, because it is obvious that they have not made enough growth in the last two years. I'm glad to hear you have put in 200 Hamlins and Pineapples. I think Zamorano is too low to get really good results with Washington navels.

As for grapes we have worked on them quite a lot and it is no job to grow the American varieties. You can get fine results with Isabella and Niagara, and I would also plant Catawba and Delaware. I feel sure the Muscadines will do allright too. The European grapes will grow in patios against walls but we had forty-five varieties from California at Zamorano some years ago, and we had to give up. It is too hard to control diseases.

One of those plants of Rubus glaucus on Uyuca is particularly good. The Shankberry which grows up there is also a fine thing. It will be very much worthwhile to propagate these berries and distribute them to other regions.

I believe that the Uyuca map must at the Engineering office of Zamorano. Try to find it.

Sincerely yours,

Wilson Popenoe



December 5, 1960

Dear Dr. Popenoe;

Some time ago Amado Pelen sent you a list of the forthcoming articles for CEIBA, which I took over from Tom Furman. Since then we have had acceptances to do articles from Dr. G. Hocking at Auburn, Dr. P. F. Knowles of Agronomy at Davis, and Dr. Grierson, formerly of Lake Alfred Station, but now working with a consulting company. I am tickled by the fine response we have had, which includes articles by three of our own people, Ortega on pigs, Herrera on cheese production, and Peress on vocational ag education in Latin America.

I have decided to include a special horticultural section in the issue due in March, to honor the annual meeting of the Caribbean Section of the ASHS, and so far have 5 horticultural articles - Adriance of Texas on Brazil horticulture; Miller and Roberts of Florida on diseases; an article on Tangelos; one by me on mango varieties, and one from the ag school in Salvador on a new way of propagating pineapples. I wonder if I could bother you to do one - I had in mind perhaps the story of Mt. Uyuca, which we could assist with photographs and a list of living trees? However anything you would care to do, if you could find time, would be more than welcome.

I plan on distributing copies of this issue of CEIBA at the meeting.

I hope to be able to publish CEIBA 3 or 4 times a year, as there is a tremendous amount of material available and interesting in Latin America that should be printed.

I shall look forward to hearing from you, and hope you will be able to help us out.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arnold Krochmal".

Arnold Krochmal



Antigua, Guatemala, 10 December 1960

Dr Arnold Krochmal,  
EAP, Tegucigalpa, Honduras.

Dear Doctor Krochmal:

Just as I was getting ready to write you about a number of horticultural matters, in comes your welcome letter of the 5th instant. I want to say right at the start that I shall be delighted to prepare an article on the history of the deciduous fruit plantings on Uyuca, and can knock it out on short notice. I assume you will want it right after you get thru the Xmas holidays, verdad? I believe you know that George Darrow, whom I call the Dean of American pomology, now that U P Hedrick is no more, told us when he came to Zamorano in 1949 that we had, on Uyuca, the finest collection in tropical America of deciduous fruits chosen for short chilling requirements.

While speaking of Uyuca, I am anxious to get the so-called Reina Claudia plum of Ecuador (which I believe all of us are now convinced has nothing to do with the Reine Claudes of Europe, but is a yellow salicina) established in other countries. Our best bet is probably to get Jorge Benitez to graft a few hundred trees here in Guatemala when he has some rootstocks available. There are a number of trees on Uyuca which were grafted on root sprouts of plum rootstocks from peach trees I believe; maybe we could get a dozen or so of these to make a beginning over here. I don't suppose you will be able to operate a nursery of deciduous fruit trees at Zamorano, will you?

As far as concerns the other plums on Uyuca, I think we have them here and in Salvador. Also the peaches. In one of the upper rows there are about five trees labelled "Pineapple". I assume these are quinces. They were in blossom when we were there in March. Have they borne fruit?

I am sorry we did not do anything crabapples up there. Darrow says

the "Spanish cider crabs" are the things for us to grow, and the trees over at Güinope (get Pelen to show them to you) are of this kind. I have been trying to find where we might get some better varieties of this type, so far without success. I found this same crab down at Jinotega in Nicaragua, last June. Any apple which cooks well and will grow here at 4000 feet is interesting, I think.

I don't know why the loquats have never fruited on Uyuca - or hadn't in my time. There are 5 or 6 trees there of Tanaka, one of the best. And about the kakis: we have observed a curious thing, and I think it applies to Uyuca. Grafted trees of the standard commercial varieties have grown very slowly on Uyuca and over here, but seedlings have grown more rapidly and larger and have produced a lot of fruit. I have made arrangements with Mr. Taber of Glen Saint Mary to get a lot of seed next year.

Now about the mango collection down at Zamorano: it suffered from too little water for a couple of years, but it just delayed the development of the trees. That is the finest collection of mango varieties in Central America. In fact the only other as good, so far as I know is at Maracay in Venezuela. It was our experience that mangos should be watered for the first three or four years, then given no water at all, to encourage glowering and fruiting. What is your observation this year?

That Citrus collection at Zamorano got off to a bad start and when I saw it in March still was pretty unattractive. In fact it was the only lot of trees which President Reitz of the University of Florida criticised when he was there some three years ago. But I hope you will keep it going, and get the trees into better shape if you can; because it is the best collection of Citrus varieties in Central America and no one dares bring in another collection because of the danger of introducing tristeza. Our collection may prove very valuable as a

source of propagating material - I wonder if we have Clementine mandarin I am afraid not; we have one tree here in Antigua and the fruit is fine.

As for the avocados, I hope you can propagate and continue the most promising varieties. That collection down below the new houses is the fifth we have had in 20 years. Doctor Malan of South Africa told us they had learned to lengthen the life of plantings where Phytophthora is a problem by cutting down irrigation; and in my last two years at Zamorano I tried that and it seemed to help. I thought the trees would die from drought- we gave them no water during the dry season, but they didnt. Of course they didnt grow much. Zamorano has always been a source of propagating material of the best avocados and I hope it can continue to be.

I am delighted that you are going to put Ceiba back on its feet. And what you say makes me feel sure you plan to join us at the Miami meeting of the Caribbean Region ASHS next March. The following year, 1962, it is planned to meet here in Guatemala and devote special attention to deciduous fruits.

And now a last word on mangoes: our colleagues in Florida are giving up the commercial planting of Haden because they say it stops bearing when it is 12 to 15 years of age. In Venezuela I saw, last year, at least 20 trees which I know to be 30 years old and they were bearing fine crops. I ask them in Florida, How do you know that your new varieties such as Keitt and Kent and Zill wont stop bearing, here, when the grafted trees are 12 to 15 yrs old, just like Haden. I am still encouraging the planting of Haden in tropical America.

If you should come over this way at any time, do not fail to spend a day or two with us here in Antigua. We have lots of room and there is plenty to see in this region.

Sincerely,



December 16, 1960

Dear Dr. Popenoe;

I was pleased to hear from you, and to know we will have a story from you for CEIBA. So far for the special issue we have the following;

*All have  
gone "to bed"  
at Depante  
Calden*

"Haiti and the Arbitonite Valley" B. Ira Judd, Arizona State U  
"Un Nuevo Metodo para propagacion de Pina" Gattoni, San  
Andreas School, El Salvador  
"Orderly marketing of citrus fruits" Grierson, Florida U  
"Tangelo pollination problems" Mustard, Miami U  
"El Zamorano Disease Reporter" Muller and Roberts, Florida U  
"Horticulture in Brazil" Adriance, Texas A & M  
"Some mango fruits in El Zamorano" Krochmal and Salgado

to come

"Deciduous fruits of Mt. Uyuca" Popenoe  
"Diseases of Avocados" Zentmyer, California  
"Safflower as a potential Latin American oil crop" Knowles,  
California  
"Jalaps of Mexico and Brazil" Swansea School of Pharmacy, England  
a paper by George Hocking of Auburn U on medicinal plants

I think we will have an ample selection of material for a good issue of CEIBA. I hope to distribute copies in Miami at the meetings, and encourage others to submit materials for publication. I have been contacting all my friends, and have been turned down just once in about 20 requests. Any horticulturists you may run into- pleas let them know CEIBA is coming out.

The citrus groves are in bad condition, and I am dubious if some can be restored to bearing condition. We do have a new grove of Pineapple oranges on Cleopatra rootstock, certified by Florida. We are also producing a good number of rootstocks of Cleopatra for future propagating.

The young mango grove of varieties is in excellent condition. I am trying to keep a good cover crop on it during the rainy season and keep it clean during the dry season. We have put some animal manure on. The avocado grove seems to be going down with phytopthera- we have not irrigated it since I came here last April, and it did have a fair crop- I suspect there were many more fruits than we harvested, but the students seem to like them a great deal.

The work at Uyuca has been slow, to my regret. If we do get another horticulturist I hope we can get working on it. It



is without doubt a magnificent orchard and deserves to be cared for. Salgado and I have discussed the possibility of doing some propagating work up there but have done none so far.

We harvested good crops of plums, a few peaches, some sand pears.

(January 10- I put this aside to finish it but have been swamped. The special issue of CEIBA is about done- I am looking for your article with anticipation. May I include 1 or 2 photos of Uyuca Pelen took last week? We have been spending week-ends up there working on the place.)

I should type this over, as my 3 year old got to it, but I am afraid if I delay any longer it will never get off.

At the first opportunity I hope to visit you and talk with you. I shall be in Miami for the meetings.

I have a paper coming out in Germany you may be interested in- a detailed botanical study of Afghan grapes. I hope to bring in some muscadines this winter and try them out, their resistance to fungus and adaptability to warm, damp climates encourages me.

Cordially,

A handwritten signature in cursive script that reads "Arnold Krochmal".

Arnold Krochmal