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About the Institute

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.

Rancho California, Almuñecar (Granada) Spain 20 May 1958

Dr George M Darrow Plant Industry Field Station, Beltsville, Md. Dear George:

Terribly sorry I did not get a chance to have a long talk with you before we left Washington, but the weather was so bad we could not do much; so we hurried back to New York and flew to Madrid where we found it so dold - it actually got down a degree or two below freezing! - that everybody was unhappy including ourselves. I tell my friends, "You folks are hard to suit; you go to bed one night shivering with the cold, and you get up next morning complaining about the heat".

I want to tell you a few things about the work. I believe you know that I am here on my own and going to stay on my own. I am as independent as a hog on ice, I can help where I think I can behelpful and no politics involved. An appointment by the govt has been suggested and I say No, I will help the government all I can but I do not intend to lay myself open to criticism on the grounds that I am taking money from this government, which really hasnt any more than it needs for the bare necessities, and then have folks criticise me because they think I am not showing the results I ought to show in six months.

So here we are, established in a neat little apartment in this lovely valley of Almunecar, less than half a mile from the sea. We plan to keep this as our base for the rest of this year, coming and going; for example we plan to leave on 10 June for Italy, Gre ce and Israel, then back here, and in late August for Madeira and the Canary Islands. This valley is one of the most favored spots on the whole Mediterranean coast of southern Europe, so far as minimum temperatures are concerned. And I think it probably the world's greatest center of cherimoya cultivation; there seem tto be about 250 acres of grafted trees in the valley. It is therefore a grand place to get a lot of information regarding the culture of this fruit. No bearing evocados here as yet - in this valley- but we have seen 200 trees in other areas along the coast, between Motril and Marbella. And you will be interested to know that all three races are growing here, and successfully. At Motril there is one grafted tree in fruit, sent from Washington about 20 years ago; it seems to be my Benik from Antigua and the fruit is now ripe and very fine. There are 4 trees from Cuba, of the West Indian race, near Malaga. The rest of the trees we have seen are mainly Mexicans but there are a number which seem to be hybrids; I cant figure out where they came from.

Our job here at Rancho California (in reality a small, privatelyowned experiment station) is to introduce and establish, first of all, a good collection of varieties. We have received material in the past two weeks from California, Texas, Florida and Chiae, some 12 varieties in all. Hass and Fuerte are already here, material from Chile and what I sent two years ago from Honduras. Fruit from the Mexican seedlings on this coast sells right at the farm for \$1 a kilo, and in Madrid at twice that price - probably grabbed up by Latin American diplomats and students, for the Spaniards in general do not know aguacates and it may take some time for them to learn to want them.

There is one bearing mange tree on this coast, a seedling from Cuba 22 years old. I do not think much of its looks, and doubt that the mango has a commercial future here. Same appless to papayas, the fruit does not ripen well probably because of insufficient heat just as in California.

Loquats are an important crop in this valley, and Tanaka is established; there are trees of Gold Nugget from Armstrong at Rancho California but they are quite young; also two grafted white sapotes which are producing their first fruits. I believe this fruit has a future here because the Spaniars like <u>sweet</u> fruits. No citrus in this valley, mostly sugar cane and cherimoyas and loquats withbsome apricots and almonds and pomegranates and olives - you cant go far in southern Spain without running into olives and almonds and of course grapes. No peaches or plums in the valley - they are grown in cooler parts of Spain, but I see no reason why the peaches from Florida and the Japanese plums should not do well here. Japanese persimmons are grown around Granada, also strawberries on a small commercial scale, and I believe they will do well here. I will see if we can get some plants from the States later this year. We are expecting some lychee plants from Johnny Lynch in Florida in a month or two, and we have a nice shipment of macadamia seeds planted; they came from Dick Hamilton in Honolulu.

Two weeks ago Helen and I spent a few days in Cordoba, where I was invited to give a couple of lectures to students of the agricultural college in Madrid; they were in Córdoba for three months to get a look at subtropical crops. We saw a dozen avocado trees near there, one of them a West Indian seedling in production. I feel sure avocados can be grown in Andalucia as far north as Sevilla and Córdoba. We havent had a chance as yet, this year, to see the Valencia region but will get over there eventually. It is somewhat colder than this area - you probably know the oranges were badly hit a couple of years ago by a freeze - but that is a great orange region of course, and I believe can grow avocadol, especially the Guatemalan x Mexican hybrids.

Our permanent address in this part of the world is care of Martha Sussmann at the American Embassy in Madrid; she is an old ffiend from the Embassy in Tegucigalpa and will forward our mail wherever we go. I am looking forward to Israel for it seems those lads have done a lot of work with avocados and mangos. Both are bring produced commercially on a small scale, I hear.

Living is unbelievably cheap in Spain; goodmhotels \$2 per day with meals, if you stay away from the swank tourist joints. Of course this is because dollar exchange is so greatly in our favor.

Best regards in which Helen joins me - she is right now lining up a lunch of filet mignon, creamed potatos and Swiss chard.

Ever yours,

Antigua, Suatemala, 20 July 1959

Dr George M Darrow, Glenn Dale, Maryland.

Dear George:

I hope this letter reaches you. I assume you are living at your old home. After a year around the Mediterranean and in the Canary Islands I am trying to settle down and write a Manual of Tropical and Subtropical Fruit Culture in Spanish, mainly for Latin America. I wouldnt dare write another Manual in English; those lads up in Florida and Califfornia are way ahead of me and I had better stay in the background. On going over my material and looking back a few years -nand because I am right now reading your exceldent paper in CEIBA 4 I am in the mind to write you about a few developments here and elsewhere.

First of all, about Israel: Where else can one ride down the road and see on one side (50 ft away) a fine plantation of Cavendish bananas and on the other side, equally 50 ft away, a commercial planting of Golden Delicious apples? That got me whipped. Those bdys have so many apples growing that I dont know what they are going to do with them unless they drink a lot of hard cider. They need more bananas, a lot. That country can nevef feed itself, I am afraid. They sure cant do it with apples, though I like apples.

Now getting down to your paper in CEIBA. I have just come from two weeks in Maxico, At Irapuato they are doing a big business in strawberries, for shipment (frozen) to the US. They tell me they get the same price as you guys do for American grown strawberries; they claim thdirs are more popular in the States bacause the berries are firm tho small, and of fine aroma; they are used for jams and ice creams. They are making money because they are paying \$1 per day for labor while you gringos pay nearer \$1 per hour. Good proposition. But the interesting thing to you and me is that they are growing almost exclusively Klondike. The have some Florida 90, which they say is fine locally for fresh eating, but they are not shipping it. They say it bears more heavily than Klondike and is of finer flavor.

No progress down this way with Rubus. As for grapes, I think we are getting ahead, but mainly with Isabella. Last week I saw a beautiful vine in Guatemala City, in the garden of an Italian (those birds know how to groy grapes) and in Venezuela where I worked for a short time, a couple of months ago, I found that the Italians had brought in Isabella about 40 years ago and it is doing well at about 4000 feet but has not gotten into the commercial field. The Venezuelans are still struggling with viniferas and getting nowhere fast. I am tringgtho get them to eat American grapes. It isnt easy. I am thinking of Golden Muscat; the name will help. If you called <u>V. tilieafolia</u> Muscatel the Latins would eat it. They dont seem to know any other and call it Muscatel.

The Santa Rosa plum is gaining ground; they send fruit from here over to Salvador where they have no plums. I have found in an orchard near Antigua what they say is Kelsey. It is much finer in quality Digitized by Hunt Institute for Botanical Documentation,

Carnegie Mellon University, Pittsburgh, PA

than Santa Rosa. I am not sure it really is Kelsey but it seems to answer up to the description in Hedrick. And as for that Reina Ciaudia of Eduador, which we now have at Zamorano, I am convinced it is a Japanese plum, ergo, nothing to do witheEuropean plums. I saw what I believe is the same thing in Mexico two weeks ago, but they dont call it Reina Claudia. We are going to go places, down here, with those Japanese plums. Good fruits. And we dont worry abput cross pollination, either. Just like the avocados. Stout told us many years ago we must plant the A type with the B type to get cross pollinatian. We havent done it and we are still getting lots of avocados - though we are getting less in Mexico and Venezuela and some other countries (not Guatefiama as yet) because the trees are dying - Phytopththora foot rot, I guess.

Apples are coming along. Winter Banana in the lead but Golden Delicious gaining ground; its the leading one in some parts of Mexico now. Folks are not too happy about the quality of Winter Banana but it seems to have the lowest chilling requitement and it sure does produce apples. I cant see that Gravenstein is gaining ground.

As for the peaches, not much change. Those hard clingstone seedlings are still on top. Jewel and Angel from Florida are much finer but folks down here havent learneddit. And as for pears, I dont feel too hopeful. No progress. And as I told them in Venezuela if you will take a well-baked but rather soft brick and boil it in suagr you will have the Pineapple pear. I am going to do some more looking into this pear business. We've got to do better. There are soke good pears in Guitemala but there are a lot more bad one, and we dont cuite know what varieties.

I am enjoying this "retirement" business and as long as Gdd grants me grace (as Archie Shamel used to say) I am going to plug along; since "retirement" I have worked in Salvador and Spain and Israel and Venezuela; not a bad start. Do let me have a word from you just to know you are still with us in spirit, and if you have any suggestions regarding this book on which I am working, for goodness sake send them along. I want to make it worth while; I want it to be the standard work of reference for the next 25 years.

Always yours cordially,

Wilson Popence

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11 :

THE DARROWS aug 2-59 Dear Wilson :-Perhapsyon were a bit surprised at seeing bananas and Golden Delicious apples side byside and Iwould be, But I was just as struck back in 1952 to see piecepples. interplanted with strawberries at Turi alba, I have a good hodachrome to show. and to let you down further shave about 150 trees of orange in my back yourd bet out last year. I have opversponded with the Irapuato men at various times, They have

plenty of problems but the area could be a great berry section. They have the elimate and irrigation Have you seen any Pierce, the tetraploid of Isabella that is grown in California, I think to the exclusion of sabella? you probably have heard that fan leafscottmin is splead by nematodes. California has published a lot recently on virus diseases and measures are being taken to clean rep reveral major viruses. I know little Josthe plum situation. you should keep in touch with, Prof. Sharpe of Florida, He is doing an extensive and Excellent job of breeding. He wtrying for size, quality and firmness of northern yellow

THE DARROWS peaches for central and conthern Florida. He is a very fine plant breeder. O kine seedings seen to be giving him the best results in Pears may be fine some time but crosses. I think it will come slowly. Here we expect to have the finest quality in blight resistant varieties from Dr. magnew work, Good luck on the book and Ill be glad to help in any way. I am sovry I cannot read the Spanish. I thenclose a card to indicate part of the retitement interests, 9

joined the boys and we have about 20 acres to first next year, We use Earlidown, midland, Divieland, Pocahautas armore and Tennessee Beauty, Georgek. (mack) is manager I also have about 2 30 varieties of day lilies - henero callis and 1500 seedling flower next year, and some a feleas and shododendron ma shade house and am a bamboo murseryman (P. nudu I have an article on Strawberry Varieties-part presents future for the Fruit Variety magazine of the am. Pomological Society - but it is all for W.S. Itishould be out this summer. I still go to the Oficeabout once a week and last week took a bluberry trif to new England. Lets hear from you againg and tell no more that



4 Fields

Glenn Dale, Md. • ((P. O. Bowie, Md.)

CEdar 6-3431

STRAWBERRIES

"PICK YOUR OWN"

for 1959

23 10 May 30th - June 20th

On Glenn Dale Road Between Penn. R. R. and U. S. Rt. 50 FOLLOW SIGNS

Antigua, Guate, ala, 20 Sept 1959

Dr George M Darrow, Bowie, Maryland.

Dear George:

Many thanks for your letter of 2 August. I am glad that both of us are hanging onto our horticulturists and activities. I never learned to pay golf or bridge. Too late now.

You mention that Irapuato has the climate and irrigation. Yes, but I dont think too much of their strawberry soils, so far as I saw them do you? I assume the reason they only grow Klondike for export is because their market is used to Klondike; but maybe it holds its shape a little better, for ice dream and pesserves. My Kenney thought so. Too bad they dont have some lighter soils, it seems to me.

We have not yet friited Pierce here though Francisco de Sola got it after you told us about it and I got some cuttings from him. I now have two plants in my patio - young ones. I saw a <u>beautiful</u> arbor covered with Isabella in the City the other day; owned by an Italian who knows how to prune. Tremendous crop. Niagara is still our best bet for quality - if what we have is really Niagara. I think the only otherpossibility is that it might be Diamond, but I have never introduced Diamond and I have introduced Niagara.

As for plums, I am right nowbrecommend that the folks in Venesuela plant Santa Rosa, Kelsey, Satsuma and that so-called Reina Claudia from Ecuador which I am sure is a yellow-fruited plum of Japanese blood, nothing to do with the Reine Claudes of Europe. Dont you agree? I have seen all the plums here in Guatemala this past month. All of the Jap varieties from California, of which I like Kelsey best for quality, Seems to be way ahead of Sta Rosa. Mariposa also good, and Duarte and Elephant Heart. But give me Kelsey for the home garden and it will grow and fruit well here at 5500 feet/ Almost mo interest here in grafted peaches; they seem satisfied with those Spanish seedlings. I think the climate here in the fruit country is too cool to ripen peaches well. The Florida varieties been quite uniformly proved better than the local things but we cant seem to arouse any interest. As for apples, in a survey I made last month, Winter Banana constitutes more than 75% of the production. Very few Golden Delicious; I dont know what some of the others are. Winter banana sure produces.

And speaking of apples, Jorge Benitez who pr duced 50,000 grafted citrus, avccados and mangos for the Point Four boys last year (they are now out of business; the govt has terminated the arrangement) wants to go in for apples and wants rootstocks resistant to wohly aphis. He got some East Malling rootstocks from France but they failed to grow - too long on the road. What do you recommend and where can he get cuttings or rooted cuttings in quantity -several thousand at least. Please drop me a line and tell me what we can do.

Best regards to all of you.

Ever yours,

T. 10 - 59 Dear Wilso most the lack Frence of fartilizers in the strawberry fields of I rapuato - and the excellent papaya o there, Kloudike e little f. a te Lavor has always been a wers. 1 manufact crea the Florida sta I harpe of breeding peaches 10007 grea nga do as the frodu ed. Central a ould be tried Recently I had some of one of The Havis - t discorded seedings as fine as one could n from a peach could be grow would ever want a bud ed and

malling root tocks can be purchased from Chick-adee mursery, R#2, Therwood, Oregon asfollows :-# 104-19275 for M 106-275 " 109-225 11 111 -225 " " "malling XXV-185 fer M. The C & musery at Wenatchee Wash. can probably supply them also. all are supposed to be more or less resistant to the wooly applies. where is Jorge Benites located? Hot weather has continued till now but its supposed to be much cooler to might. We have just had 1/2-mehor of rain so can do

THE DARROW ted 1.0 Here to drive we at hel of ale ·h . P. . to plant. sus the terday I started to cover back on plastic mall green house R use. at our gas in lady bro ght a mit (she I should eatone said

ever hear of their being haised starts them in a pot inside as & understood. I'll they to find out more about how she does it. The one I tried was good. I have , 50 or so seedlings of Citrus trifoliata but wonder if they would flower & fruit as a potted plants of they were budded or grafted to get around the juvenile state. Have n about this? thuow have any frintgarden? ? Doyou remember visiting a planting at the Grace line more at home of a - Sincerele antique.

Antigua, Guatemala, 19 Oct 1959

Dr George M Darrow, Oldfille Farm, Bowie, Md.

Dear George:

Many thanks for your letter of the 10th, particularly concerned with those Malling rootstocks. As I told you in my last, the Point Four work is terminated and we are presently in a sort of interregnum until we see what can be done. Jorge Benitez is being carried on under the new regime - the Ministerio de Agriculture - but how much money he will have for nursery work is a problem. In any event, I think we will find some way to carry on the apple work. Which reminds me to say that Last week I went up to San Rafael, on the old road between here and Guatemala City; 6850 feet. A German Swiss who has lived here for some 30 years planted a lot of fruit trees and a few other thilds - Red Raspberries for example which have done very well there. Looks like Cuthbert but might be something European. He had harvested and was holding the apple crop and I got good specimens of five varieties: Winter Banana, Colden Delicious, Gravenstein, Rhode Island Greening, and one he calls Bockoop. I tried then all with interest and I have watched their behavior more or less. Here is the way they stack up with me: Winter Banana will grow and produce at the lowest elevations for apples (exclusing the Spanish Grabs of course); it is a tremendous bearer, good for cooking but for eating second if not third class. Golden Delicious will grow at elevations almost as low as Winter Banana; not so productive; but much better in quality. Gravenstein the best in quality of the five mentioned. I dont know too much about is adaptations and productiveness. Perhaps needs a little more cold than the first two. Greening and Boskoop did not interest me too much.

I have a letter from the Dominican Republic; they want to grow grapes, primarily for whee. I am telling them that of 45 vinifera grapes we tested pretty thoroly at Zamorano not one was wholly successful; the two best were Valdepeñas and Carignane. I am recommending they try the American hybrids, especially Goldan Muscat (not so resistant to diseases) and Isabella and Pierce and Niagara. I would start off with Isabella beca so it is so throighly proved out.

Friends of mine are interested in hed Raspberries. Guthbert is allright here at 7000 ft; no good at 6000; and no good here in Antigua at 5000. Some years ago a colleague of mine got a Red Raspberry which he said came from California and which hore good offaps at Tegucigalpa, 3360 feet. He did not know where he got it (what mursery) nor the name. Have you any guess? No, I never heard of pasion fruits in a temperate climate but I

No, I never heard of pasion fruits in a temperate climate out i dont see why they might not be started in a greenbuse and fruited outside before frost. -- No, I have never played with <u>Citrus trifoliata</u> but I would rather play with Meyer lemon as a house plant if you dont want Ponderosa. We have a small garden here, mostly roses and amaryllis and geraniums and Liliums (especially <u>philippinense</u>, a grand thing) but also six Navel oranges, one Marsh grapefruit (all we can eat), three Persian limes, one Satsuma and one Reina Claudia from Ecuador which havent borne yet and probably wont.

With old time regards, as Dr Fairchild used to say,

Ever yours,

Antigua Guatemala, 10 Dec 1959

Dr G M Darrow Bowie, Md. EE UU de A

Dear George:

About this "Reina Claudia" plum from Ecuador. Maybe I have brought this to your attention previously. My great & good friend (as the Presidents sati) Abelardo Pachano of Ambato thought the Reina Claudia of Ambato which is supposed to have come there from Chile, is the <u>triflora</u> Chabot; but Hedrick in his "Plumseof New York" (what a fine job that was, plums of the whole world but New York paid the bill) shows Chabot in colors and it is pink to red. I have never seen any color but yellow in the Reina Claudia of Ecuador, which is now doing <u>extremely</u> well in Honduras and Guatemala and I think my supplant the excellent Santa Rosa as our leading commercial plum. Hedrick mays Chabot is not as productive as could be wished. So far, the so-called Reina Claudia of Ecuador is very productive here. I think it may be highlymself-

I have just come from Salvador. Our friend Francisco de Sola has three plum trees at his place "Los Andes" about 5500 ft, and they are all good. I said a few years ago they are Satsumas; but he says the fruits are not quite alike and they have given different names to each tree. It now appears - the present Minister of Agriculture told me the story - that these three tress were grown from seeds of a Satsuma imported from California, perhaps '40 years ago. But here is my story about plums: the good ones in Central America are up to now Santa Ross (principal commercial variety in Guatemala) Satsuma (not very well known in Guatemala but gaining ground in Salvador), Kelsey (growing here near Antigua and fine for sating but not shipping) and the newly introduced Reina Càaudia from Ecuador. It interests me that plums are being carried by truck from Guatemala to Salvador and I believe even to Gosta Rica.

Apples: I think I have written you. Winter Banana is the thing I would grow if I wanted to sell apples/ God from 6000 ft upward. Yellow or Golden Delicious much better but not so productive. Gravenstein still better hut needs a littam more cold. Cuatemala is getting into the apple business; not promising from here to Colombia.

The most interesting thing in Salvador, to me, is the development of <u>Rubus glaucus</u> as a commercial fruit. Chico de Sola now has several acrés in production at about 5500 feet. His strain was on the farm when he bought it; dont know its origin put probably local. Very productive, the berries firm enough to stand shipping and handling, and mighty good to eat. Rubus glaucus has a real future in tropical Am. Tell me something about the American Pomological Society. Going over my books I find I was Chairman of the Tropical Fruit Section back

Tell me something about the American Pomological Society. Going over my books I find I was Chairman of the Tropical Fruit Section back about 1915. A few years ago H B Tukey sent me the Wilder Medal of which I am very proud. Is the Society still pretty active and how should I re-join? Maybe it is too late; that old man with the scythe is now working down my alley. You know what I mean.

Ever yours.

Antigua, Guatemala, 7 May 1960

Dr George M Datbow, Bowie, Maryland.

Dear Georges

You and I are still in the running, though not running quite so fast as we were thirty years ago. I want your advice on a little problem.

When you were down here, I tokk you to Güinope and you saw those apple trees. Spanish crabs, I believe you called them. Recently Don Francisco de Sola and I went to Güinope and saw those same trees and some others. We were told they were brought into that region about 80 years ago by a Spanish priest. I got some basal suckers and took them to Francisco de Sola's place in Salvador but I doubt that they will grow.

On Uyuca - which place you will remember well because it was there you told me with your tongue in your cheek that the Shankberry was no good, - we have some crabs from the States which look promising. The best is labelled "Pineapple". I dont know where we got it, but it was flowering beautifully when don Francisco and I went up there about March 20. Do you know this variety?

In any event, what we want you to do is to tell us what crabs to get and where to get them. I have a hunch that they will produce fruit down here at lower elevations than Winter Banana, which so far is our best bet for elevations around 6000 feet. But you remember that Guinope is only 400 ft and those <u>perotes</u> or crabs have been bearing fruit there for some 80 years. What shall we get and where, for some better?

Ever yours,

Digitized by Hunt Institute for Botanical Documentation, Carnegie Mellon On Versity, Pritson gie Pala. Wilson Popence Antigua, Guatemala, 20 Oct 1960

Dr George M Darrow, Olallie Farm, Bowie., Md.

Dear George:

My letter to you about those Spanish Cider Crabs made the rounds and finally ended up at the Arnold Arboretum. Donald Wyman wrote me a good letter and sent me a bulletin about ornamental crabs, but said he didnt know anything about the <u>eatine</u> crabs. I remember very well the magnificent collection of flowering crabs at the Arboretum.

Now, cant you give me some sort of a hunch as to where to look for things like that apple you saw at Guinope? Do you know the Transcendent crab which is offered by Roeding? He says it is the largest and best of the eating crabs. We will try it, but somewhere there must be others of that type; I am going to work over the possibilities in Spain, where I have a number of contacts.

Incidentally, I am convinced that the Reina Claudia plum of Ecuador has nothing to dowith the Reina Claudias of Europe; I think it is just another <u>salicina</u>, which happens to be yellow instead of red. When our man Mario Jalil went to Ecuador some five years ago he brought back a lot of "Reina Claudias" from Ambato; they have come into fruit and there is everything among them, from Satsumas to Mirabelles . I am no longer going to list the Ecuador Reina Claudia as a <u>domestica</u>.

Ever yours,

Wilson Popence

OLALLIE FARM Feb -15-1961 BOWLE MD Dear ilson Grace and & have inished listening to Pres. the conference medu rend V. He was done a good gob Lar people kit brings home to Ithin what government is more fo erto To-day & spent at the Univ. of Ind. Sofar. him. unal & locists short course at their a and of course enjoyed reports of progress fect of K on green house plants. y projects. forcing azaleas for christmas interaction of . Anghdragous hotoperiod temperature and fi ngisides in soils for h others and yesterday ewas at fice for a while talking over blueberry

crosses, also have suggested to others the use of the high mountain blueberry in quaternale & budown to Pern for breeding with our Pacific Coast one It is near the taled to Vaccincing morting on whatever it may be called in the different countries. It finited heavily at hour Beach, Wash. - large fruited but laste less, productive. I suggested it to Prof. Sharpe at Famesville, Fla. I plan to see Sharpe in 2013 weeks. Grace + 9 place to drive down to I loved to spend a while with a brother & sister and to visit friends on the way down and back - blueberry friends . I am having a good time this winter reading, writing, visiting; loafing + have my greenhouse to care for. I had a letter Tues. to answer from a profine min. D. Oreg- Engene lireg. in regards to finit in central america

THE DARROW OLALLIE FA other. to visit filans Sthin the looks after our ho our son wherey project - only 10 a . stra aveber his wife to shrings l it are mack is to stay nama trip to ou a ch as the but his wife is ba another wee Tuesday works and was to beau duty They visited James Hawes who is horticulturist for the C u al some. america He is a brother in- law of Dr. Wm Cowgill I hal Guatomala an who start the Carr beau Sect. of the am Ho \$.Se. told of going Edith (Smack's wife 5 ries of mean these this saw udloga I seem to b dead loss crab apples for central america, I

would assume that most crabs would have been tried in various places and that none that we could suggest would be helpful. Those of Spain and perhaps of Israel and those at the experiment would seem station on mit Kenya to be the most likely to be gralue. How is the book progressing? Have you much of a flower and first me planting there at antique or do you have it through friends ? you must look backon your work at the school in Hondurds with greatest satisfaction. If only it could have been multiplied by 10 oc 100 min call the comitries how greatly less complicated the world would be Sincerely ge

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

WASHINGTON

HORTICULTURAL INVESTIGATIONS

March 16, 1925.

Mr. Wilson Popence,

Foreign Seed and Plant Introduction.

Dear Wilson:

I have been over the pictures and have been thinking that I would like to see an article on your recent visit to the strawberry fields of South America. The following outline will cover some of the questions which I have in mind and which I am sure would be of interest to others.

I am returning your prints and would like, if possible, to secure a complete set of these, as well as your former pictures of the Chilean strawberry, for use here.

Very truly yours,

Ero In.

Foreign Seed & Plant Introduct

Geo. M. Darrow, Associate Pomologist.

FURTHER NOTES ON THE CHILEAN STRAWBERRY: Sex, Sterility of Flowers, and Firmness.

1. Previous publication 2. Translation of Duchesne on F. chiloensis -especially on sex. 3. F. chiloensis - previous introduction of 1921 to U. S. was perfect flowered. 4. Is there more than one variety? 5. Is it a dry land, poor soil, arid climate plant? 6. Are the flowers always perfect? 7. Do all the flowers set? 8: What is the structure of an inflorescence? 9. What is the plant structure? Does it make a new crown for each new inflorescence, or does it have several trusses from one crowy RECEIVED 10. How deep are the roots? MA 11. Is it a free runner maker? 12. How often are the berries picked? 13. How large are the yields? 14. What other plants grow on the same soils? 15. How old are the fields?

ESCUELA AGRICOLA PANAMERICANA

APARTADO 93

TEGUCIGALPA, HONDURAS CENTRO AMERICA

Antigua, Guatemala, 8 March 1961

Dr G M Darrow, Bowie, Md.

Dear George:

Thanks for your interesting letter of 15 Feb. You mention driving down to Florida. I wonder if you are coming to the mtgs of the Caribbean Region, ASHS, at Miami March 19 to 25. I sufe hope so.

Yes, I heard about the Prof at Eugene Oregon who wants to stucy fruit culture in Costa Rica, but when I found that he considers Ceiba pentandra and Crescentia cujete to be worthy of investigation as potential comestibles I got scared. Our friend Francisco de Sola over in Salvador is going to town with <u>Rubus glaucus</u>; sold 122 hundredweight, not pounds, of fruit last year.

I am getting nowhere fast on this crabapple business. Cant seem to find trees commercially available anywhere. I may have to settle down to propagating those trees at Guinope which you and I saw. I have seen a few others at Jinotega iminNicaragua; no more known tot the writer. With good culture that Guinope tree might not be a bad bet, for apple sauce et id genus omne. I am particularly fond of id genus omne.

Ever yours,

THE DARROWS Feb 8-63 -----Generale BOWHE MD Dear has apples conto station. He ereat the apples to relative to anowe 5/1 10 les and al three varieties there are 2 all those both ero suffice chilling . require the lea der ty elson the 19th were at guna that is the Tok - probably mostly from the ere are lo 182 from seed. my French eider and English eider

marieties, one English station has done a lot of work on diabs for cider They had 2000 to 3000 varieties of eider affeld. Why not write them? ug ashton Bristol Eng. - Ido Know ho now. I fink way a breeder - is in charge Sola there, Hobbs in charge of the plantations. The. Bould was also there blit probably retired. The Shink. ning up before are yo then Juale to go back oush with Pro. Sharpe. conculed heroo he is a g visiting professor isy we here an Its que m ce a week tooffice treat with ave day lily red Iwant cold t. Tom Gi istimi, ou Harold Winters Have you k He seemovery Mayaques wasal Salat rather she fine as ever king &

THE DARROWS OLALLIE FARM 15 GLENN DALE, MARYLAND 20769 Dear Wilson. ng of Ja one a he Wallace rhe shoke bly be sure to do 20, the new at to see its wirs. athere. 6-6 talk Tola 6 eeding. He is 24 is is place Section with le caches to getting al he swelly the. lity 5 and filckl wio NC co angla nicking fricking k. storing at about 650 9 thin

we you ever corresponded with ackerman who used to be at chied is now Supt at glun Dale here for your old office? He has specialized and apples. He would know plas for the tropics - or rather the o days temperate n trate on Florida 90 berry to all if it is not better an then try Tiogd more productice. I for better than haven. Also of California - Julian miller Dabreak of houise is the one to contact for Dabreak, dud Tioga try Royce Bringhurst at Davis Cal, you should try southern pears of high flauch. Dr. Brooks Hout Plant Industry Da. Beltsville und now hay the fear rele have Baldwing & Hood pears. anglad you why not trythe Imagness I moonlight - ask Brooks, We like but the the September and esplernes. presse it for later jam or on ice cream. It has more flavor frozen or heated to pasturisation or just to bailing - so much flavor then that it needs diluting with apple.

DARROWS MARYLAND 20769 GLENN DALE here . mack/ surge) ith are here Ed an the stran 25 after C es for all lors 9PC ayed with au e acres 9 hlouting 12 11 1 into sh ouvberry book put a week alr here isto is out of the way we tha to aton very direction all blueberries in Fla -20-2 erries in Japan Staly 0 0 & day lilies in I Cos angeles or Sant agaleas somewhere, It been thand to be tied down so

much for 3 years now. and Hurry Dlame - got to blame Wallace isto someone, It's been a mice writer sofar - one snow of sinches. I keep heat in hugger house but do not have much there. I hope we can get to fla. this writer & if so will probably seg John Poporloe - L'el see Bob Khught at chapman Field. with but regards