

Mexican Explorations of 1948

Wilson Popenoe and Louis O. Williams

The objectives of the newly formed Committee on Foreign Exploration were set forth by President Griswold in the Yearbook for 1947, which also contains two papers, one by C. A. Schroeder, the other by ourselves, summarizing the results of two expeditions to Mexico.

Carl Crawford, indefatigable traveler and explorer, admirer of Mexico and things Mexican, has done a great deal of the basic "avocado hunting" in Mexico. In the numerous trips which he has made he has visited most of the principal regions of the country where avocados are grown. He made many valuable contacts and, by personal observation, eliminated many trees from further consideration.

The unique and remarkable Rodiles grove of avocados, near Atlixco, received the greatest amount of attention because it contains many trees which produce fruit similar to that of the **Fuerte** variety. In October 1947 we collected budwood from fourteen trees in this grove, part of which was taken to California, the rest sent to the Escuela Agrícola Panamericana in Honduras.

Apparently all but one of these varieties has been established in California, and all but one in Honduras; between the two places the collection is complete. Our trees in Honduras, a year after the buds were inserted about two feet above the ground in stocks an inch in diameter at the base, are from six to twelve feet in height. Further propagations have been made and budwood is available in quantity.

At the time of the October 1947 expedition to Atlixco it was decided that it would be desirable to make a second study of the trees of the Rodiles grove, but somewhat earlier in the season. Perhaps in August, we argued, it would be possible to find varieties ripening earlier than does **Fuerte**.

As time went on, interest in this project spread to all of the avocado growing regions of the United States — California, Florida, and the Rio Grande Valley of Texas. The result was the largest gathering of professional avocado enthusiasts, bound on a serious mission, which Mexico has ever seen. About the middle of August there assembled at the Hotel de Cortes in Mexico City — whose genial proprietor don Jose Brockmann practically turned it over to us — Dr. J. Eliot Coit, Mr. Carl S. Crawford, Dean Knowles A. Ryerson and Dr. C. A. Schroeder, all of California; Dr. Rafael H. Cintron, Dr. William H. Cooper and Mr. J. R. Padgett from Texas; and ourselves from Honduras.

Operations began with a visit to Ingeniero Salvador Sanchez Colin, genial Director General of Agriculture in Mexico, whose generous assistance in all of this work has been most valuable. Afterward the party moved to Atlixco where headquarters were established at the Hacienda Xahuentla of don Enrique Gilly, member of the Committee on Foreign Exploration of the California Avocado Society. We owe our hearty thanks to Sr. Gilly and to his charming wife for their generous hospitality.

Three days were spent in going over the Rodiles grove tree by tree, for which permission had previously been obtained from the owner by Carl Crawford. Eighteen trees which appeared to be Fuerte-like hybrids were selected and budwood was taken. The budwood was divided into three lots, one of which was carried to California by Dr. Schroeder; another to Texas by Messers. Padgett, Cintron and Cooper; the third lot was sent to the Escuela Agricola Panamericana in Honduras where stock plants of both Guatemalan and West Indian races were budded by Don Fiester.



The Group at Hacienda Xahuentla, August 22, 1948.
Left to right: Carl Crawford, J. R. Padgett, W. C. Cooper, R. H. Cintron, Adolfo Rodiles,
Wilson Popenoe, J. Eliot Coit, Knowles Ryerson, C. A. Schroeder.

The eighteen collections were given the numbers 14361 to 14378 inclusive — serial numbers in the collection series of Dr. Williams. Each parent tree was tagged with a copper label bearing a number and its location in the grove indicated on a plan by Dr. Schroeder.

In addition to these Fuerte-like hybrids, three trees, apparently of the Mexican race and numbered 14379, 14380 and 14381, were selected as of unusually strong growth and as of possible value as rootstocks, if not for their fruit. These trees bore fruit above the local average in size. Budwood was sent to Honduras for propagation.

In our report of the 1947 expedition, published in the Yearbook for 1947, we state (page 27):

"There may be varieties in the Atlixco area which are sufficiently like Fuerte in fruit characters to fit the North American market, automatically as it were, and which at

the same time are sufficiently different in season of ripening or in cultural requirements to be of great value to the grower."

This explains, we believe, our reasons for selecting an additional eighteen varieties this year. Justification, if it were necessary, would seem to lie in the fact that only two Atlixco hybrids, Fuerte and Puebla (assuming the latter to be a hybrid leaning toward the Mexican race in character) were obtained in the early days of avocado exploration. Both of these have played a prominent part in the development of the California avocado industry, though Puebla is no longer of great commercial importance.

Aguacates De China

The presence of many trees in the Atlixco region which appear to be hybrids between the Guatemalan and Mexican races brought up the question of a suitable name by which the group might be designated. Not only did we see many such trees in the Rodiles grove, but also fruits similar in character were in the Atlixco market from other localities.

What term shall we use to designate members of this interesting group? They could, of course, be called Mexican-Guatemalan hybrids but they are only assumed to be hybrids. We do not know the parentage of any of them. In any case the group, because of **Fuerte**, is of such outstanding commercial importance that we thought it would be advisable to give to it a distinctive name.

When Carl Schmidt obtained budwood from the parent **Fuerte** tree in 1911 he said that the owner referred to it as an "aguacate de China". Subsequent inquiries in Atlixco, among some of the more experienced growers and dealers, brought out the fact that superior variations of the Guatemalan race are sometimes called by this same name. Should we call the group in question "Atlixco hybrids"? No, because we do not know that they are confined to Atlixco. In fact, we saw analogous trees later at Zitacuaro. Should we call them "Fuerte-like hybrids"? No, because many have fruits which do not closely resemble those of **Fuerte**; they have in common with **Fuerte** only a similar assumed hybrid origin.

Questioning many people we came to the conclusion eventually that the term "aguacate de China" is used to designate a superior avocado, without regard to race. The term seems to have developed in this manner: In the early days many fine things came to New Spain, as Mexico was then called, from China and the term "from China" eventually came to mean something choice or very superior. We found that it is applied to superior variations of other fruits, for example "granadilla de China" (a Passiflora), and "guayaba de China" (a Psidium). We have a parallel usage in Central and South America, where the term is "de Castilla", that is, "from Spain". Several members of the expedition were of the opinion that it would be appropriate to use the term "aguacates de China" as the group name for these supposed hybrids and the idea is respectfully placed before the California Avocado Society.

The Orizaba Region

Upon concluding the work in the Atlixco region, the Texas delegation, accompanied by Dr. Coit, left for a tour of the state of Veracruz, while Dr. Schroeder hurried back to California with budwood. Carl Crawford, Dean Ryerson and ourselves went down to Orizaba with two objectives in view; to get fruits of the **chinene** or **chinini (Persea Schiedeana)** and to hunt the wild avocado which Crawford, Griswold, Schroeder and Wahlberg had seen near the village of Aquila in 1947.

We were successful in both instances. Fifty seeds of the **chinene** were sent back to Honduras, where we are growing them for trial as rootstocks for the avocado. We obtained budwood of the wild avocado from near Aquila. This species proves to be **Persea floccosa**, a plant fairly closely allied to **Persea americana**. It seems to differ from all but one of the other wild avocados of this affinity which we have seen and collected in Mexico, Guatemala or Honduras in that the leaves, young branchlets and buds are covered with a brownish pubescence. Fruits of the species, which were not mature at the time of our visit, appear to be similar to those of the wild forms which we have seen near Tecpan in Guatemala, in the highlands of Honduras and at Acultzingo near Orizaba in Mexico. They are small, about one and one-half inches long, round or subpyriform and hard shelled. There is no anise odor in the leaves. We hope to fruit the plant in Honduras so that we may get seed to grow and try out as a stock plant.

It may be added that Don Fiester, at this writing, has a good number of buds of the Aquila avocado established on West Indian rootstocks at the Escuela Agricola Panamericana; and that our first experiments in budding avocados on **Persea Schiedeana** rootstocks, made in early August of this year, do not look very hopeful. The whole question of rootstocks remains to be solved but progress is being made.

The States of Mexico and Michoacan

Carl Crawford, who has made sixteen trips to Mexico at his own expense in the interests of the California avocado industry, will not rest happily until he has done two things: discovered the wild progenitor of the Mexican race, and brought to light some horticulturally superior variations of that race for cultivation in California. As regards the first point, we can add nothing to the statements made in our report of the 1947 explorations (Yearbook 1947, page 23); as regards the second — and recognizing that there are differences of opinion regarding the necessity of looking for Mexican avocados better than those already growing in California—we were glad to accompany Carl on a trip to certain regions of the states of Mexico and Michoacan, where he had seen large fruits (relatively speaking) of the Mexican race in previous years.

Ingeniero Sanchez Colin kindly offered to take us—Carl Crawford, Dean Ryerson and ourselves — on this trip. The first important avocado region visited was at Villa Guerrero in the state of Mexico. Here we found that most of the trees (in this region the Mexican race is practically the only one grown) were out of season; but we found off-season fruits on trees which locally were reputed to be unusually fine. We collected budwood of three which were numbered 14382, 14383 and 14384. Incidentally, two of these were from grafted trees. The owner, Sr. Eustolio Lopez Pliego, an intelligent and progressive

horticulturist, had considered them so superior that he had gone to the trouble of planting grafted trees in his orchard.

At Zitacuaro, in the state of Michoacan, we entered another important avocado region producing, almost exclusively, fruits of the Mexican race. Here we met an interested and intelligent horticulturist, Jesus H. Contreras, who told us that he obtained seeds from the Rodiles grove in Atlixco many years ago and planted them in this town. From his original trees seedlings have been grown, of which he showed us several. One appeared to be a pure Guatemalan, several others Guatemalan-Mexican hybrids. From the garden of Nabor Contreras at the village of Curungueo, not far from Zitacuaro, we took budwood (No. 14385) from a tree which appeared to be one of these hybrids and which was said to produce very superior fruits. It was not bearing at the time of our visit.