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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.

"LA ILUSTRACION", S.A.

PAPELERIA-IMPRESA-LIBRERIA

CASA MATER:

2 ORIENTE No. 11.

AMBOS TELEFONOS 22-65

SUCURSAL:

5 DE MAYO No. 405.

TELEFONO ERICSSON 87-28.

APARTADO No. 294.

PUEBLA, PUE.

PARA OBTENER OTRO LIBRO IGUAL PIDA EL No. 210

AVOCADO VARIETIES

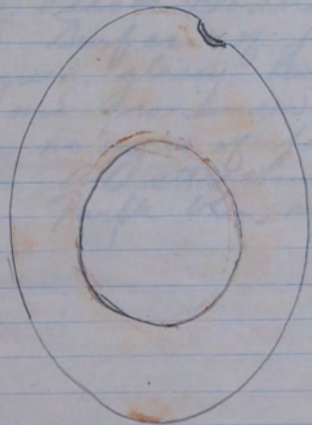
of which
budwood was collected at
the Hacienda San Diego near
Atlixco, Estado Puebla, Mexico

23 August 1948

and of which one lot was
taken to California (with a
few exceptions) by Dr. C. A.
Schroeder; one lot was taken
to Texas by Drs. Pintron and
Cooper; and one lot was
sent to Honduras by Mr.
Popenoe

The numbers are those of
the herbarium of Dr. Louis
O. Williams.

14361

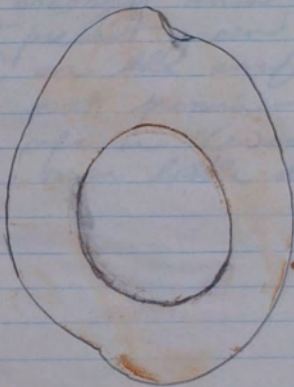


Pedicle 4 ins.

14361

Fuente-like hybrid. Not yet
mature. Leaves moderately anise-
scented. Surface of fruit now
light green, glossy. Lenticels abun-
dant and pronounced. Flesh
shows no signs of fibre-vascular
bundles. An attractive little
fruit - Purple when ripe

14362

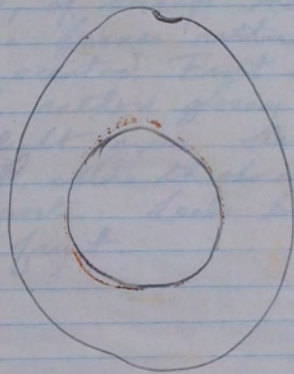


Pedical 4 to 6 ins.

14362

Appears to be a *Fuente*-like
hybrid, not yet mature. Leaves
rather strongly anise-scented.
Fruit at present green in color,
smooth on the surface, rather
glossy, with prominent lentreels.
Perhaps ripe in November? Looks
like a nice little avocado.

14363

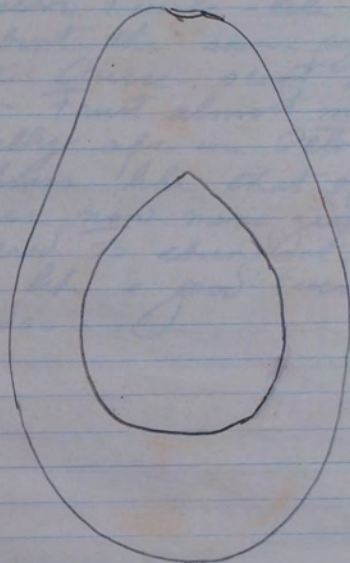


Pediceol 1 to 4 ins.

14363

Appears to be a Fuerte-like
hybrid, of perhaps the same
season. Leaves rather strongly
anise-scented. Fruit with a
smooth rather glossy surface,
now light green. Senticels pro-
minent, skin thickness like that
of Fuerte. Looks like a nice
little fruit.

14364

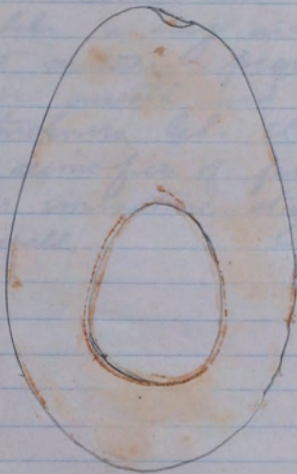


Pedice 4-5 ins.

14364

Another Fuerte-like hybrid,
of about the same size as
Fuerte. Anise scent of leaves
faint. Fruit almost mature -
probably ripe in October. Skin
thickness like that of Fuerte;
surface now moss green. Lenticels
scattered to abundant, conspicuous.
Looks like a good Fuerte-like
avocado.

14365.



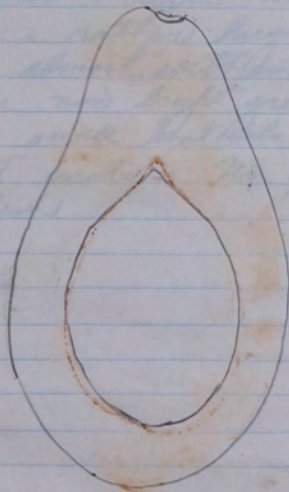
Pedical 3-5 ins.



14365

Another Fuerte-like hybrid and
looks like a very nice fruit.
Not yet mature - probably Oct.
Surface smooth and glossy -
Skin thickness like that of Fuerte
Flesh seems free of fibers even
in this immature stage. Seed
very small.

14366

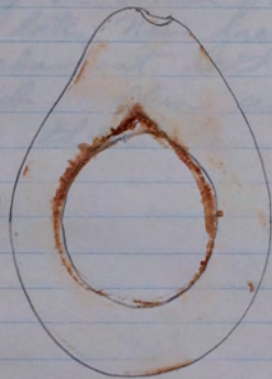


Pediceel 3 ins.

14366

Another Tuerke-like hybrid,
with a rather large seed.
T. shape almost without aroma-odor.
Surface now bright green, with
rather small lentils. Fruit
almost mature. No fibers apparent
in flesh.

14367



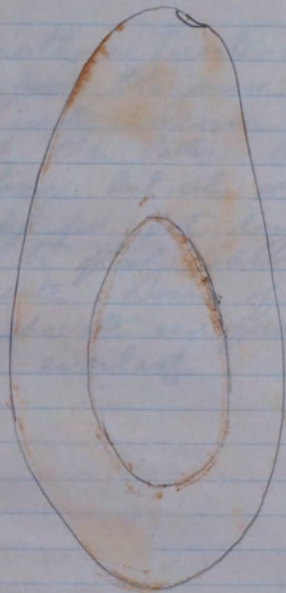
Ped, cell 6 ins.



14367

A Fuente-like, hybrid-plant
of anise-odor in leaves.
Probably a small fruit and
rather late. Now green in color
with abundant rather small
lent. cells. Skin seems to be
rather thick.

14368

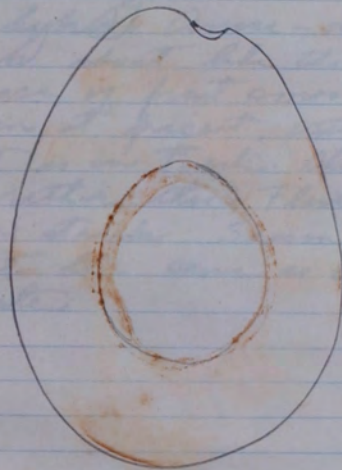


Pediceol 3-6 ins.

14368

Apparently a Fuerte-like hybrid.
Leaves have the same shape about
like Fuerte. Season perhaps about
that of the latter. Surface smooth
and glossy, lentils scattered and
relatively few, but large. Proportion
of seed to flesh about like that
of Fuerte. Some of the fruits
more obovate in form than that
traced overleaf.

14369



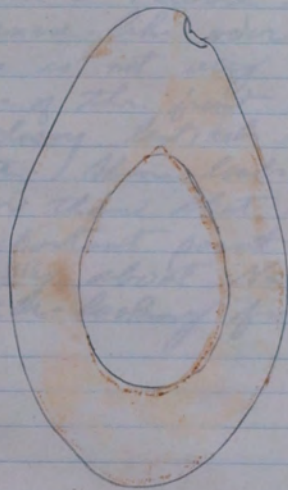
Ped. cal 4-6 mm.



14369

Another good-looking Tuerte-like hybrid. Anise-scent in the leaves about like that of Tuerte. Surface of fruit smooth, light green at present, with lenticels about as in Tuerte. Skin looks to be rather thin. Flesh free from fiber streaks. Season probably about the same as that of Tuerte.

14370



Pedicle 4-6 ins.

97241



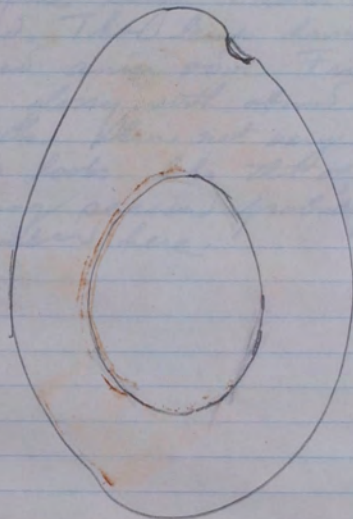
seed & embryo

14370

Another Fuerte-like hybrid.
The anise-like odor in the
leaves is not very strong. The
surface of the fruit is smooth
and glossy. Lenticels about as in
Fuerte. Skin looks somewhat
thicker than that of Fuerte
an important point. Season
probably about November here.
A nice-looking fruit.

Fuente Stone

14371.

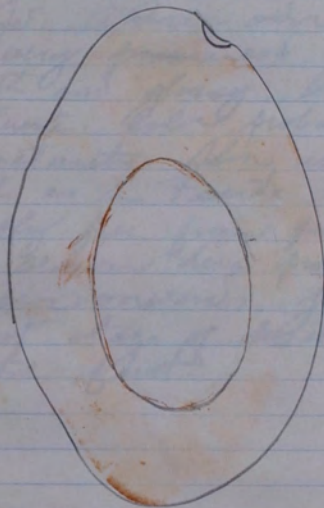


Ped. 8 ms.

14371.

A fine large Fuerte-like
hybrid. The leaves have a pro-
nounced anise odor. Fruit now
green, glossy with abundant large
lentils. Skin not very thick.
Flesh looks like that of Fuerte.
Ripening season probably about
November here

14372

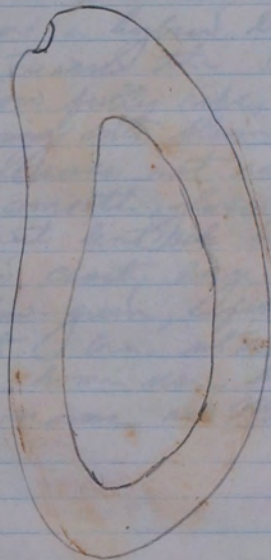


Pedicel 3 mm.

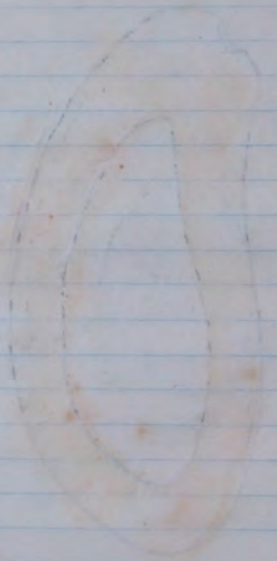
14372.

A good-sized Fuerte-like
hybrid. Aromatic odor of leaves
not very pronounced. Surface
smooth and glossy; lenticels as
in Fuerte. Color probably green
at maturity. Skin about as
thick as in Fuerte. Flesh
probably free from fiber. Ripen-
ing season here probably from
October onwards, judging by
present stage of development
of the fruit.

14373



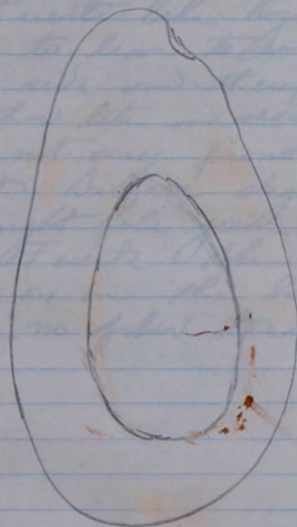
Pedicele 2-3 ms



14373

Either a late and large-fruited
Mexican or a hybrid leaning
strongly toward the Mexican
seed. Now fully ripe, and the
tree coming into bloom. Arose
odor of leaves not really strong.
Surface smooth, glossy dark
purple with lenticels not show-
ing. Seed cavity large. Flesh
pale yellow-green, fibers not
prominent. An interesting
fruit for home use & analysis
of the season and Mexican
tree.

14374

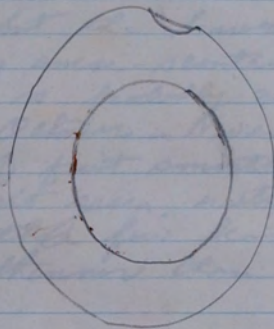


Pedice 3 ins.

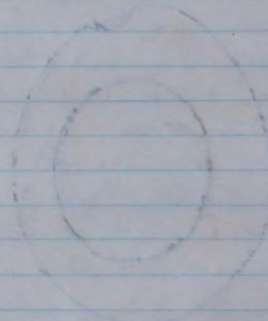
14374

A Fuente-like hybrid which
seems to lean toward the Guate-
malan side and therefore may
be rather late in season. Anise
odor not very pronounced but
present. Surface slightly pebbled,
now bright pale green lent, etc.
as in Fuente. Skin thickness
about as in the latter, flesh
shows no fiber streaks.

14375



Ped. 6 cm.

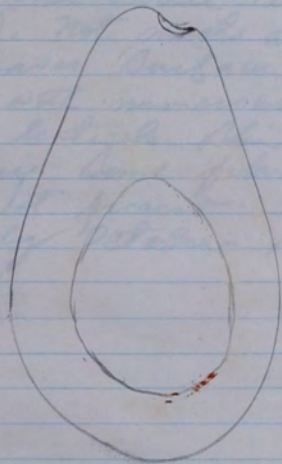


14375

Looks like a hybrid which
leans toward the Mexican
side but the leaves are not
strongly amara-scented; and
season is probably not earlier
than October - November. Sur-
face of fruit smooth and glossy,
new light green, with small
and rather few bristles.
Skin thinner than that of
Tuerke.

2781

14376

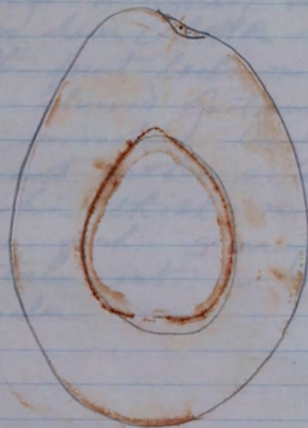


Pedicle 3 to 5 mm.

14376

A nice little Fuerte-like
hybrid. Not much anise-scent
on leaves. Surface (now) pale
green with numerous rather
small lenticels. Skin thin and
leathery. Some fiber streaks in
flesh at present: season here
probably October-November.

14377



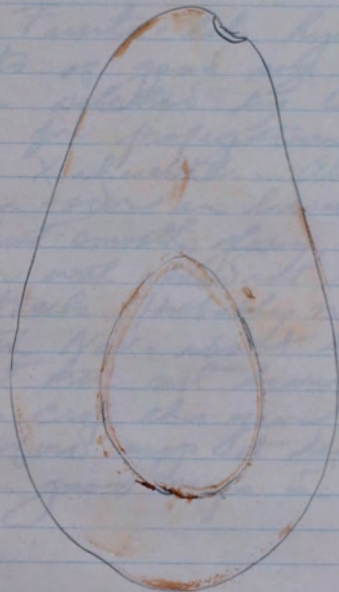
Radicle 3 ins



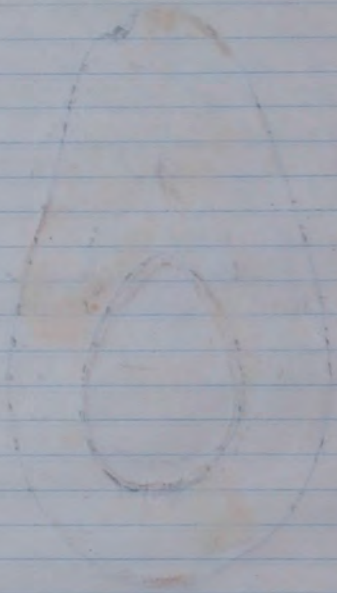
14377

Perhaps a hybrid, but the leaves have little ann. over and the fruit looks much like a smooth-skinned Guatemalan. Still quite immature. Surface with abundant rather small leucicels. Skin thick, no apparent pith in flesh. I suspect this may turn out to be a Guatemalan.

14378



Pedicele to ins



14378.

A Fuente-like hybrid with
fruits of good size. It has
been selected by Carl Crow-
ford for propagation at the
Hva. Xahuatl. Almost no
anise-odor in leaves. Surface
of fruit smooth, glossy, now light
green with abundant small
benticks. Probably not mature
until Nov. about like Fuente
Parent but not bearing much
of a crop this year but Carl
Crowford says it has borne
some good crops in the past.

14379.



Pedicle 1 to 2 ins

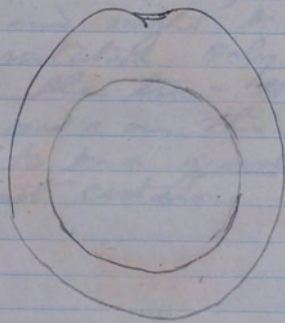


14379

Apparently a pure Mexican,
and perhaps rather late for
this race. Dark purple or
green around the base and
purple elsewhere. A nice
shagely fruit with the large
seed characteristic of this
race.

Apparently a strong grower for
trial as a root stock.

14380

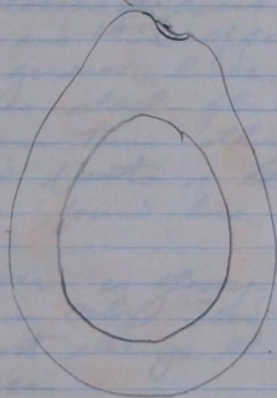


Pedicele 2 ins.

14380.

A variety of the Mexican was chosen primarily because it seems to be an unusually strong grower and might be interesting as a rootstock. Only one fruit left on the tree - there were several seeds on the ground. appears to be a green fruit but this is not certain.

14381.



14381

A variety of the Mexican race, taken because this and 14379 and 14380 appear to be strong growers, hence of possible value as stock-plants; and at the same time they are about as good fruits of this race as can be found here.

The var. is glossy, purple and green in color. Seed large as is almost always the case with this race.

722
Dr. Schroeder's list of *Avocado*s collected
at Rodiles grove, August 22-23 1948

Williams No Location in Grove

14361	Row 5 Tree 3	
14362	4	24
14363	3	28
14364	3	31
14365	3	32
14366	4	38
14367	3	47
14368	7	65
14369	12	65
14370	6	51
14371	7	38
14372	6	30
14373	7	20
14374	11	16
14375	11	18
14376	12	17
14377	10	6

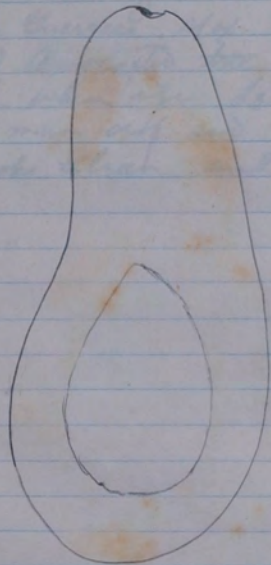
All the foregoing trees were marked with numbered copper labels.

14378 Ron 5 Tree 2? (Crawford's location) marked with copper label carrying no number. This variety is being propagated at Xahuentla as Rodiles No. 3.

14379 }
14380 } Mexicans? Taken by
14381 }

Williams and Popenoe, as of possible interest for rootstocks or good Mexican fruits.

14382



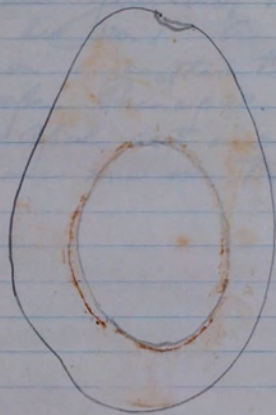
58841

14382

28 Aug 1948

From huerta of Eustolio Lopez Pleguez
at Villa Guerrero, Mex. (Burdwood collected
his No. 2) A grafted tree. Fruit said to
be black when ripe. Looks to be mature
now but main crop said to be in April.
Flesh looks clean and color good.

14383



14383

28 Aug 1948

From huerta of Eustasio Lopez
Puego, Villa Guerrero, Mex. Budwood
labelled see No. 1. A fine Mexican.
Taken from a grafted tree. Color green
when ripe. Principal season said
to be April, but a number of
fruits are now on tree and almost
mature.

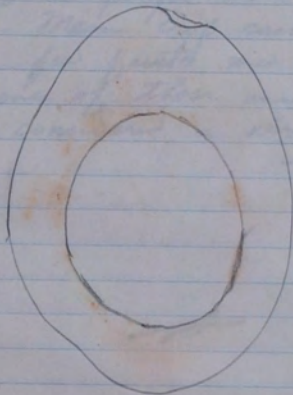
Aug 22

14384

14384

25 Aug 1945

From hillside of San Juan
Valla greenish yellow. 6' high. The
leaves are dark green with
horizontal veins and to a small
only a few small ones are
dark and of 2-3 cm. in length.
Locally it is very good for



14384

28 Aug 1948

From huerta of Jose Vera in
Villa Guerrero, Mex. A good Mex-
ican Dark purple with Emerald
lentils. Main crop said to be April.
Only a few fruits now on tree
but some of those are mature.
Locally considered a very good aqua-
cate.

14385

29 Aug 1948

"Curungueo" - Parent of
this tree said to be a seedling
in Zatacnaro which was grown
from a seed brought from
Atlixco. This tree is said to bear
a long black medium-sized
fruit of good quality with a
small seed. Probably a hybrid
tending toward the Mex. side.

Tree at house of Habor Contreras
at settlement of Curungueo a few
kms from Zatacnaro.

Jesus H. Cortes

1^a Nicolas Romero #4

Zitacuaro, Michoacan.

An avocado enthusiast - got seeds
from the Roody grove many years
ago and planted them here.
Seedlings from these show much
evidence of crossing with local
Mexicans. We saw several such
trees.

He says aguacates de Chera are
fine fruits with small seeds
and flesh of good quality. Nam-
guajaba de Chera and granada
de Chera also used.

Pasqual Martinez

who lives at the Cumbre de
Acultzingo, can get seeds of
the wild avocado in season -
probably around the first of
the year. Carl Crawford says
he can arrange to have Jacques
pick them up on one of his
trips to Orizaba and deliver
them to Mr. Bogen (Despacho
412, at Palma Norte 417 in
Mexico City) who can ship to
us by air express. We should
try to get 100 seeds.

Inscription on plaque which has been placed on outside of old Le Blanc house:

En esta casa existe el arbol de aguacate que dio origen a las grandes plantaciones, que son fuente de riqueza en los Estados Unidos.

Su propietario, señor Alejandro Le Blanc, proporcionó las plantas del aguacate al señor Carlos Schmitt en 1911; quien las transportó para sembrallas en California con mucho éxito.

En clase fue la única, entre todas las variedades que se llevaron a California, de varias partes del mundo, que resiste las intemperancias del invierno en esas latitudes.

Por esto la "California Avocado Association" hace su primera excursión para rendir homenaje al aguacate "Fuente", también llamado "Padre".

Athens, 17 de abril de 1938.

Present in Atlixco Aug 22-23 1948
when trees were examined in the
Roddus grove

Dr. J. Eliot Coit of California
Dr. C. A. Schroeder "
Dean K. A. Ryerson "
Dr. Rafael Cintron of Texas
Dr. Wm. Cooper " "
Mr. Padgett " "
Dr. L. O. Williams " Honduras
Mr. Wilson Popenoe " "
Mr. Carl Cranford of California

We discussed an appropriate
name for the trees which appear
to be Guatemalan x Mexican
hybrids. Three were suggested:

Atlaxco hybrids
Fuerte-like hybrids
Aguacates de China

The majority of those present

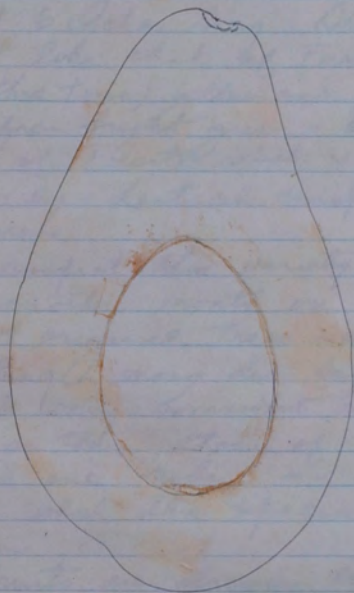
700
seemed to feel that the best term
is "de China". There are hybrids
of this parentage in places other
than Atlixco, and these hybrids
are not all Fuente-like. While
the term "de China" is applied
in Atlixco to some varieties
which do not appear to be hybrids
its use in horticulture for
Guatemalan & Mexican hybrids
should not result in any con-
fusion and its use in this
sense has already become es-
tablished to a limited degree.

Following are notes made at
Escuela Agrícola Panamericana on
the avocados introduced from
Mexico 1947-1948.

W. Popenoe

No. 13520.

Fruit from one of the original
buds, obtained in October 1947.



Not yet mature.

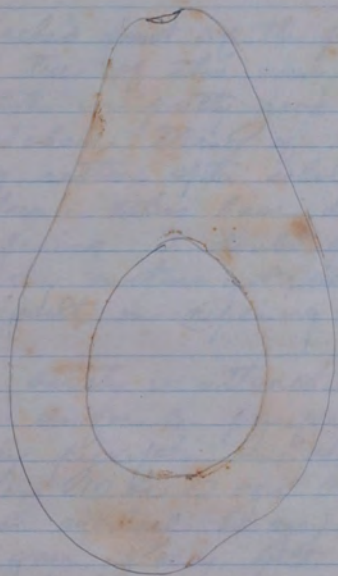
See next page

13520.

The fruit outlined overleaf was picked on 11 Sept 1949. Seed coats not yet dry - fruit not mature. Present weight about 13 ounces. Pedicel about 6 inches long. Skin thickness about like that of Fuerte. Flesh (at this time) yellow and free from fiber. Surface bright green - brighter than that of Fuerte which is growing near-by - Lenticels conspicuous, and numerous.

I suspect this variety may mature in another month or so. One of the 4 original trees seems to be failing & may die before long. Fruits vary somewhat in form but less so than those of Fuerte; I noted one "cuke" on the tree from which this specimen was taken.

Fruits are already being stolen from this variety.



13520, picked Oct 20 1949
See next page

13520 - Zamorano, 28 Oct 1949.

We picked most of the fruits from
and 3 trees of this number which
are still in pretty good health on
20 October. Many of them were
showing rotten spots while still on
the trees - others have developed
on ripening. I doubt if the fruits
are fully mature yet; some of
them will on ripening.

This variety is attractively and
rather uniformly pyriform to
broadly pyriform in shape; weight
averaging 10 or 12 ozs (the one
outlined overleaf 14 ozs); color
bright green, glossy, with numerous
small lenticles; skin definitely
thinner than that of *F. aculeata*,
without stone cells, almost like
that of the Mexican race, not

separating readily from the flesh
which is of course slightly objectionable;
flesh rich yellow in color, greenish
close to the skin, free from fibers
and almost free from fiber streaks;
flavor nutty, dry, much like a
good fruit of the Mexican race;
quality excellent; seed rather
small to medium-sized, tight
in the cavity. Season in
this climate October-November.

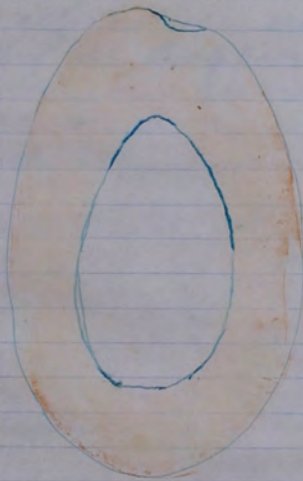
Zamorano, 19 July 1951.

Several seeds were brought from the Rodiles grove, Atlitico, in October 1947 when we also brought budwood of the 13000 series. One tree grown from those seeds has produced attract. we fruit this year - one other has fruited but does not look good.

The tree whose fruit is shown overhead is about 6 ft high, spreading in form but not drooping. About a dozen fruits in this first crop, all taken before mature. Weight about 8gms, probably going to 10, color light green, surface smooth and attractive. Season here September? Perhaps ripe in August.

Rodiles seedling (see preceding
page).

Skin thickness about like that
of Fuerte, but surface less
rough. Flesh yellow, not pale.
No fiber streaks.



Zamorano, 21 July 1951

The following notes and outlines of some of the 1948 introductions were made in the field today. All of the varieties are still far from maturity but the fruits are rapidly disappearing and it is best to get what information we can before they all disappear. No notes were made on several vars. of the Mexican race as they do not look very promising.

Following varieties might well be distributed more extensively in California for trial:

14361	14377
14365	Rodiles seedling
14367	
14369	
*** 14371	

14361

Pedice! short, 3-5 cm, stout

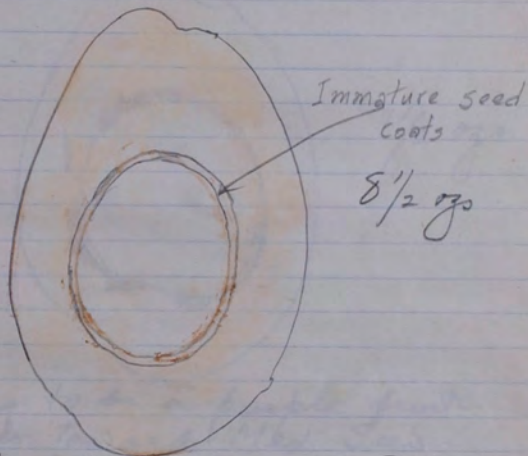


See original
notes
purple when
ripe

Very immature seed coats fleshy
and white. Wt 8 ozs. Surface smooth,
light or yellowish green. Tree
upright, 10 ft (original bud). 5
fruits hanging - Worth further trial

14361

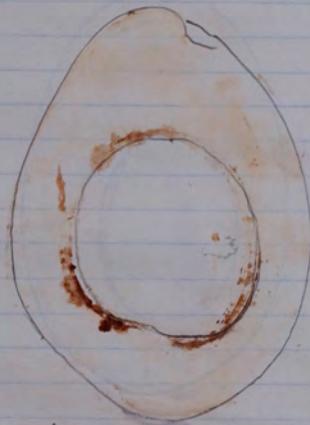
This one (and all following ones)
from tree in Variety Collection (not
original seedlings).



Sick tree 4 ft high with 8 fruits.
Looks promising

14362

3 trees 5 ft high, very spreading
in habit. a few fruits on each



7 1/2 ozs

Going to be a purple fruit.
Tends toward Mex. Seeds
pretty large. Not very promising.

14365

3 trees, 6 ft high, compact, shrubby,
2 trees each with 2-4 fruits

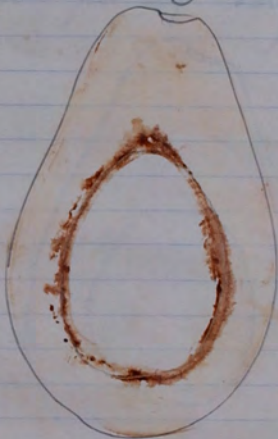


6 1/2 ozs

Not as immature as 14361. Perhaps
ripe in one month. Flesh yellow,
clean. Productiveness uncertain
as yet, but for growth and for
size and shape of fruit worth further
trial. Fruit scabby?

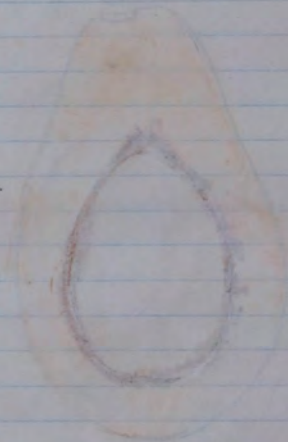
14366

3 trees, 8 ft, tall + slender. all
with good to large crops.



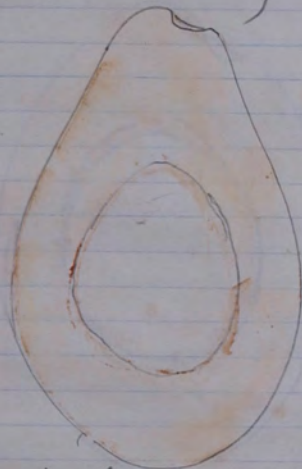
Figs

Seed too large. neck pronounced in
many specimens may prove to be
a heavy bract but not promising for
its large seed.



14367

3 trees. 6-7 ft. good shape, large leaves. On tree only with fruit, but thin with fine crop. Very strong grower

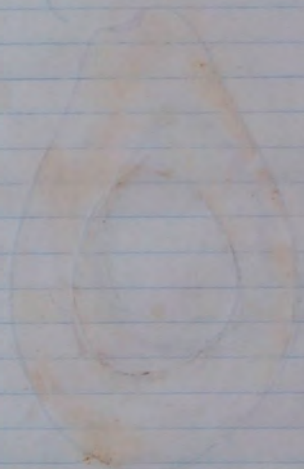


7 ozs
~~Probably~~
purple

going to turn purple? Surface smooth + glossy, seed not too large. Worth further trial.

14371.

3 trees 7-8 ft rather spreading
but good form. Two with good crops,
a few fruits on the others

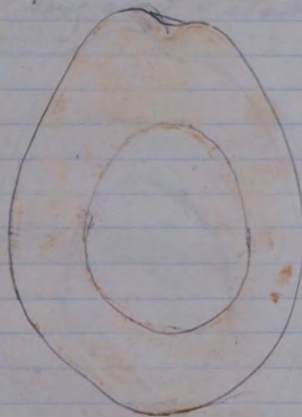


9 ops
Purple
probably

Quite immature. Uniform shape
good surface. One of the most promising.
Propagate.

14369.

Two sick trees and one fair
tree 7 ft high with about 15 fruits -
good crop.

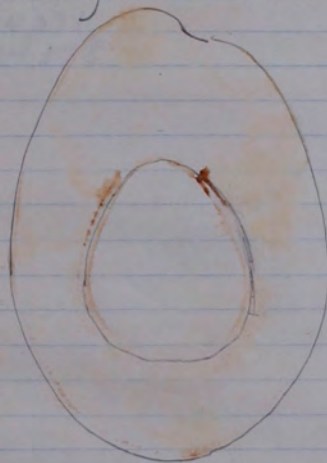


8 yrs
Purple

Seed coats still thick & fleshy. Surface
smooth but going purple. Seed medium
size. Worth limited trial.

14377

2 trees 7-8 ft high, strong grower,
upright, nice clean foliage. Fruit quite
variable in shape and size. Fair crops.
Pedicel very short + stout.



Very immature. Surface attractive. Color?
For limited further trial because so much
variation in size + shape. Seed small.

June 5 - Look interesting

14362

14365

14372

14371

14378

Sent to Wm C Cooper,
Weslaco, Texas, on 14 Mar 1950

13516	14384
13517	14377
13520 AZTEC	14378
13521	14374
13524	14376
13526	14361
	14372
	14375
	14371
	14362
	14365
	14366
	14369

Sent to F. B. Lincoln, Subtrop.
Exp. Sta. Homestead, 26 Mar 1950

13518	14365
	14366
	14367
	14369
	14372
	14376
	14377
	14378
	14380
	14382
	14383
	14384

Harlan B. Grismold
459 West Road, La Habra.
phone WHittier 83155

Felipe H. Escalante
Calle 60 num 480
Merida Yucatan
Good man for tours to ruins -
not so expensive as some.

Eduardo Mejia Velez
wants list of movies on
Agriculture in Spanish and
Pine seed.

Manuel R. Ornelas
Student Union Bldg.
Colorado A & M College
Fort Collins.

Send watch to Srta Victoria Morales B.
7a Ar. Norte 27
Antigua G

Bogrens house phone
36-53-59

Rafael Heliodoro Valle
15-08-48

Ing Salvador Sanchez Colin (home)
11-35-51

(Send him some teak seed)

Mrs. Barsaloux - Sycamore 48-048

Homer Henney
Phone 1161 (office) 595 (house)
Fort Collins.

W. R. Horlacher, Associate Director

