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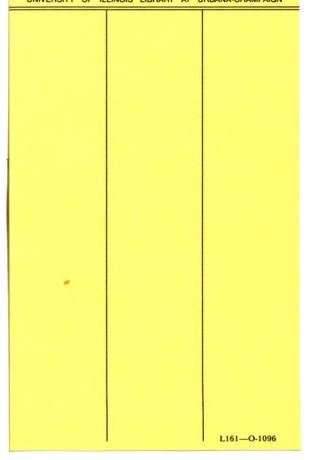
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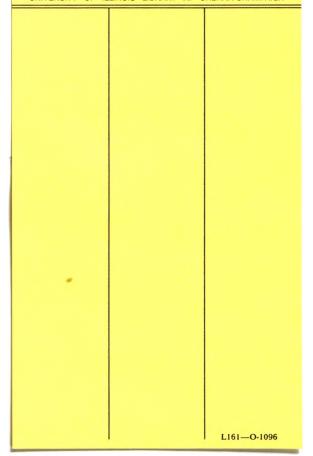
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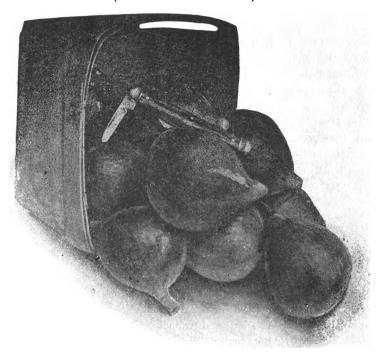
November, 1907.

GEORGIA EXPERIMENT STATION.

EXPERIMENT. GA.

# THE FIG IN GEORGIA

(SECOND REPORT)



By H. N. STARNES and J. F. MONROE.

The Bulletins of this Station are sent free to all "persons actually engaged in farming, who make request for same," and to all newspapers in the State. Address

MARTIN V. CALVIN, Director,

Experiment, Ga.

Byrd Printing Co., Atlanta.

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	(1) "Profichi"	
•	(2) "Mammoni"	
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# PLATE I.

# I. CORDATE Type.

- (II. Remaining four leaves CALCARISATE Type.)
  - 1. LATATE Group
  - 3. SPATULATE Group
- 2. LYRATE Group
- 4. LINEATE Group

# THE FIG IN GEORGIA

(SECOND REPORT)

BY H. N. STARNES AND J. F. MONROE.

### INTRODUCTORY.

SUFFICIENT interest in the Fig seemed, four years ago, to have developed in this section to warrant the publication of a Station Bulletin on the topic. Bulletin 61, "The Fig in Georgia," was therefore issued. This bulletin covered cultural methods, inflorescence and classification, leaf types and varieties.

The appearance of this Bulletin seemed to evoke throughout the whole of the South Atlantic and Gulf States an increased interest in the Fig which has steadily intensified as time passed, and while in the matter of cultural methods there have arisen few new

developments, so much additional information has been compiled regarding varieties that the following publication is deemed necessary to place on record the recent work of the Station, under two heads (botanical and entomological) as follows:

- 1. Nomenclature and Synonymy.
- 2. Smyrna Fig Culture.

# PART I. NOMENCLATURE AND SYNONYMY.

### 1.-THE STATION COLLECTION.

While the test plats of the Station at the time of the publication of Bulletin 61 contained only some twenty-odd varieties of the Fig—all that had been collected up to that time—at the very beginning of the work the terrible confusion obtaining in the matter of names was noted. Indeed, no fruit comprising, as in this case, but a single species, is so badly mixed as is the Fig in its nomenclature. The Japanese plums are sufficiently bewildering, but Bailey, Waugh, Wickson and others have succeeded in reducing their synonymy to something like decent shape. Japanese persimmons are in even a worse tangle than Japanese plums, yet they do not occupy so extensive a field and are therefore relatively less important; their number of varieties is also more limited and they are, in addition, fairly on the way toward simplification, for Hume has done some good work in this direction, and this Station has also been engaged extensively in their study and expects soon to publish the results.

But the nomenclature of the Fig still remains in the crudest confusion, and little, so far, has been done to remedy it. Roeding's very valuable work with this fruit in California has been mainly along commercial lines. F. S. Earle, in Alabama, has dealt chiefly with cultural methods and with maladies; R. H. Price's studies in Texas have been strictly local. Dr. Howard's publications are, of course, entomological, and confined principally to a consideration of the Blastophaga (or fig wasp) on the Pacific Slope. Gustav Eisen, while preparing a veritable cyclopedia of information on the Fig—by far the best and completest American work on this subject—has not attempted to any extent to untangle its synonymy.

That this is necessary is apparent from the fact that of the 25 or 26 socalled "varieties" we have been growing at the South for perhaps the greater portion of a century, and which, until quite recently constituted the entire range in this section of varietal experimentation, possibly one-third consisted of reduplicated names. For example, the Station has received time and again the Dalmatian fig under many different names, among others Magnolia, Reed, Turkey Brown, Brunswick, and even White "Smyrna," confusion seems particularly to prevail regarding the identity of Brunswick and Turkey Brown, and several different figs bear the name of DuRoi. Price even terms this a black variety, although it is distinctly a yellow fig. Instances might be multiplied again and again, yet so well defined are the principal features of most of the figs grown in this section that there is no reason why there should exist any great uncertainty regarding their respective identities beyond the fact that no one seems as yet to have been in position to properly conduct their study and classification and continue it until definite results were secured.

On taking up this work the first step adopted by the Station as a basis for the intended differentiation was to obtain from various points in the South and from California cuttings of every listed fig that could be found. Beginning with the small nucleus of 26 varieties already on hand, additional collections were established from many places in Georgia, Florida, Louisiana and Texas. A number of varieties were also added by purchase from California nurseries, and two handsome collections were donated by the California Experiment Station—one supplied by Patron John Tuohy of the San Joaquin Valley Sub-Station, at Tulare, the other by Mr. J. H. Barber, at the time Superintendent of the Southern California Sub-Station at Ontario. The courtesy of both in the matter is gratefully acknowledged. A small amount of wood was also obtained from the U. S. Division of Pomology.

The Station next imported directly from Southern France through Messrs. Nabonnand & Co., Golfe Juan, Alpes Maritimes, 52 so-called "varieties" under their original French names. At the same time Mr. John B. Davis, of Mobile, Ala., who is cooperating in this work with the Station, imported from Piedmont, Lombardy and Naples a number of Italian "varieties," the wood of which he has generously shared with us.

Plats were successfully established from these varied sources in 1904 and 1905, and added to in 1906. They made in nearly every case a satisfactory and frequently a remarkable growth. The alphabetical list of the varieties at present composing this collection, together with the sources from which they were obtained, is here appended.

### FIG COLLECTION.

### Georgia Experiment Station.

1907.

STATIO	ON				
No.		Va	RIETY		Source
4001				Valley	John Tuohy, San Joaquin Sub-Station, Tulare, Cal.
				Alpes	and & Co., Golfe Juan, Maritimes, France.
4003	Adriatic			colle€t	
	do	do	(b)		Roeding, Pres. & Mngr. er Creek Nurseries, Fr sno
	do	do	(c)	Tuohy.	

Stati	ON	
No.	. VARIETY	Source
4004	Agen (a)	The P. J. Berckmans Co., Augusta,
2001	<b>g</b> (ω)	Ga.
	<b>do</b> (b)	
4005	Angelique (a)	
4000	do (b)	
4006	Aubique Noire	
4007	Beaucaire Grise	
	Belle Dame	
4008		
<b>400</b> 9	Bellona (a)	J. H. Barber, Supt. S. Cal. Sub-
	1 (1)	Station, Ontario, Cal.
		Nabonnand & Co.
4010	Bourgeassotte Blanche (a)	
		Tuohy.
4011	Bourgeassotte Grise	
<b>40</b> 12	Bourgeassotte Noire	
4013	Bourgeassotte Violette	
4014	Bourjassote Panache	Roeding.
4015	Brizanzola	Tuohy.
4016	Brogiotto	Tuohy.
4017	Brunswick	Station.
4018	California Black (a)	Station.
	do (b)	Chico Nursery Co., Chico, Cal.
<b>40</b> 19	Celeste White	Roeding.
4020	Celestial	Station.
4021	Celestial Yellow	Tuohy.
4022	Claiborne	Jno. B. Davis, 15-17 N. Commerce
		St., Mobile, Ala.
4023	Claveline, de la	Nabonnand & Co.
4024	Col. di Signora Bianca (a)	
	do (b)	Nabonnand & Co.
		Tuohy.
4025	Col. di Signora Nigra	
4026	Constantine, de (a)	
1020	do (b)	Tuohy.
4027	Dalmatian	
4028	Datte	
<b>402</b> 9	Doree	
4030	Doree Narbus	
4031	Dottato	•
4032	Dottato White	
4033		J. L. Normand, Hillside Nurseries,
7000	Diap d Of (a)	Marksville, La.
	<b>do</b> (b)	
4024	Du Roi (a)	
<b>40</b> 34	do (b)	
	do (c)	
	uo (c)	I dony

Stati	ON	
No.	. VARIETY	Source
4035	Early Violet (a)	Barber.
	<b>do</b> (b)	Tuohy.
4036	Endich White	Roeding.
4037	Everbearing	Davis.
4038	Ford	
4039	Four Season, White	Station.
4040	Gant d'Or	Nabonnand & Co.
4041	Genoa Blue (a)	Station.
	<b>do</b> (b)	Berckmans Co.
4042	Genoa White (a)	
	<b>do</b> (b)	Tuohy.
4043	Genoese White	
4044	Golden Narbus	Station.
4045	Grosse Grise Bifere (a)	Barber.
	<b>do</b> (b)	Tuohy.
4046	Hardy Prolific	Davis.
4047	Hirta du Japon (a)	Barbe <b>r.</b>
	<b>do</b> (b)	
4048	Hobichon Noir	Nabonnand & Co.
<b>404</b> 9	Ischia Black (a)	
	<b>do</b> (b)	
4050	Ischia Brown (a)	
		Nabonnand & Co.
	<b>do</b> (c)	
4051	Ischia White (a)	Station.
	<b>do</b> (b <sub>.</sub> )	Tuohy.
4052	Jacobson	
4053	Jaspe, a bois	Nabonnand & Co.
4054	Jerusalem, de	
4055	Kennedy Castle	
4056	Kirtland	
4057	La Perouse	
4058	<b>Lardaro</b> (a)	
	<b>do</b> (b)	
4059	Lemon	
4060	Lievre, Museau de	
4061	Lievre, Sang de	
4062	Madeleine	
<b>4</b> 063	Madeleine Grise	
<b>4</b> 064	Magdaelina	
4065	Magnolia	Station.
<b>4</b> 066	Malaga	
4067	Marocaine	
<b>406</b> 8	Marseillaise Grosse	
4069	Marseilles Black	
4070	Marseilles White (a)	Station.

STATI	ION	
No	. VARIETY	Source
4070	Marseilles White (b)	Tuohy.
4071	Martinique White	
4072	Mission	
4073	Monaco Bianco (a)	
		Nabonnand & Co
4074	Mouissonne	
4075	Nabonnand Grise	
4076	Nabonnand Jaune	
4077	Nabonnand Rose	Nabonnand & Co.
4078	Nabonnand Rouge	Nabonnand & Co.
4079	Nabonnand Violette	Nabonnand & Cg.
4080	Negro Largo	
4081	Negrone	
4082	New French	Nabonnand & Co.
4083	Neyreii White	Berckmans Co
4084	Noirmoutier	Barber.
4085	Oblique Blanche	Nabonnand & Co.
4086	Oblique Noire	Nabonnand & Co.
4087	Osborn Prolific	
4088	Paileuse Blanche	Nabonnand & Co.
<b>408</b> 9	Panachee	Nabonnand & Co.
4090	Pastelliere (a)	
		J. L. Normand.
	do (c)	
<b>40</b> 91	Peau Dure	
<b>40</b> 92	Persian White	
4093	Petite Marseillaise	
4094	Petite Violette	
4095	Precoce de Barcelonne	
4096	Precoce, Grosse Grise	
4097	Pregussata	
4098	Provence Black	
4099	Reculver	
4100	Reed No. 1	
4101	Reed No. 5	
4102	Reed No. 6	
4103	Ronde Noire	Barber.
4104	Ronde Violette Hative	Tuohy.
4105	Royal Vineyard	Landa Tuohy.
4106	San Pedro Black (a)	
4105	do (b)	
4107	San Pedro White (a)	
4100		Roeding.
4108	Smyrna White	N-bana 1 ° C
4109	St. Jean Blanc	
4110	St. Jean Gris	Nabonnand & Co.

Stati	ON	
No.	VARIETY	Source
4111	St. Jean Noir	Nabonnand & Co.
4112	Superbe de Fontbelle	Nabonnand & Co.
4113	Toulousienne	William James, Jacksonville, Fla.
4114	Turkey Brown (a)	Station.
	<b>do</b> (b)	
4115	Turquie Brune	Nabonnand & Co.
4116	Verdale Longue (a)	Barber.
	<b>do</b> (b)	
	do (c)	Nabonnand & Co.
	Vernissenque	
4118	Versailles, de	Nabonnand & Co.
4119	Violet, Early Round	Station.
4120	Violet Sepor (a)	
	<b>do</b> (b)	James.
4121	Walker	Station.

### CHISWICK COLLECTION.

In addition to the foregoing the Station received in January, 1907, through the kindness of Professors Taylor, Fairchilds and Barrett, of the U.S. Division of Pomology, cuttings of certain varieties, which are said to have constituted the cream of the famous "Chiswick Collection" in England. Some of these we already have here in our plats, but there are several "standards" in the list that will be warmly welcomed, while all will be useful as checks on the other specimens which we have under the same name. In this list the figures in the left hand column immediately preceding the names, represent the U.S. Department number, under which each was received and which has been introduced here for the full identification of the specimens. The first or left hand column gives the Station's "accession number," by which the specimen will be in future recognized here.

It should be noted that neither in our main collection already enumerated and covered by numbers 4001 to 4121 inclusive, nor in the Chiswick Collection covered by numbers 4122 to 4168 inclusive, have we inserted any of the Smyrna figs or Caprifigs, which will be listed separately in Division II of this Bulletin.

### BARRETT'S LIST.

(From "Chiswick Collection").

```
STATION U.S.
 No.
          No.
                                    NAME.
4122 --- 18861 --- Arbal.
4123 .... 18848 .... A Bas Jasper, (A Bois Jaspe?)
4124____18855____Archipel, de le.
4125____18873____Adam.
4126----18854----Bondance Precoce.
4127____18847___Bourjasotte Noir, (Bourgeassotte Noire?)
4128 --- 18898 --- Brunswick.
4129____18874____Constantine, de.
4150 --- 18897 --- Doree.
4151____18851____Euscaire Preto.
4152____18896____Gourand Noir.
4153____18876____Grosse Verte.
4154____18844____Grosse Violette de Bordeaux.
4155____18857____Hirta du Japon.
4156____18856____Ischia Green.
4157____18862___Jerusalem, de.
4158____18890____Madeleine, de la.
4159____18853____Monaco Bianco.
4160____18846____Monstreuse.
4161 ____ 18863 ___ Nebian.
4162____18889____Negro Largo.
4163____18842____Oeil de Perdris.
4164____18888____Pastilliere.
4165____18867____Reculver.
4166____18849____Royal Vineyard.
4167____18858____St. John, (St. Jean?)
4168____18875____Violet Super, (Violet Sepor?)
```

### 2.—COMMENT.

As soon as possible the foliage of our more newly acquired figs was studied, the result somewhat modifying the arrangement previously adopted in Bulletin 61, in the initial classification of fig foliage. This will be referred to in its proper place. Almost every variety has now fruited, those more precocious in the fall of 1905 and the others in 1906, although several varieties matured their crop so late that in both years it was cut off by frost and consequently no notes were obtained. This would necessarily imply the worthlessness of the varieties in question but for the fact that past experience in such matters induces a belief that possibly in a few years

these belated individuals may readapt themselves to the changed climate and environment and may prove valuable after all as very late varieties, particularly in seasons when no frost happens to occur during the latter part of October.

Nearly every specimen has been technically described, recorded and photographed, although not with the precision that would have been observed had it been foreseen that all of our plats would succumb to the cold during the winter of 1906-07. This proved, unfortunately, the case, since the warm December of 1906 stimulated abnormal development after a very short nap which the trees took during the first half of the month. This development had proceeded to such an extent by December 20th, that the subsequent "blizzard" during Christmas week, although of no very great severity,—the mercury falling to a minimum of only 16 degrees, injured the plat so seriously that we were forced to saw off every tree level with the ground the following spring. All of our plats were thus entirely "wiped out," and thereby we lost not only the year or two of time necessary to renew their former proportions from the old stools, but we also had a peremptory stop put to our note taking, which was of more consequence. Some of the trees so destroyed were nearly sixteen feet high with trunks at the base as large as a man's thigh—and this after only a couple of years' growth. Fortunately the root system remained intact in almost every instance and we lost very few trees outright, and therefore the work has not been entirely nullified, but merely temporarily interrupted; at least so it is hoped, although it is well known that in this latitude the shoots springing from fig stumps are much more tender than unmutilated older trees during the first two or three years of their new growth and are therefore liable to be seriously injured by even a moderate degree of cold for several winters to come or until their trunks again attain density of structure and hardiness by age.

The most provoking feature of this occurrence lay in our inability to furnish last spring to those cooperating with us in different parts of this and other States the complete collection of wood which we had expected to send them. This has been necessarily delayed an entire season.

Notwithstanding this temporary discouragement, the work has made fair, if not satisfactory, progress, and several points of distinct interest and value have been developed.

1. One of the primary determinations which we had intended to make was the identification of the true Turkey Brown fig. This we had hoped to accomplish by the importation from France of the variety there known as "Turquie Brune," which we had expected to use as a basis of reference and to accept as the true Turkey Brown. We failed in this, since the Turquie Brune received from Nabonnand & Co. appears almost identical with Dalmatian or Magnolia, having "Calcarisate" foliage with "Lineate" lobes instead of "Cordate" leaves, and is very far from the type known here as Turkey Brown. Nabonnand & Co. evidently mixed labels in shipping or else we are badly off the track regarding the identity of this fig, and have always been so. As it is, we are left in a worse predicament than before and the question, instead of being cleared, becomes more complex.

- 2. We had also hoped to distinctly identify Dalmatian or Magnolia and determine its correct name and origin. Doree, as received from Nabonnand & Co., proves almost, if not absolutely, identical with Dalmatian, yet so does the specimen which they shipped us as Turquie Brune. The hiatus caused by the destruction of our plat has prevented a critical comparison of these varieties and so defers the matter for at least another season.
- 3. Brunswick is another fig the identity of which it is desirable to correctly determine. So far the fig we have under this name is a large, late, undesirable mahogany colored fruit of poor quality and identical with the California Black of our old plat, growing by its side. It in nowise resembles Magnolia, and is far from being the same as the Turkey Brown of this section, and it has never here shown any indication of the good quality ascribed to it elsewhere, particularly in Texas. To add to the complication there was exhibited at the Jamestown Exposition in September, 1907, two types of Brunswick from around Norfolk. One, our mahogany colored Brunswick, the other a darker and duller looking fruit of equal size but of far better quality, which, though superior, does not correspond to the standard descriptions of Brunswick. The whole matter is consequently "still in the air."
- 4. Ischia White we had also hoped to find something more about. Here it is our best fig, and here it is neither small nor of medium quality, but on the contrary, medium in size and of unsurpassed quality, in both respects differing from its characterization on the Pacific slope and in Texas; yet whatever we have got under this name we have got a good thing and our Ischia White still stands unrivaled at the head of the list and is likely to there remain.
- 5. DuRoi, another maledicted fig in many sections, we had thought to find some other variety, since DuRoi is one of our best figs here, a constant bearer, always reliable and far better than the old standard Lemon so universally planted, although considerably resembling it. Its main point of difference is in its habit, which is stocky and bushy and not erect and straggling like Lemon almost universally is. But we have found that our specimen is apparently exactly the same as the DuRoi of the Pacific slope, for the first year the latter bore in this locality its fruit in size and quality appeared as large and good as that of our own older trees. Immediate environment with the fig must mean far more than has heretofore been admitted, and it is possible that while an inferior variety in California, there is something in the conditions which it finds here which improves this fig. If there is such an ameliorating factor in operation, it must be sought for in the soil, for it certainly cannot reside in the climate.
- 6. Among our importations and other incidental acquisitions we have chanced upon several very valuable additions to the fig list. The most important of these is probably *Peau Dure*, a well named variety, for the adjective evidently refers to the resistant character of the skin—its "toughness," not its "thickness"—for although thin, the skin of this fruit is leathery and elastic and the fruit should in consequence handle well. In quality *Peau Dure* is unique, highly vinous as well as sugary, the only instance, so far as can be discovered, of acidity ever having been recorded as a quality

characteristic in a fig, with one possible exception—Toulousienne. The latter, however, is only slightly vinous, and cannot compete in this particular with Peau Dure. The fruit of Peau Dure is also of good size, and like Ischia White, hangs on the tree until it shrivels, seldom turning sour even in damp weather; yet Eisen characterizes the quality of this variety as only medium. In quality it may be ranked with the type which our French friends indicate by the word "Gris;" yet its tint is not gray, but a grizzled combination of purple, olive and brown.

- 7. In this connection it may be well to say that almost all the "gray" figs are more or less superior in quality. Bourgeassotte Grise is particularly good and an extremely productive variety here, bearing its fruit in heavy clusters and seems well worthy of extensive propagation. St. Jean Gris is also a delicious fig and one of the best for the table that we have, but unfortunately it is not as productive as could be desired—at least during its earlier years.
- 8. Walker, another promising candidate, is a Georgia production and not yet identified with any of the standards. It is a large, handsome, productive fig and of good quality, with a very long bearing period. In color it is rather too dark to be ranked with the "gray" type, and is in fact almost blue.

Comments of the foregoing sort could be continued indefinitely, but as we are merely upon the threshold of this undertaking, it should properly be deferred for a year or two, when, after a critical comparison of the specimens in the respective collections now at our command, we should be able to successfully differentiate and identify characteristics and synonyms which are now merely a hopeless jumble of confusion.



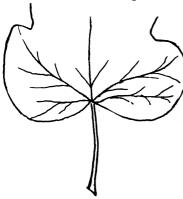
THE "WALKER" FIG.

### 3.-LEAF TYPES.

Four years ago, on attempting to devise some process of comparison or correlation by which the classification of the various "Domesticated," or edible figs might be effected and their identification simplified, it was found that the leaf afforded a readier index than any other feature. A study of the foliage of some 25 or 26 varieties then growing at the Station disclosed the fact that there were apparently five distinct forms or types of leaves and that to one or the other of these types or groups every fig we had might be referred—the distinction resting entirely on shape or outline and not relating to any other feature, as surface or even size. This seemed to afford a simple and obvious method of arrangement or description and it was believed that its adoption would frequently present the means of instantly confirming or disproving a disputed question of identity or synonymy

This led to the rather crude erection of the limited number of specimens then at our command into five groups, which, from their general appearance or configuration, were awkwardly termed "Grape leaf," "Maple leaf," "Oak leaf," "Spoonbill" and "Okra leaf", respectively.

A closer study of the very much larger collection which the Station now has confirms our original classification, but the former names were found so awkward and clumsy and ill suited that we have very naturally changed them into terms more dignified and appropriate.



CORDATE BASE

Others, instead of having the base rounded, develop acute basal lobes or spurs, whatever may be the characteristics of the remaining or terminal lobes. To this type has been applied the term "Calcarisate." The "Cordate" type covers our former "Grape leaf" group, while the "Calcarisate" type includes all of the remaining four groups, for it was found that four minor or secondary

It was noted, primarily, that a distinction obtained in the conformation of the base. With certain varieties the outline of the base on either side of the petiole was distinctly rounded or "Cordate," as per adjoining figure, whatever might be the subsequent development of the terminal lobes. To this type has, of course, been applied the term "Cordate," and in it are included all varieties with a rounded base with no indication of "spurs."



CALCARISATE BASE



distinctions prevailed with all spurred or "Calcarisate" leaves. The terminal lobes of the first division were in a general way short and broad. To this division we have given the name "Latate" and it corresponds with our former division known as the "Maple leaf" group. The "Latate" group elongating its lobes and developing irregular in-

LATATE LOBES

cisions along their margins merges into the next division, the "Lyrate," corresponding with our former "Oak leaf" group. The "Lyrate" leaf still further narrowing its terminal lobes



LYRATE LOBES

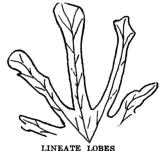


SPATULATE LOBES

at their basal ends and broadening the distal ends, and losing, to a certain extent, its sinuous or indented margin, merges into the "Spatulate" form, which name has been applied to the third subsidiary division or group of the "Calcarisate" type, corresponding with our former "Spoon-

bill" group. This group on still more closely contracting its lobes along their entire length finally becomes the "Lineate" group, corresponding with our former "Okra leaf" group.

Between each of these distinct divisions there are necessarily "transitional" forms partaking of the characteristics of both. To avoid complication these have been



ranked under the first of the two groups between which they constitute the connecting link, although marked thereunder as the "transitional" form to the next group. The last, or "Lineate" group, of course, includes no "transitional" forms.

It will thus be seen that with the foliage of the Fig our first differentiation is governed by the shape of the base, leaves with rounded base and no spurs constituting the "Cordate" type, with no further subsidiary divisions or groups, whatever may be the characteristics of the lobing. Leaves having

a truncate or a "spurred" base—that is, with the basal lobes on either side of the petiole acute, form the second or "Calcarisate" type, with four subsidiary divisions or groups which are differentiated with reference to the terminal lobes; for the "Calcarisate" type prevails so largely that some kind of secondary or subsidiary division seems necessary.

Therefore, while the distinction between the two Types depends upon the form of the base, the four Groups composing the "Calcarisate" type depend for their distinction upon the shape of their lobes, and have been named to correspond with the general character of these lobes—constituting respectively the "Latate," "Lyrate" "Spatulate" and "Lineate" Groups, each merging little by little into the other through intermediate or "transitional" forms. This will be more readily understood from the following:

### LEAF CHART.

Type 1. CORDATE—Base Rounded; no subdivisions or Groups: (Transition to Type II.)

Type II. CALCARISATE—Base Spurred; 4 subdivisions or Groups.

Group 1. Latate—Lobes Broad.

(Transition to Group 2.)

Group 2. Lyrate—Lobes Incised.

(Transition to Group 3.)

Group 3. Spatulate-Lobes Spoon-like.

(Transition to Group 4.)

Group 4. Lineate—Lobes Narrow.

According to this arrangement the subjoined classification of the varieties which we have grown at the Station will be found to contain, in many cases, amorphous or varying types of foliage that seem to prevail while the trees are young; but this apparent tendency to amorphism more or less disappears as the specimens attain age, although it frequently persists and occasionally causes some confusion in deciding into which of two divisions certain varieties should be placed. This, of course, is only the case with the few specimens that approach either one of the transitional forms. The others are necessarily sufficiently distinct and uniform for all practical purposes.

### DISTRIBUTION OF VARIETIES ACCORDING TO FOLIAGE.

### Type I-CORDATE.

Abondance; Abruzzes; Agen; Angelique; Bourgeassotte Blanche; Bourgeassotte Grise; Bourgeassotte Noire; Celestial; Celestial Yellow; Col di Signora Bianca; Datte; Early Violet; Ford; Gant d'Or; Grosse Grise Bifere; Hobichon Noir; Jacobson; Marocaine; Nabonnand Grise; Nabonnand Violette; Negrone; New French; Noirmoutier; Oblique Blanche; Panachee; Petite Violette; Ronde Violette Hative; San Pedro Black; St. Jean Blanc; Toulousienne; Turkey Brown; Verdale Longue; Vernissenque; Versailles, de; Violet, Early Round; Violet Sepor.

Transition (to Calcarisate Type)—Aubique Noire; Marseillaise Grosse.

### Type II-CALCARISATE.

1. Latate Group—Brizanzola; Claiborne; Dottato; Everbearing; Golden Narbus; Hirta du Japon; Ischia White; Jaspe, A Bois; Madeleine; Osborn Prolific; Marseilles White; Peau Dure; Petite Marseillaise; Royal Vineyard; San Pedro White; Walker.

Transition (to Lyrate Group)—Beaucaire Grise; Bellona; Brogiotto; Constantine, de; Ischia Black; Jerusalem; Pastelliere; St. Jean Gris.

2. Lyrate Group—Belle Dame; Brunswick; California Black; Col. di Signora Nigra; Four Season White; Lievre, Sang de; Madeleine Grise; Mission; Monaco Bianco; Mouissonne; Negro Largo; Neyreii White; Persian White; Precoce, Grosse Grise; Pregussata; Reculver; St. Jean Noir.

Transition (to Spatulate Group)—Dottato White; La Perouse; Nabonnand Rose; Oblique Noire.

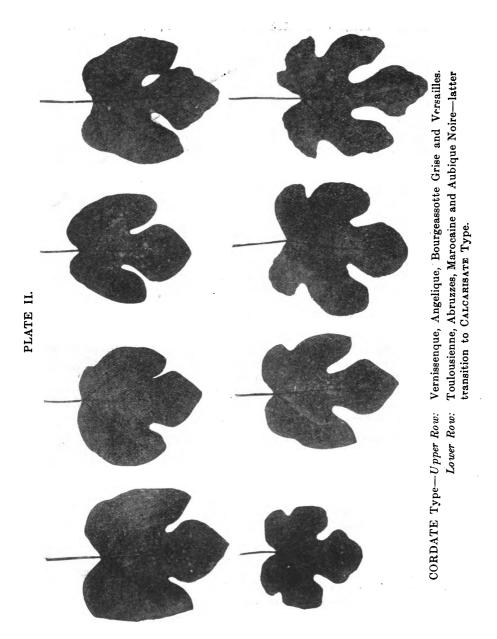
3. Spatulate Group.—Adriatic White; Claveline, de la; DuRoi; Lievre, Museau de; Malaga; Nabonnand Jaune; Nabonnand Rouge; Provence Black; Superbe de Fontbelle.

Transition (to Lineate Group)—Bourgeassotte Violette; Drap d'Or; Paileuse Blanche; Precoce de Barcelonne.

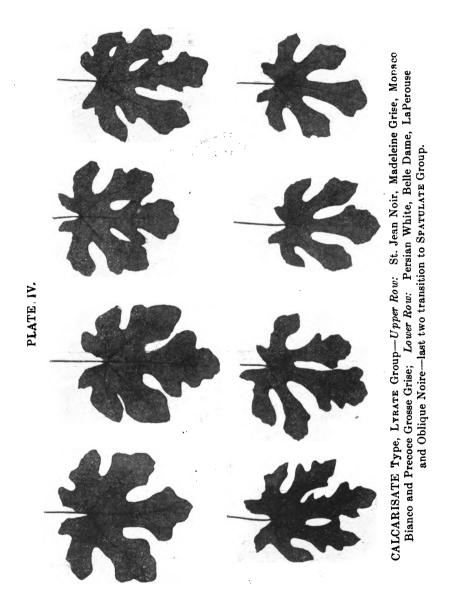
4. Lineate Group.—Dalmatian; Doree; Ischia Brown; Kennedy Castle; Turquie Brune.

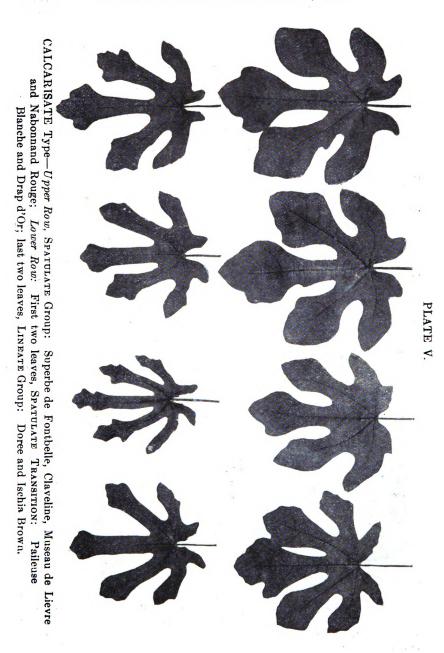
Of the value of this arrangement there can be no question, since it has already greatly simplified our initial work, limited though it may have been, and the process will prove of much greater value when a more critical comparison becomes necessary as the study proceeds.

On examining the five plates illustrating the foregoing arrangement, the entire scheme will appear quite plain and needs no further comment.



CACARISATE Type, LATATE Group-Upper Row: Peau Dure, Brinzanzola, Walker and Dottato; Lower Row: Genoa White, Petite Marseillaise, Pastilliere and St. Jean Grislast two transition to Lyrate Group. PLATE III.





### 4.-DESCRIPTIVE LIST.

[Note.—In this list are included only those varieties of the "Domesticated" class that have been actually tested at the Georgia Experiment Station, with the object in view of putting on record their detailed features and characteristics in order that assistance may be derived therefrom in the attempt to build up a more correct nomenclature than that now obtainable in and for our section. In several respects the details are not exhaustive, yet the descriptions will serve for a beginning or basis and may be elaborated and corrected hereafter.]

Smyrna figs and Caprifigs are not included, but the list covers all of our more recent introductions as well as the older standards which were catalogued alphabetically in Bulletin 61 four years ago. Necessarily a year or two of additional study must considerably amplify all of the descriptions and perhaps greatly modify many of them. The list as it now stands must be taken for what it is worth—a starting point, at any rate, for more correct and elaborate future detail.

Abondance—Synonyms: Franche Paillard, Versailles, D'Abondance, Franque Pagarde.—Growth strong, vigorous, healthy; four and one-half feet first year from cuttings; tending to arboreal form; leaf large, "Cordate;" tree too young to fruit; no further notes taken.



ABRUZZES

Abruzzes.—Synonym: LaBruge—Strong, vigorous grower, attaining at two years a height of over eight feet; foliage thick and leathery; leaf large, "Cordate" type.—Fruit medium, globular, short conical with rounded apex, 41x40 mm.; neck wanting; pedicel short; color skin clear greenish yellow with dark spots; skin tough, adheres to flesh; flesh whitish yellow, rather spongy; pulp amber; seed, few, small; quality good, with high sugar content. Very productive; ripens late.

Adriatic White—Syns.: White Adriatic; Grosse Verte; Nebian, Strawberry.
—Growth strong and vigorous. Not very hardy, as it is often winter-

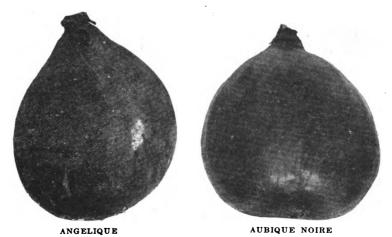
killed. Health here perfect. Foliage beautiful; leaf the largest of all the figs, deep green, glaucous, "Calcarisate" type, "Spatulate" group, seven

lobed, counting spurs; lobes very long and flaring at tip; sinus very deep; petiole extremely long.—Fruit quite large, short pyriform, apex generally truncate, 61x50 mm.; neck short, generally obtuse, sometimes acute; stalk short, thick, persistent; ribs obscure; eye large, open; iris red; skin greenish-yellow, rather thick; peels readily; meat white, with purplish streaks, firm; pulp red; seed-rudiments large, crisp; quality very good to best, rich sweet and highly flavored. Productiveness rather light; no brebas. Main crop begins to ripen about August 21st. At this Station an excellent variety. The two different specimens of this variety from California have not yet fruited.

Agen.—Syn.: Grosse du Draguignan.—(a) Specimen from Barber.—Small, healthy, spreading, inclined to stool; three feet at one year of age; no fruit; foliage dense; leaf small, "Cordate" type, though polymorphous.

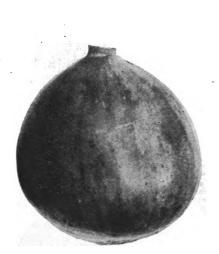
(b) Specimen from Tuohy.—Small, healthy, arboreal form; four feet at one year of age; foliage rather dense; leaf small, "Cordate" type, but somewhat polymorphous; shy bearer, failing to mature its fruit. (The two specimens are evidently the same variety, although they have not borne fruit here as yet.)

Angelique. Syns.: Yellow Angelique; Jaune Hative; Early Yellow; Early Lemon; Vendome.—Tree vigorous, healthy, symmetrical, though with tendency to stool; seven feet high at two years of age; foliage dense; leaf small to medium, "Cordate" type.—Fruit small, globular, plump, 35x30 mm.; no neck; pedicel short, slender; ribs wanting; eye large, open; fruit has tendency to split; color skin golden, spotted with dark brown; skin medium thick, tough; flesh white, spongy; pulp deep amber; seed few, small; quality good, with high sugar content; very productive. (The foregoing description from Tuohy and Station; trees from Berckmans similar in every respect except quality, which is inferior.) Ripens in September.



Aubique Noire.—Syn.: San Pedro Black.—Growth strong and vigorous, nclined to stool; eight feet high at two years of age; healthy; foliage; large and transition from "Cordate" to "Calcarisate" types.—FRUIT medium to large, 46x43 mm., abruptly conical, rather short neck and broad apexi eye large, open; scales light rose; color skin dull yellow at base extending into deep purple, almost black at apex; ribs prominent; skin thin and tough, peels readily; flesh greenish white; pulp amber, slightly inclined to rose; seed-rudiments large, crackling under teeth; quality decidedly good; very late; ripened October 16th, in 1906.

Beaucaire Grise.—Syns.: Figue Grise; Grisette; Celestine; Grisette Hative—Growth strong and vigorous, spreading; inclined to stool; two year tree eight feet high; foliage large, somewhat unhealthy; leaf transition from "Latate" to "Lyrate" groups.—Fruit medium, 43x47 mm., short conical, nearly globular; color skin greenish yellow, waxy; ribs very obscure; neck wanting; cheek generally swollen; eye small, open; scales small, rosy; skin tough, elastic; flesh white; pulp rosy; seed-rudiments large, few; rather low sugar content; quality fair to good. Shy bearer; maturity late September.







BELLE DAME

Belle Dame.—Syn.: Bonne Dame.—Growth slow, irregular and sprawling; two year tree seven feet high; foliage medium, "Calcarisate" type, "Lyrate" group.—Fruit small, elongated, 49x30 mm.; no neck; pedicel medium long; ribs obscure or wanting; eye small, closed; color skin yellow, blotched with dark brown; skin thick, tough, elastic, peels readily; flesh amber white; pulp rose; seed-rudiments few, small, yellow; quality good. Matured last week in September in 1906.

Bellona.—Syn.: Bellone de Nice.—Growth vigorous and healthy, though straggling; inclined to stool; two year trees eight feet high; foliage "Calcarisate" type, "Latate" group, merging into "Lyrate," which probably predominates.—FRUIT borne in clusters, but very late, none having ripened October 16th when overtaken by frost.

September.



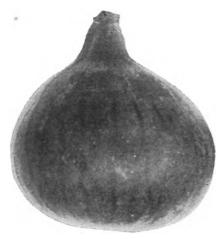
BOURGEASSOTTE BLANCHE

Bourgeassotte Grise. - Syn.: Barnissotte Grise. -- Fine, lusty, vigorous growth: compact arboreal form; foliage healthy, "Cordate" type; very productive, bearing fruit in heavy clusters.— FRUIT large, broadly conical, turbinate, 59x56 mm., both diameters practically the same; neck short, abrupt; pedicel short, thick: ribs distinct, but not prominent; eye medium, open; skin thick, tough; deep bluish purple, almost Black; cracks numerous; flesh spongy, yellowish white, soft; pulp pink or light rose; seed-rudiments few, large and yellow; quality good; season late August.

Bourgeassotte Blanche.—Syns.: BarnissotteBlanche: Bourjassotte Blanche; Brogiotto Bianco.—Vigorous, assuming arboreal form; two year trees eight feet high; foliage very large, "Cordate" type; productive, though late.-FRUIT medium, broad conical, 39x35 mm.; neck wanting, pedicel short; ribs distinct; eye small, open; scales light; variety apparently a misnomer, since prevailing color is violet, striped with amber and not white; skin thick, tough, elastic: flesh whitish amber, firm: pulp rose; seed-rudiments medium, crackling under teeth; sugar content high and quality good. Ripens last week in



BOURGEASSOTTE GRISE



BOURGEASSOTTE NOIRE

Bourgeassotte Noire.—Syns.: Bourjasotte Noire; Bourjassotte Noire; Barnisotte Noire; Barnissote Black; Black Barnissotte, Brogiotto Nero.—A strong, lusty grower with long and vigorous canes; inclined to stool; foliage healthy, leaf full medium to large, "Cordate" type.-FRUIT medium to large; short conical with swollen cheek; neck short; apex abrupt; eye small, closed; color dark purple or violet with blue bloom; skin thin, tender, adhering; meat creamy white, spongy; pulp crimson; seedrudiments large and numerous; quality fair to good. Late to very late-latter part of October

-and a shy bearer; fruit not in clusters as with Bourgeasotte Grise.

Bourgeassotte Violette.—Growth moderate, but healthy and vigorous with sturdy canes; foliage "Calcarisate" but with composite lobes, forming transition from "Spatulate" to "Lineate" groups. FRUIT small, irregular, 33x28 mm.; color greenish yellow with dark splotches; skin tender but peels readily; seed-rudiments few, yellow; mild in flavor; quality poor to fair; unproductive and rather late, ripening in first week of September.

Bourjassote Panache. - Syn.: Bourgeassotte Panache—Trees young—no notes.

Brizanzola. -Syn.: Italian. -Growth vigorous; stool form; height eight feet at two years; foliage dense, but healthy, "Calcarisate" type, "Latate" group; leaf large and leathery-very little fruit which was set too late to ripen be- BOURGEASSOTTE VIOLETTE fore frost.



Brogiotto.—Growth fairly vigorous; stool form; seven feet high at two years of age; foliage dense with large, leathery, polymorphous leaves, "Calcarisate" but a transition form from "Latate" to "Lyrate" groups. No matured fruit; shy bearer, and crop caught by frost before ripening. Is this Brogiotto White or Brogiotto Black, or neither? Its leaf differs materially from both as described by Eisen.

Brunswick.—Syns.: Madonna, Bayswater, Boughton, etc., but not Ma nolia or Brown Turkey. - Growth variable, sometimes rapid; tree rather small and straggling; wood long jointed; winter-kills considerably; leaf medium to large, type "Calcarisate," "Lyrate" group, seven lobed, including spurs; sinus deep; petiole medium to long.—FRUIT of largest size, 70x54 mm.; broad pyriform, with swollen cheek; apex truncate or depressed; neck usually obtuse or wanting; stalk short to medium, slender, persistent; ribs prominent, highly colored; eye medium to large, open; iris with rosy red scales; skin smooth, thick, tough, color varying from greenish mahogany to lilac or violet, darker on ribs, amber about neck; pulp, pink, soft; seed-rudiments few, large, soft. A light and uncertain cropper in this section; quality only fair; main crop ripens about August 25th; entirely distinct from either Turkey Brown or Magnolia, but practically the same as California Black of Station plat.

California Black.—Syns.: Black California; Mission; Black Mexican.—
(a) Specimen from Station.—Growth rather poor, straggling; winter-kills here, though otherwise healthy; wood long jointed, open; foliage scant; leaf full medium to large, "Lyrate," seven lobed, including spurs; deep sinus; petiole long.—Fruit very large, pyriform; apex truncate; neck variable, sometimes obtuse or even acute and sometimes entirely wanting; stalk rather long, slender; eye small, open; ribs numerous, distinct; skin smooth, glistening, leathery, greenish amber to mahogany brown, with a lilac or violet tint, lighter on the neck and darker on the ribs; pulp amber pink, soft and juicy; seed-rudiments medium, soft; quality mild, sweet and from fair to good; extremely shy bearer; ripens here about September 5th. These notes, independently made, tally sufficiently with Brunswick to warrant the inference that the two, as we have them, are identical, but whether the "true" Brunswick and not Mission, or the "true" Mission and not Brunswick cannot yet be decided.

(b) Specimen from Chico.—Growth vigorous and healthy, though open and unsymmetrical; foliage scant; leaf full medium to large, "Calcarisate" type, polymorphous, with tendency to "Lyrate" lobes; height seven and one-half feet when two years of age.—Fruit medium to large, conical, 45x39 mm.; no neck; pedicel long, slender; apex abrupt; eye large, open; scale, amber; color skin deep purple, lighter toward base, dotted with brown; ribs prominent; skin thin, brittle, adheres closely; meat creamy white, very spongy; pulp pinkish amber, course; seed-rudiments very large, medium in number; sugar content light, little flavor and character; quality fair at best—possibly better in a more favorable season; ripens late, and apparently a shy bearer here. This does not seem to be absolutely identical with, although somewhat similar to the Station specimen, but ripens so late as possibly to change its normal characteristics, fruit not having matured in 1906 until October 20.

Celeste White.—Trees too young for description.

Celestial.—Syns.: Sugar; Celeste; Blue Celeste; Violette; Celeste Violette, etc.—Growth excellent, open, free, though wood is rather short-jointed; hardy, resisting more cold than any other variety except Turkey Brown, perhaps the most universally planted of any in this section—again excepting Turkey Brown and possibly Lemon; thoroughly healthy; foliage

dense; leaf small to medium, "Cordate," three lobed; lobes short, broad with shallow sinus; petiole medium.—Fruit ovate turbinate, small, 35x30 mm.; neck long, narrow to acute, sometimes obtuse; stalk medium, slender, fugacious; ribs few, but distinct; eye small, closed; iris elevated; scales small and pink; skin thin, very persistent, in color pinkish violet, sometimes amber and lilac; bloom pale blue, quite noticeable; pulp rose, finegrained; meat amber, soft; quality pleasant and very sugary, but with little flavor or character; enormously productive; seldom or never matures brebas here, but the main crop ripens about July 23rd and continues for over two months; reputed edible without peeling, which is difficult; it may be from the standpoint of a billy-goat: But for its small size Celestial would easily lead the entire list.

Celestial Yellow.—Syn.: Celestial.—Growth vigorous, shapely; stool form; foliage dense and healthy; leaf medium to large, "Cordate."—Fruit very small, pyriform, slender; no neck; pedicel long and slender; apex truncate; eye very small, closed; scales small, rosy; color brownish piak or light violet; no ribs; skin thin, adheres; very hard to peel; meat amber white; pulp rose; seed-rudiments large, few; sugar content high with but little flavor; quality good; very productive, and apparently identical with the well known Celestial of this section.

Claiborne.—Growth large, vigorous and symmetrical; stool form; eight and one-half feet at two years; foliage very dense, healthy; leaf "Calcarisate," very large and polymorphous, "Latate" lobes predominating. No fruit as yet.

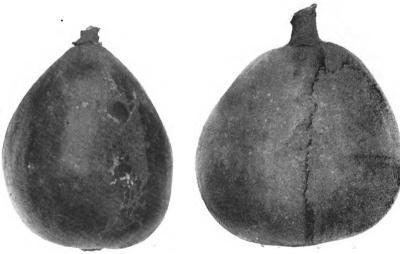
Claveline, de la.—A strong, vigorous, lusty grower with handsome and healthy foliage; leaf "Spatulate"; very shy bearer; extremely late; no fruit ripe October 16th.

Col di Signora Bianca.—Syns: Col des Dames. Lucrezia.— Strong, vigorous, song-caned grower; stools heavily; foliage healthy; leaf large and handlome, "Cordate," but quite polymorphous, with a tendency to "Lyrate', lobes.—Fruit full medium to large, 63x44 mm.; conical, with swollen cheek no neck; pedicel short and thick; apex truncate; eye large, open; scale greenish yellow; color greenish yellow covered with brown dots; skin thin and tough; meat white; pulp deep rose; quality good. Shy bearer and late, ripening October 20 in 1906.

Col di Signora Nigra.—Syn.: Col de Senora Negra.—A strong vigorous grower, though not so lusty as the preceding; straggling and inclined to recumbent form; ugly and irregular; seven feet high at two years of age; leaf medium to large, "Lyrate."—Fruit medium 45x33 mm.; conical and very uniform in slope from apex to base; no neck; pedicel short, thick; apex truncate; eye small, partly open; scales deep purple; color deep purple with dark brown dots; skin thick, tough, elastic, peels readily; meat greenish white; very thin; pulp deep pink; seed-rudiments numerous, and crackle under teeth; quality good. Very shy bearer; ripened September 3d, in 1906.

Constantine, de.—Growth strong, vigorous; inclined to stool; seven and one-half feet high at two years; foliage healthy and heavy; leaf medium, with lobes a transition from "Latate" to "Lyrate." Well fruited; fruit set singly and not in clusters. Very late; failed to ripen before frost.

Dalmatian.—Syns.: Dalmatia; Magnolia; White "Smyrna"; Doree.—Growth slow, but fairly good; short-jointed, open; healthy; foliage l;ight leaf small "Lineate," seven lobed, including spurs; lobes long, narrow, sinus deep; petiole short, slender.—Fruit large to very large, 55x56 mm., axes practically equal; shape pyriform, apex truncate or slightly rounded; neck very obtuse or wanting; stalk very short and thick; ribs indistinct; eye very large, open; skin thick, tough, greenish amber, overspread with brown; would be popularly styled a "brown" fig; pulp pinkish amber; meat amber white; seed-rudiments medium to large, soft; quality good at first but the fig sours frightfully with wet weather and is consequently of no practical value in this locality; quite productive; begins to ripen July 30th and continues in bearing—such as it is—till frost. This fig is absolutely identical with that we are cultivating here as Magnolia. and also with White "Smyrna" (so-called) and with Reed's Nos. 1, 5 and 6.



COL DE SIGNORA NIGRA

DOREE

Datte.—Syn.: Dotte. —Growth moderately vigorous, but ugly, straggling and unsymmetrical; two year old trees six feet high; foliage heavy; leaf full medium, "Cordate."—Fruit long pyriform, 57x35 mm.; neck slender; pedicel long; eye small, closed; scales small, rose; color golden, waxy, with dark brown spots; ribs not prominent; skin thin, tough, peels readily; meat white, firm; pulp rose; seed-rudiments few, small to medium, yellow; high sugar content and quality good. Heavy bearer, maturing first week in September and should prove a good home variety.

Doree.—Syns.: Figue d'Or; Dalmatian.—Growth slow and ight; two year trees five feet high; short jointed, open, moderately healthy; foliage light; leaf small, "Lineate," lobes long, narrow, sinus deep; petiole short, slender.—Fruit medium to large, pyriform; apex turbinate, sometimes truncate; neck obtuse or wanting; stem short, thick; ribs indistinct; eye

large, open; skin thick, tough, greenish amber, overspread with brown; pulp pinkish amber; meat-amber white; seed-rudiments medium to large, soft; quality fairly good but sours in wet weather; productive; ripened September 1st, in 1906; appears absolutely identical with *Dalmatian* or *Magnolia* and is possibly the correct name for the variety.

Doree Narbus.—Syns.: Golden Narbus, Narbus Doree, Doree Nobis—Growth vigorous and healthy, although canes made but three feet at one year of age, branching, however, considerably, with a tendency toward arboreal form; set but did not ripen its fruit during its first year.

Dottato.—Syns.: Calabria, Napolitaine, Gentile, Tiburtina Goccia, Dottato White. — Growth not very vigorous but symmetrical with tendency to stool; five feet high at two years of age; leaf small to medium, "Latate." Very little fruit, which failed to ripen.

Dottato White.—Syns.: Dottato, etc.—Growth vigorous, healthy, though unsymmetrical; inclined to stool form; nine feet at two years of age; foliage dense; leaf large, "Calcarisate" type, somewhat polymorphous but with "Lyrate" lobes predominating, forming transition to "Spatulate," in this differing from Dottato of Nabonnand which has apparently "Latate" lobes. A shy bearer, failing to mature its fruit in 1906.

Drap d'Or.—Syn.: Cloth of Gold.—Growth small, inclined to stool; five and one-half feet at two years; foliage fairly dense; leaf "Calcarisate" type, varying in size from small to medium, the smaller distinctly "Lineate," the larger leaves "Spatulate"; classified as transition from "Spatulate" to "Lineate."—Fruir long—conical or pyriform; medium to large, 58x39 mm.; apex abrupt; eye large, open; scales lavender; neck long, with long pedicel; color light greenish yellow, overspread with dirty brown; skin thick, rather tender and brittle, but peels readily; meat creamy white,





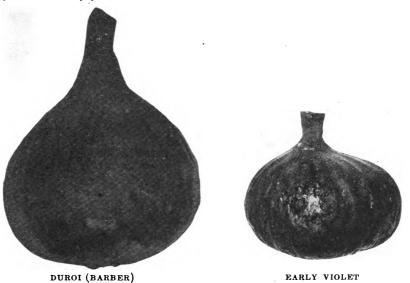


DUROI (TUOHY)

thick, firm; pulp pink; seed-rudiments medium in number and large; quality fair, mild and pleasant with but little character. Season medium.

DuRoi.—(a) Station Specimen.—Growth strong and vigorous, though not very hardy; new wood straight and long jointed but tree not large; health good; foliage dense and heavy, "Calcarisate," leaf large and glaucous, "Spatulate," seven lobed, counting spurs, which are sometimes obscure; lobes not so long as with others of this group and their diameter is broader, closely resembling those of the "Latate" group; sinus, however, deep; petiole medium.—Fruit large, 56x59 mm., pyriform or obovate, with its transverse axis the greater; apex turbinate; neck acute, sometimes long; stalk short, thick, persistent; ribs obscure or wanting; eye medium, open; skin thin, yellow; pulp amber, inclined to pink; meat white; seed-rudiments small, numerous, soft; consistency soft and spongy; quality good, but lacking in character. Extremely productive; ripe August 6th, and bears till frost; does not sour readily. If this is the true Du Roi it is better here than it is generally reported elsewhere.

(b) Specimen from Barber.—Growth fairly vigorous, but unsymmetrical; inclined to stool; two year trees six and one-half feet; foliage dense; leaf large, "Spatulate."—Fruit medium to large, long conical, 52x41 mm.; neck medium; pedicel slender; apex turbinate; eye large, open; color greenish yellow; skin thin, tender and peels readily; meat greenish white, spongy; pulp amber; seed-rudiments medium to large, few; quality fair—mild and pleasant. Very productive.



(c) Specimen from Tuohy.—Growth moderately vigorous, unsymmetrical, rather low; two year trees six feet high; inclined to stool; foliage dense; leaf large, "Spatulate," 49x46 mm.: distorted with swollen cheek; neck

pronounced; pedicel long; apex abrupt; eye large, closed; scales large, golden green; color golden yellow splotched with dark brown; skin thick, tough but not elastic; meat white, very spongy; pulp amber; seed-rudiments very few and small to medium in size; quality fair, mild and pleasant. Specimens from Tuohy and Barber apparently the same and both identical with that of the Station, although there are minor differences.

Early Violet.—Growth vigorous, healthy, but ugly and unsymmetrical, inclined to stool; two year trees seven and one-half feet; foliage dense; leaf small to medium, "Cordate."—Fruit small, oblate, quite abnormally depressed, 29x38 mm.; no neck, stem long; ribs prominent; eye very large, open; scales small and numerous; color lilac brown, a very unusual and peculiar tint; skin thin and tender; meat amber white; pulp pink or amber pink; seed-rudiments small, many; quality good, although it sours readily and is no keeper. A neat little fig, however, for home use. Season middle of August.

Endich White.—Syns.: Endrich; Rubado?— Trees very young; no description.



EVERBEARING

Everbearing.—Growth poor; trees small. misshapen and inclined to stool; two year trees four and one-half feet high; foliage "Calcarisate"; leaf small to medium, lobes "Latate."-FRUIT small, globular, almost completely spherical, but with excessively long neck and longer stem, resembling an inverted modern balloon; size, including neck, 48x41 mm.; neck omitted, 37x40 mm.; ribs not prominent though distinct and of darker color than that of body; color greenish yellow, overlaid with lilac brown; eye small to medium, closed; scales small and numerous; skin thick and only moderately tough; splits under too much moisture, although it resists a moderate amount and does not sour readily; meat white, firm; pulp amber or pinkish amber; seed-rudiments many, medium in size and crackle under teeth; quality fair, sugar content low.

Moderately productive; ripens August 18th.

Ford.—Syns.: Ford Seedling; Marseillaise.—Growth unsymmetrical, although vigorous and healthy, with tendency to stool; two year trees ten feet high; foliage fairly dense; leaf large, "Cordate"; no fruit in 1906.

Four Season White.—Syn.: White Four Season.—an absurd name, as it evidently belongs to the "San Pedro" sub-class and hence matures only brebas; has never ripened a second crop here; growth strong and vigorous; healthy; foliage full and handsome, "Calcarisate" type and "Lyrate" group, seven lobed, including spurs, which are pronounced; sinus medium; petiole medium; bore in 1898 a full crop of brebas, ripening in June, since

which date they have been annually destroyed by cold.—Fruit (brebas) large, yellow, soft, with amber pulp, but coarse and tasteless. Of little value.



GANT D'OR

Gant d'Or. Syn:—Golden Glove. — Growth healthy and vigorous; two year trees seven and one-half feet high; foliage handsome; leaf large, "Cordate."—Fruit small, 36x28 mm.; conical with slightly pointed apex; neck short; stem medium to long, slender; eye large, closed, scales amber, color greenish yellow, covered with brown dots, skin thick, tough, adheres to flesh; meat yellowish white; pulp amber; seed-rudiments medium sized and numerous and quality only fair—mild with little character, but productive and late, ripening October 8 in 1906.

Genoa; Blue. — Syn.: Blue Genoa; Black Genoa; Black Spanish.—Our trees of this variety proved untrue to name, but throughout

this section the "Big Blue" fig, as it is popularly known, is a tall, strong, but rather straggling grower and a shy bearer of extremely handsome, large, long, soft fruit, with a blue skin which peels readily; its quality is only fair to good, as it lacks both sweetness and flavor; yet its fine appearance is sufficient to recommend it for amateur culture. Whether the "Big Blue" fig is identical with "Blue Genoa" or "Black Ischia" remains to be seen.

Genoa White.—Syn.: White Genoq.— (a) Specimen from Normand: Growth healthy and vigorous with tendency toward arboreal form; one year trees six feet high; foliage of average density and leaf of medium size, "Lyrate." Very little fruit which failed to mature by frost.

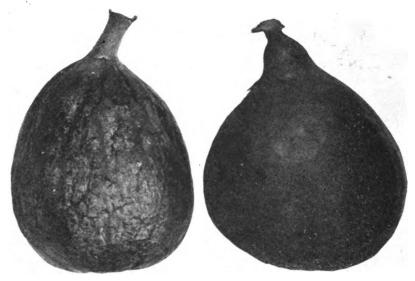
(b) Specimen from Tuohy: No description; trees very young.

Genoese White.—Trees young; no description.

Golden Narbus.—Syns.: Doree Narbus; Doree Nobis.— An excellent "first early"; growth very vigorous and pronounced; health perfect; foliage dense and heavy, canopied; leaf very large and leathery, "Calcarisate" type and "Latate" group, although its spurs are occasionally obscure; lobes broad; sinus shallow; petiole long to very long.—Fruit medium, ovoid, 45x54 mm., the transverse axis the greater; neck wanting, as a rule, though sometimes present in obtuse form in very ripe and elastic specimens; pedicel short and thick; ribs close and obscure; eye small and closed; skin bright, waxy, golden yellow; attractive; pulp clear amber; meat white; seed-rudiments small, soft; consistency spongy; quality good when fully ripe; maturity July 29th; crop heavy, but bearing season short. This would be a recommendation in a commercial succession for a nearby market.

Grosse Grise Bifere.—Syn.: Grosse Servantine Bifere.—Growth vigorous but unsymmetrical, with tendency to stool form; height of two year trees six feet; foliage dense; leaf large, rather polymorphous, "Cordate" type-

predominating, and in this division it is placed.—Fruit medium to large, 52x42 mm.; pyriform; ribs not prominent; color dingy yellow with dark blotches; skin, tough, leathery, adheres to flesh; meat greenish white; pulp rose; seed-rudiments large, yellow, numerous; quality excellent; very good to best, with high sugar content.



GROSSE GRISE BIFERE

HIRTA DU JAPON

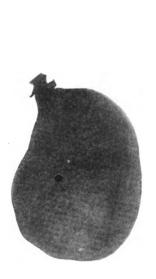
Hardy Prolific.—A standard variety in southeastern Virginia somewhat resembling *Turkey Brown* but not so good in quality; Station trees quite young and no notes.

Hirta du Japon.—Syns.: Hirtu du Japon; Hirta; Hirtu; Japanese.—Station specimen (now dead): Growth slow, but very dense; healthy; habit dwarfish, adapting it to culture in city back-yards and tubs; leaf medium, "Calcarisate" type, "Latate" group; distinctly five lobed; lobes short and broad, margin noticably crenate—a unique characteristic; sinus shallow to medium; petiole short.—Fruit medium or below, turbinate, with distinct acute neck; stalk medium, slender; ribs very obscure; eye medium, open; scales small, reddish; skin smooth and thin but tough, violet red; pulp amber; meat white; seed-rudiments small, numerous, soft; consistency rather hard; quality poor, insipid—the most inferior of all our figs; very productive, however, and a sure cropper, ripening August 16th.

(b) Specimen from Tuohy.—Growth vigorous but low and spreading; stool form; two year trees five feet high; foliage very dense; healthy; leaf medium to large, "Calcarisate" type, but somewhat polymorphous, "Latate" lobes predominating.—FRUIT short, conical, medium to large, 53x44 mm.; neck and pedicel short; ribs not prominent; eye large, open;

scales short, red; color greenish purple or violet; skin leathery, tough, peels readily; meat greenish white, slightly spongy; pulp amber; seed-rudiments medium in size, numerous, buff, soft; quality fair, mild and characterless. Very productive and a continuous bearer. Station's former specimen was from Normand and evidently identical with that from Tuohy; specimens from Barber and Davis too young for description.

Hobichon Noir.—Growth robust and very vigorous, with arboreal habit; two year trees ten feet high; foliage medium, handsome, "Cordate."—Fruir small to medium, 43x31 mm.; of very irregular outline, often with swollen cheek, rather oblong; no neck; pedicel short and thick; ribs obscure; eye small, closed, scales rose; color dark purple, nearly black, with a few greenish brown spots; skin thin, tender, adherent; meat purplish white, very thin; pulp a rosy amber; seed-rudiments large, numerous, crackling under teeth; quality good. Very late, ripening Oct. 20 in 1906.







ISCHIA BLACK

Ischia Black.—Syns.: Black Ischia; Blue Ischia.—Growth strong, vigorous and open, but not so hardy as its sister White Ischia. with equally handsome foliage, but differing from it considerably in form of leaf, which belongs to the transition from the "Latate" to the "Lyrate" group, having seven lobes including spurs, rather narrower than the lobes of the other members of the "Latate" group and with a deeper sinus; petiole short.—Fruit medium to full medium, larger than White Ischia, 53x47 mm., short conical with rounded apex and neck; pedicel medium long and medium thick; eye large, open; scales large, purple; skin in color violet black, heavily "crevassed" or split in cracks, with lilac or bluish lilac bloom; in texture mdium thick, but not tough, although elastic; meat creamy white.

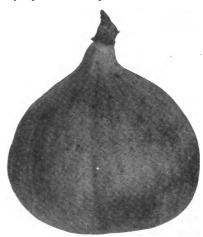
thin, sometimes a little spongy; pulp deep pink or light rose; seed-rudiments large, numerous and crackle under teeth; quality good, but inferior to White Ischia. Very light bearer, often failing to set any fruit at all. Is this possibly the ante-bellum fig known as "Big Blue?" It ripens later than Ischia White—from Aug. 25 to frost.

Ischia Brown.—Specimens from Tuohy, Normand and Davis have all made vigorous and satisfactory growth, but no fruit; foliage very large, "Lineate." Said to be a color variation of *Black Ischia*, but the leaf is entirely distinct and its origin therefore in doubt.

Ischia White.—Syns.: White Ischia; Green Ischia; Brockett Hall; Singleton.—(a) Station specimen.—Robust, vigorous, healthy, rather open grower; foliage thick; leaf medium, "Calcarisate" type, "Latate" group, seven lobed, counting spurs, which are small and indistinct, making it practically five lobed; lobes short, broad; sinus shallow to medium; petiole medium to long; bears sometimes amorphous forms of leaf entirely without lobes, but with crenate or sinuous margin.—FRUIT medium—in favorable locations and seasons full medium—by no means small as generally reported, as it will average 55x56 mm., the transverse axis the greater; form turbinate with acute neck; apex rounded; stalk very short, weak; eye small, open, scales rosy; skin smooth, greenish yellow, more distinctly green than any other variety, even when fully ripe; pulp rosy red; meat white; seed-rudiments few and small, crisp; consistency soft, melting; quality rich and sugary—the best of all Georgia figs. The fruit shrivels and dries naturally on the tree in anything like favorable weather and does not sour except under continually moist atmospheric conditions; extremely productive, beginning to ripen August 22d and continuing until cut short by frost. Decidedly the first choice for this locality, though rather late.

(b) Specimen from Tuohy.—Growth small, sickly and ugly, evidently diseased and consequently worthless for purposes of comparison.

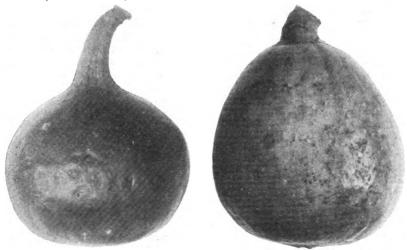




JASPE, A BOIS

Jacobson.—Growth vigorous, inclined to stool; two year trees seven and one-half feet high; foliage dense and healthy, leaf medium, "Cordate" type.—Fruit small to medium, 30x37 mm.; oblate-globular, usually with unequal cheeks; no neck; pedicel short, medium thick; ribs wanting; eye small, open; scales greenish white; color greenish yellow, covered with dirty brown spots; skin thin, tender, brittle, although peeling rapidly; meat yellowish white; pulp amber, seed-rudiments medium to large, numerous; sugar content high, and quality fair to good. Very late—Oct. 20 to frost.

Jaspe, a Bois.—Syns.: Jasper; A Bois et Fruit Jaspe.—Growth vigorous and healthy, and of straggling arboreal habit; two year trees ten and one-half feet high; foliage handsome, canopied; leaf large, "Calcarisate" type with "Latate" lobes.—Fruit large, 52x48 mm., neck moderately long; pedicel short, thick; apex abrupt; ribs not prominent; eye large, open, scales light rose; color yellow with greenish stripes which are very marked during maturity, dotted and blotched with brown; skin thick, tough, elastic, adherent; meat white, thin, firm; pulp amber, rather course grained; seed-rudiments medium to large, very numerous; quality fair. Shy bearer, and very late—latter part of October.



JERUSALEM, DE

KENNEDY CASTLE

Jerusalem, ce. Syn:—Di Gerusaleme.—of only moderate vigor; inclined to stool; two year trees seven feet high; foliage medium, "Calcarisate" with amorphous lobes forming transition from "Latate" to "Lyrate" groups.—Fruit medium to large, 53x34 mm.; globular with a long extended neck; ribs not prominent, eye medium, open; color yellow with dirty brownish black blotches; skin thick and soft, but brittle; meat white, spongy; pulp amber or pinkish amber; seed-rudiments large, few, yellow; flavor mild and insipid, but quite saccharine; quality fair to good or almost good. Productive; rather late, maturing in September.

Kennedy Castle.—Syn.: Dalmatian?—Growth slow or medium, open and straggling, but apparently healthy; inclined to stool; two year trees six feet high; foliage small to medium, "Calcarisate" with "Lineate" lobes.—Fruit medium, 49x44 mm.; short conical; apex abrupt; no neck; pedicel short and thick; eye small to medium; open, scales small, rosy; ribs wanting; color a dirty greenish gold speckled with ugly brown dots; skin thin, tough, adherent; meat greenish white, spongy; pulp rosy, fine grained and delicate; seed-rudiments medium in size, numerous; flavor mild and pleasant; quality fair to good. Shy bearer and late. Resembles Dalmatian and may prove to be identical with it. Season September.

Kirtland.—Promises a vigorous growth; year old trees five feet high; inclined to stool, showing also evidence of productiveness, but trees too young to warrant full description.



LA PEROUSE

La Perouse.—Fairly good grower; two year trees seven feet high; inclined to stool; foliage clean, healthy and very dark, "Calcarisate" type, leaf small to medium and quite amorphous but with "Lyrate" lobes predominating and hence classified as "Lyrate transition."—Fruit small to medium, 47x31 mm.; distorted and lopsided; ribs prominent; color nondescript, a greenish amber ground overlaid with violet and blotched with dark brown; quality fair, specimens ripening too late for just comparison. Only moderately productive and midseason to late, ripening latter part of September in 1906.

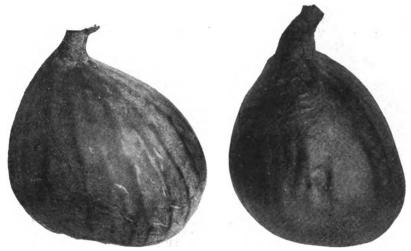
Lardaro.—Trees too young to warrant full description, but have started off with a moderately vigorous growth, and promise to be productive.

Lemon.—An old Georgia standard, and like the Elberta peach, and Concord grape

too well known to render detailed description necessary. A tall and rampant though straggling grower, with medium to large golden yellow fruit. It sours readily and is spongy and of poor quality, though excessively productive. This possibly accounts for its wide distribution and apparent popularity, since it has little else to recommend it.

Lievre, Museau de.—Syn.: Rabbit Nose.—Growth moderately vigorous and healthy, although foliage seems inclined to rust; height at two years five and one-half feet. with tendency to stool; foliage medium to large, "Calcarisate" with "Spatulate" lobes.—Fruit medium, 52x48 mm.; conical, distorted, with unequal cheeks; apex abrupt; no neck; pedicel short; ribs very prominent; eye small, closed, scales small, rose; color violet brown, reddish along ribs; quite handsome in appearance; skin thin, tender; meat creamy white, rather spongy; pulp light rose, very fine grained; seed-rudiments medium in size, numerous; quality only fair. Very shy bearer and quite late; season last week in September.

Lievre, Sang de.—Syn.: Rabbit Blood.— Growth vigorous, healthy, compact and inclined to stool; seven feet high at two years of age; foliage heavy and dense, "Calcarisate"; leaf very large with "Lyrate" lobes.—Fruit medium to large, 53x39 mm., pyriform, irregular, with swollen cheek; ribs



LIEVRE, MUSEAU DE

LIEVRE, SANG DE

obscure; neck medium; pedicel long; color amber or buff; skin thin, elastic; meat white, firm, not spongy like *Museau de Lievre*; pulp rose; seed-rudiments medium in size, yellow, numerous; quality good. Unproductive and late; season Sept. 27 to frost.

Madeleine.—Syn.: White Neyreii. —Growth vigorous, strong and healthy, but sensitive to severe cold; foliage rather open, but abundant; leaf full medium, "Calcarisate" type, "Latate" group, with seven lobes, including its inconspicuous spurs; lobes short and broad; sinus medium; petiole full medium to long.—Fruit medium or above, 42x51 mm., obovate, transverse axis the greater; no neck; apex truncate or depressed; stalk long and slender; ribs not prominent, shallow; eye medium, open, scales large; skin thick, spongy, greenish yellow—quite yellow and waxy when fully ripe; pulp amber; meat white and rather coarse; seed-rudiments large, few and soft; consistency spongy; quality fair; has little flavor, but is a very desirable variety. Quite productive at the Station though reported otherwise elsewhere; ripens July 20th; season short. There is practically no difference between this fig, as we have it, and White Neyreii.

Madeleine Grise.—Only moderately vigorous; inclined to stool; two year trees six and one-half feet high; fol agerather open and inclined to rust, "Cal-carisate' type with "Lyrate" lobes.—Fruit medium, 51x42 mm.; conical; apex abrupt; neck distinct, shapely; pedicel short but slender; ribs notprominent; eye small, closed, scales small, rosy; color greenish gold; skinmedium thick, tender, adherent; meat white, spongy; pulp light

rose; seed-rudiments large, numerous; quality fair to good. Midseason to late, ripening Sept. 20 in 1906.



MADELEINE GRISE

Magdalena.—Synonyms: Magdalen; Madeleine?—Very healthy; inclined to stool; moderate grower; four feet at one year of age; but trees too young to warrant detailed description.

Magnolia.—Syn.: Dalmatian.—This variety is so palpably identical in every feature with Dalmatian (q. v.) that the same description will serve for both. Neither is worth cultivating here on account of the readiness with which they split and sour in wet weather.

Malaga.—Growth small, inclined to stool; two year trees five feet high; foliage sparse, "Calcarisate"; leaf medium with "Spatulate" lobes; no fruit; variety evidently a shy bearer and apparently late.

Marocaine.—Syn.: Morocco.—Growth very tall but erect and vigorous; ten feet high at two years of age; foliage open and rather sparse, healthy; eaf medium to large, "Cordate."—Fruit medium, 38x38 mm.; globular or short conical; no neck; pedicel short; color golden with dark blotches, waxy; skin tough, thin; peels readily; meat firm, not spongy, white; pulp amber; seed-rudiments few, large, yellow; quality good with high sugar content. Ripened September 5th in 1906; very productive and promising, but probably tender.



MAROCAINE



MARSEILLAISE GROSSE

Marseillaise Grosse.—Moderately vigorous and erect with tendency to arboreal form; two year trees six feet high; foliage healthy, type transition from "Cordate" to "Calcarisate" but very amorphous.—Fruit medium, 51x39 mm., depressed with very long neck and short pedicel; no ribs; eye large, open; color golden amber spotted with brown; skin thick, tough, somewhat elastic; meat amber white; pulp rose; seed-rudiments small to medium, numerous, crackling under teeth; quality fair to good. Moderately productive, bearing fruit in heavy clusters. Rather late, maturing Sept. 23 in 1906.

Marseilles Black.—Syns.: Black Marseilles; Marseillaise; Black Marseillaise; Noire de Provence, Black Provence; Reculver?—Trees too young for description.

Marseilles White.—Syns.: White Marseilles; White Marseillaise; White Genoa;, White Naples:—Growth fair, healthy; foliage abundant; leaf medium' "Latate," seven lobed, including its inconspicuous spurs; lobes rather short and broad; sinus medium to deep; petiole medium.—Fruit full medium to large, 46x50 mm., transverse axis the greater; form obovate or turbinate pyriform; neck obtuse or sometimes wanting; stalk short to medium, thick, terete; ribs numerous, rather prominent; apex slightly rounded; eye large, open, scales small, greenish; skin greenish yellow; pulp amber, meat white, seed-rudiments few, large, soft; consistency soft and spongy; quality sweet, juicy and very good, somewhat resembling Du Roi, but better; ripens August 7th, but is not productive and its season is short. Said to be one of the best varieties for drying, but this is of little moment to our section.

Martinique White.—Syn.: Angelique?—Young trees; no description. Mission.—(a) Specimen from Chico Nurs. Co.—Growth irregular; height at two years about six and one-half feet; inclined to stool; leaf medium to large, thick and leathery, "Lyrate."

(b) Station Specimen.—Growth rather poor, straggling; winter-kills here, though otherwise healthy; wood long jointed, open; foliage scant; leaf full medium to large, "Lyrate," seven lobed, including spurs; deep sinus; petiole long.—Fruit very large, pyriform; apex truncate; neck variable, sometimes obtuse or even acute, sometimes entirely wanting; stalk rather long, slender; eye small, open; ribs numerous, distinct; skin smooth, glistening, leathery, greenish amber to mahogany brown, with a lilac or violet tint, lighter on the neck and darker on the ribs; pulp amber pink, soft and juicy; seed-rudiments medium soft; quality mild, sweet and from fair to good; extremely shy bearer; ripened here September 5th. These notes, independenty made, tally sufficiently with Brunswick to warrant the conclusion that the two, as we have them, are identical. Whether they are both of them Brunswick or both Mission or neither the one nor the other can most unfortunately not as yet be stated with certainty.

Monaco Bianco.—Syn.: White Monaco.—Growth and vigor only moderate; trees seven feet at two years of age; foliage sparse with some rust; leaf small to medium, "Lyrate."—FRUIT small to medium, very long and slender, 54x32 mm.; short neck; medium pedicel; rounded apex; ribs

obscure; eye very small, open; color greenish yellow mottled with greenish brown; skin thick, tough, elastic, adherent; meat white, spongy, thick; pulp rose; seed-rudiments medium to large, rather numerous; quality poor to fair. Unproductive and late; ripened Oct. 20 in 1906.

Mouissonne.—Syns.: Mouissonne Noire.—A tall, open grower with arboreal tendency and canopied foliage; very vigorous and healthy; two year trees eleven feet high; leaf rather below medium in size, "Lyrate."—Fruit medium, rounded, 49x51 mm., symmetrically depressed; very short neck and shorter pedicel; no ribs; color yellow; skin tough and elastic, peeling readily; meat white, firm; pulp bright crimson; seed-rudiments medium in size and number, yellow; quality fair to good. Bears no resemblance to California Black or to Brunswick. Moderately productive; ripened August 28th in 1906 but prolongs its season up to frost.







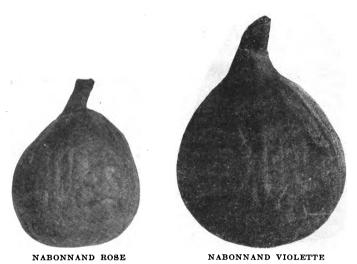
NABONNAND GRISE

Nabonnand Grise.—A vigorous and rather open grower; trees eight feet high at two years; foliage abundant; leaf medium, "Cordate," but with incised lobes and tendency to rust.—Fruit medium; short conical, distorted, with swollen cheek, 43x49 mm.; no neck; pedicel short, but thick; ribs wanting; eye medium, open; color greenish buff with dark brown splotches, increasing in number and size toward apex; skin thin, tender, crevassed; brittle, adherent; meat greenish yellow; pulp rose; seed-rudiments, large, numerous; sugar content high and quality good to very good. Moderately productive; ripened September 9 in 1906, but its season is prolonged.

Nabonnand Jaune.—Growth open, erect; moderately vigorous; two year trees eight feet high; leaf small to medium, "Spatulate"; no fruit; not very promising.

Nabonnand Rose.—Growth small, weak and poor; two year trees five and one-half feet high; inclined to stool; foliage scanty and sparse; leaf "Calcarisate," with lobes transition from "Lyrate" to "Lineate."—Fruit small,

34x29 mm.; roughly conical; irregular in outline; no neck; pedicel medium long, slender; apex rather abrupt; ribs not prominent; eye large, open; scales deep rose purple; color dark purple, almost black; skin moderately thick, tender, yet peels readily; meat white, spongy; pulp rose; seed-rudiments medium to large, few; quality good. Very productive, and but for its small size would be promising as a table variety. Season quite late—October.

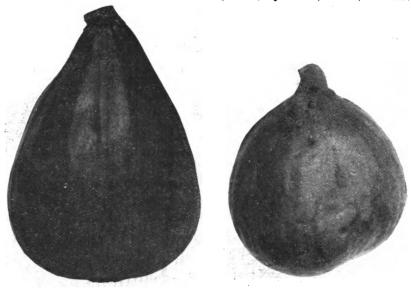


Nabonnand Rouge.—Growth very strong and vigorous, two year trees ten feet high, leaf large; "Spatulate." No fruit whatever; apparently unsuited to climate.

Nabonnand Violette.—Growth slow and light, but apparently normal; two year trees only six feet high; foliage healthy; leaf medium, "Cordate."—FRUIT small to medium, 43x39 mm.; neck medium; pedicel short; apex abrupt; ribs obscure; eye small; color amber blotched with brown; skin thick, tough, peels readily; meat white, spongy; pulp rosy; seed-rudiments medium in size and number; quality apparently poor, but ripens so late that it may prove better another season.

Negro Largo.—Syn.: San Pedro Black.—Growth ugly and unsymmetrical, but vigorous; inclined to stool; two year trees eight feet high; foliage dense and healthy; leaf very large, "Lyrate."—Fruit large, 62x41 mm.; long pyriform; apex turbinate; neck a prolongation of body; ribs prominent; eye small, closed; scales small, rosy; color dark purple mixed with mahogany overlying a lighter ground, as with Brunswick; skin thick, tough, peels readily; meat white, spongy; pulp rose, very coarse; seed-rudiments large, numerous; sugar content high and quality good. Productive and late; apparently identical with Brunswick, but for its quality, which is superior. Ripened Sept. 27 in 1906.

Negrone.—Syn.: Negronne.—Strong, vigorous grower; eight feet or more in height at two years of age, with tendency to stool; foliage large and dense, "Cordate."—FRUIT medium, 49x41 mm.; short conical or nearly globular, with no neck and short, thick pedicel; eye small, closed; no ribs:



NEGRO LARGO

NEGRONE

color greenish yellow splotched with dark brown; skin thin, sometimes tough and elastic, at others brittle; peels readily; meat amber white; pulp amber; delicate; seed-rudiments many, small; high sugar content and quality good. Productive and rather late, ripening Sept. 20 in 1906. Evidently a misnomer, wrong variety having been sent out under this name, since of course any fig named *Nebrone* should be dark, not yellow. What is it?

New French.—Growth vigorous but unsymmetrical; inclined to stool; two year trees seven and one-half feet high; foliage dense; leaf small to medium, "Cordate."—Fruit medium to large, 58x44 mm., pyriform with rounded apex; neck prominent; pedicel short, thick; ribs obscure; eye large, open, scales small and light pink; color greenish yellow, dotted with brown; skin moderately thick, tender, adherent; meat greenish white, spongy; seed-rudiments small to medium, numerous; pulp amber, moderately soft; quality good; high sugar content. Very productive and highly extolled by J. L. Normand, Marksville, La.

Neyreii White.—Syns.: White Neyreii; Madeleine. — Growth strong and free, open, but with healthy and sufficient foliage; leaf large, "Latate" group, seven lobed, spurs quite distinct; lobes medium broad; sinus medium deep, petiole medium.—FRUIT full medium to large, 47x53 mm., slightly larger than Madeleine and slightly differing in shape, though not sufficiently

to make them separate varieties; form obovate with distinct though extremely obtuse neck; stalk shorter and thicker than with *Madeleine*; apex depressed; ribs obscure; eye medium, open; skin greenish yellow; pulp amber; meat white; seed-rudiments medium, few, soft; consistency soft and spongy; quality fair to good. Ripens July 21st, but its season is brief.

Noirmoutier.—Syn.: Noire Moutier.—Moderately vigorous but ugly and unsymmetrical in growth; inclined to stool; two year trees seven and one-half feet high; foliage dense; leaf medium to large, "Cordate"; no fruit.

Oblique Blanche.—Growth vigorous and healthy, though straggling; inclined to stool; two year trees eight feet high; foliage dense and canopied; leaf below medium, "Cordate."—FRUIT medium to large, conical, irregular. 50x39 mm.; no neck; pedicel short and stout; apex turbinate; ribs obscure; eye large, open, scales white; color greenish yellow, dotted with brown; skin thick, tough, elastic, adherent; meat white, very spongy; pulp amber; seed-rudiments medium in size, numerous; quality mild and pleasant with fair sugar content. Late and productive, maturing Oct. 15 in 1906.

Oblique Noire.—Growth fairly vigorous, rather open; two year trees six and one-half feet high; foliage "Calcarisate," rather unhealthy; inclined to rust; lobes a transition



OBLIQUE BLANCHE

from "Lyrate" to "Lineate" groups. Very late, no fruit ripe October 16th.



OSBORN PROLIFIC

Osborn Prolific.—Growth fairly vigorous, rather open; inclined to stool; height of two year trees eight feet; leaf medium, "Latate."—Fruit small, 46x35 mm., conical; apex turbinate; neck short; pedicel short; medium thick; ribs obscure; eye small, closed; color a greenish fawn, mottled with dark brown; skin thick, moderately tough, rather elastic; meat white or greenish white, slightly spongy; pulp amber; seed-rudiments large and few; flavor mild and pleasant; quality fair to good. Unproductive. Ripens very late—after middle of October.

Paileuse Blanche.—Syn.: Poulette? —Of low bushy habit with decidedly recumbent tendency; growth ugly and straggling; height six and one-half feet only at two years; leaf medium to large, transition

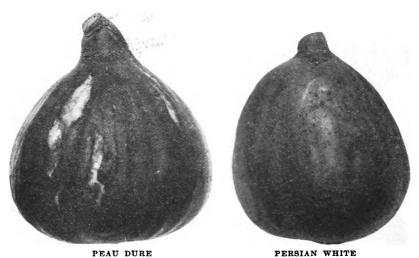
form from "Spatulate" to "Lineate." Very unproductive and late, no fruit having ripened October 16th; apparently undesirable.

Panachee.—Syn.: Striped.—Strong, vigorous, erect and shapely in habit with tendency to arboreal form; foliage very large and handsome, dense and canopied, "Cordate" type. Very shy bearer and extremely late, no fruit having matured October 16th; apparently unsuited to this climate.

Pastelliere.—Syns: Pastilliere; Pastidiere.—(a and b) Specimens from Davis and Normand, respectively.—Vigorous and healthy, assuming arboreal form with tendency to stool; five feet at one year of age. No fruit.

(c) Specimen from Tuohy.—Less vigorous than the two preceding, attaining height of only six feet at two years; foliage sparse; leaf below medium in size and form a transition from Latate to "Lyrate" groups. No fruit so far.

Peau Dure.—Syns.: Peau d'Ane; Peldure; Verte Brune.—Strong vigorous, open grower with tendency to arboreal form; height ten feet at two years of age; foliage thick and heavy, handsome, "Latate." Fruit full medium to large; short pyriform, 59x53 mm.; frequently depressed with unequal cheeks and with truncate apex and very short neck; pedicel short, thick, persistent, eye small, closed, scales large; ribs prominent, darker than body which is greenish yellow slightly gray, or drab, overspread with a darker brownish purple shade; skin thin but tough and elastic; peels readily; meat white, firm; pulp bright rose, tender; seed-

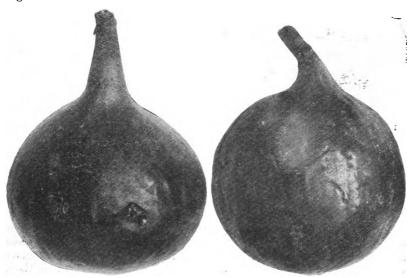


rudiments very few, small, yellow; quality very good, distinctly vinous, a very unusual characteristic with figs and rendering this variety unique. So far as known it is with the exception of *Toulousienne*, the only acid fig on record. Its resistance to moisture is almost equal to that of *Ischia White*, and like the latter it frequently dries on the tree, forming a natural

. . . .

bonbon of exquisite flavor. Seldom sours even in damp weather and well deserves its name, "Tough Skin." Should handle well and if any fig may be shipped this is the variety. Extremely promising and worthy of full and extensive test. Ripens last half of August and its only defect is that it is not sufficiently productive, at least in its earlier years, although its season is extended up to frost.

Persian White.—Small in size and of slow growth; inclined to stool; closely resembles Dalmatian in habit; two year trees only five feet high; foliage dense; leaf medium, "Lyrate," but it may be possible that changed environment would produce "Lineate" lobes.—Fruit medium to full meddium, 45x43 mm.; roughly conical with abrupt apex, no neck and short thick pedicel; eye large, open, scales rosy; color greenish yellow covered with dirty brown dots thickening toward apex; ribs not prominent but distinct and of violet color; skin thick and tough; meat yellowish white, coarse, spongy; pulp purplish amber, has apparently some female flowers; seed-rudiments very large, few; quality only fair. Closely resembles Dalmatian but is apparently not absolutely identical with it. Late, ripening October 16 in 1906.



PETITE MARSEILLAISE

PETITE VIOLETTE

Petite Marseillaise.—Habit low and spreading with a tendency to arboreal form; of slow growth; height of two year trees seven feet; foliage open, leaf medium, "Latate."—Fruit full medium to large, 59x51mm.; abrupt conical with an extravagantly long neck and short pedicel; ribs inconspicuous; eye large, wide; color greenish yellow blotched with dark brown; skin thick, tough, adherent; meat white, spongy; pulp amber or light rose; seed-rudiments large and fairly numerous; flavor mild and pleasant; quality fair to good. Splits and sours fearfully in this section

and apparently not suited to our climate, although very productive. Season September.

Petite Violette.—Syns.: Petite Violette des Vignes Ischia: Black?—Growth strong, straight, erect with tendency to stool; two year trees eight and one-half feet high; leaf medium, "Cordate."—Fruit medium, 54x46 mm., globular; apex turbinate with slender neck and pedicel; one cheek always abnormally swollen; ribs inconspicuous; color greenish buff; skin medium thick, tough; meat yellowish white, rather spongy; pulp rose; seed-rudiments medium to large and fairly numerous; quality very good. Moderately productive and may prove a good table variety. Midseason, maturing latter part of August.



PRECOCE DE BARCELONNE

Precoce de Barcelonne.—Syns.: coce d'Espagne? Trifero?-A widespread straggling grower but vigorous; height at two years nine feet; foliage scant, tendency to arboreal form; leaf medium, transformation from "Spatulate" to "Lineate."-FRUIT small to medium, 39x38 mm.; short conical; apex turbinate; no neck; ribs obscure: pedicel short and thick; eye large, open; color violet black; skin thin, elastic; meat thin, greenish white, fibrous; pulp rose, very compact; seed-rudiments medium to large, numerous, crackling under teeth; quality good to very good. But for its small size would be promising. Late, ripening Oct. 16 in 1906.

Precoce, Grosse Grise.—Growth fairly good, open and healthy with tendency to stool form; foliage sparse, leaf medium, "Lyrate." Very unproductive and extremely late, no fruit having ripened latter part of October.

Pregussata.—Syns.: Pergussata; Pegustratra; Pergustrata;—Probably "San Pedro" sub-class; has never matured a crop here and supposition is that brebas have been annually destroyed by cold and of course no second crop could mature; growth poor and weak; foliage "Lyrate," very similar to that of White Four Season; leaf large, petiole medium. From U. S. Dept. Agriculture and evidently worthless here.

Provence Black.—Syns.: Black Provence; Black Marseilles; Black Marseillaise.—Growth vigorous and rapid—one of our largest trees—foliage healthy and handsome, open below but dense and canopied above; leaf of "Spatulate" type, rather small for that group, seven lobed, including its spurs; lobes long, slender; sinus deep; petiole short and slender.—Fruit small, 41x34 mm., pyriform, neck narrow or acute; apex rounded; pedicel long, thick and very persistent; ribs slight, wavy, irregular; eye medium, partly closed, scales large, red; skin thin but tough, violet black; pulp

rosy red; meat white; seed-rudiments small, soft; of rather firm consistency; quality good; quite sweet but with little character; not so delicate as *Celestial*, but almost equally as valuable, as it ripens July 24th, and bears continually until stopped by frost; likely to prove a good shipper for a fig. Enormously productive and desirable.

Reculver.—Syns.: Marseilles Black? vence Black?-Growth vigorous, healthy and shapely; inclined to stool; height at two years seven feet; foliage dense, very dark green; leaf full medium, "Lyrate."—FRUIT very small, 31x27 mm., smaller than even Qelestial or Black Provence short conical with abrupt apex; no neck; ribs obscure; eye small, closed, scales large, purple; color almost jet biack with small whitish spots; skin thick, tough, elastic; meat white, spongy; pulp rosy amber; seed-rudiments medium, few; quality good with decidedly nutty flavor. May prove, on further test, synonymous with Black Provence, atlhough leaf of latter has "Spatulate" lobes. Season in September.



RECULVER

Reed No. 1.—Syns.: Dalmatian; Magnolia—Differs in not the minutest particular from these varieties; "Reed's numbers" are a fraud on their very face, since the origination of new varieties from Southern figs is a manifest botanical impossibility; they could at best pretend to be only "selections." As it is they are all precisely the same, are absolutely identical with Dalmatian and equally as worthless.

Reed No. 5.—Identical with Reed No. 1.

Reed No. 6.—Identical with Reed No. 1.

Ronde Noire.—Syns.: Round Black; Walker?—Very stocky; four feet at one year of age; inclined to stool; healthy, but too young to warrant detailed description. There is a bare chance of our "Walker" being found identical with it.

Ronde Violette Hative.—Syn.: Early Round Violette—Ugly and unsymmetrical, though vigorous, with tendency to arboreal form; two year trees nine feet high; foliage rather sparse; leaf medium, "Cordate"; no fruit. Unproductive and failed to ripen its fruit; apparently the same and just as worthless as Early Round Violet of the Station.

Royal Vineyard.—Growth small, with tendency to stool, but fairly healthy, although two year trees are only five feet in height; foliage dense, leaf small to medium, "Latate"; no fruit.



SAN PEDRO BLACK

San Pedro Black.—Syns.: Black San Pedro; Negro Largo; Aubique; Aubique Noire; Aubique Violette; Grosse Violette de Bordeaux; Breba Negra.—Vigorous, healthy and symmetrical with tendency to arboreal form; two year trees nine feet high; foliage dense, leaf medium, "Cordate."-FRUIT medium to full medium, conical, 51x43 mm., rather irregular with abrupt apex and long slender neck; pedicel short and thick; ribs obscure; eye large, partly closed, ground color yellow showing on neck but deepening into dark purple toward apex, covered with brown spots; skin thick but tender, adhering closely; meat creamy white; pulp bright rose or carmine, texture fine and delicate; seed-rudiments small and very numerous; crackling

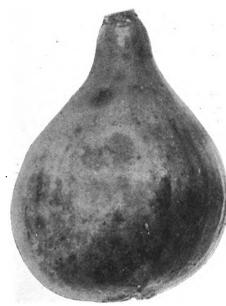
funder teeth; quality poor to fair, as it is mild, tasteless and insipid but probably better earlier in season. Productive and quite late, ripening Oct. 16 in 1906.

San Pedro White .-Syns.: White San Pedro; San Pedro White; Saint Peter: Brebas .-Growth rapid and vigorous as to wood but foliage unhealthy; attacked here by both Ozonium and nematodes: Pedro" subclass, and hence can mature only brebas, which in Mexico, according to Eisen, has given it one of its synonyms. With the exception of a few enormous brebas in 1904, it has never borne here; leaf very large, but drawn and crumpled with disease: "Latate" with five distinct lobes and obscure additional spurs; lobes long, broad,



spurs; lobes long, broad, SAN PEDRO WHITE (BREBA) obovate, with deep sinus; petiole medium; entirely worthless here.

"Smyrna" White.—Syns.: White Smyrna; Magnolia; Dalmatian.—Absolutely identical with Dalmatian (q. v.)—Fruit very large 66x75 mm., with the distinctive 'swollen cheek' characterizing the type, and splits



ST. JEAN BLANC

and sours simliarly; of no value here. It would be interesting to know its true name and origin. Prof. R. H. Price ascribes the introduction of Magnolia into Texas to a peddler selling magnolia trees which turned out to e"excellent" figs. It is reasonably certain that this fig is Price's Magnolia, but its characteristics in this section are not such as commend it. It also seems identical with Doree of Nabonnand.

St. Jean Blanc.—Syns.: White-St. John: St. John.—Growth tall, erect, but irregular and unsymmetrical; trees seven and one-half feet high at two years of age-with tendency to arboreal form and heavy canopied foliage; leaf medium, "Cordate," though somewhat polymorphous in character.

—FRUIT large, 62x48 mm., irregu-

lar conical with turbinate apex; neck distinct but short; pedicel short and thick; ribs obscure; eye large, open, with tendency to split, scales very large; color greenish yellow, mottled withbrown; skin thick, tough, elastic :

meat rosy white, spongy, thin; pulp bright rose and of firm consistency; seed-rudiments few, large, crackling under teeth; quality good; does not sour but often dries on tree like Peau Dure and Ischia White. Productive and quite promising. Season September.

St. Jean Gris.—Growth somewhat similar to that of St. Jean Noir, irregular, unsymmetrical, but fairly vigorous; seven feet high at two years of age; foliage rather dense; leaf full medium to large, transition from "Latate"to "Lyrate."—Fruit medium to large, 43x47 mm., globular with swollen cheek; no neck; short pedicel; ribs obscure; eye me-



ST. JEAN GRIS

dium to large, open, scales small; color greenish buff with darker purplish tint toward apex; skin medium thick, brittle, splits at maturity in network of small crevasses like Ischia White; meat white or greenish white, slightly spongy; pulp rose, smooth and delicate, sweet and excellent. An extremely promising variety, almost equal to Peau Dure and White Ischia. Its only defect is an apparent tendency toward unproductiveness while young. Midseason, beginning to ripen in late August.

St. Jean Noir.—Growth irregular and ugly with tendency to stool; two year trees eight feet high; foliage thick, leathery, and leaf full medium, "Lyrate."—Fruir medium, 49x40 mm.; abrupt conical; ribs obscure; color yellowish buff, overlaid with dark brown splotches; skin thick and tough, peels readily; meat greenish white; pulp light rose; seed-rudiments small to medium, numerous; quality good but it sours somewhat prematurely and is a shy bearer. Season in September.



ST, JEAN NOIR



TOULOUSIENNE

Superbe de Fontbelle.—A strong vigorous, healthy grower; nine feet high at two years of age; inclined to arboreal form; foliage very dense, canopied; leaf very large and leathery, "Spatulate." A shy bearer and very late; no specimens of fruit sufficiently ripe for description when caught by frost.

Toulousienne.—Syns.: Servantine Bijere; Grise Servantine Bijere—Apparently healthy and vigorous but of dwarfed and bushy form; two year trees only four feet high; foliage very dense; leaf small, "Cordate."—Fruit small to medium, 39x37 mm.; very short conical, almost globular; apex turbinate; neck very short, slender; eye large, open; scales rosy; skin greenish yellow; ribs wanting but their place supplied with longitudinal violet stripes over a greenish yellow ground-color; skin moderately thick, very tender, peels readily; meat greenish white, thin; pulp bright carmine; seed-rudiments medium to large, numerous; quality fair with a slightly acid flavor—the only fig except Peau Dure possessing this characteristic, which in the present instance is unpronounced. Very productive, although not particularly promising. Late, ripening in October.

Turkey Brown. -Syns.: Brown Turkey; Turkey; Turquie Brune; Forcing: Walton.—(a) Station specimen.—A strong good grower, robust, handsome, hardy and healthy; stands more cold than any other variety; foliage heavy; leaf medium, "Cordate," three to five lobed; lobes short, broad and rounded, with shallow sinus and medium petiole.— FRUIT medium to full medium, turbinate pyriform, with distinct acute neck, 56x46 mm.; pedicel very short and thick, persistent; apex sometimes truncate, sometimes depressed and shape of body occasionally distorted or "lop-sided" but seldom; ribs few and only moderately prominent; eye small to medium, partially closed; skin thin and tough, light greenish brown, sometimes coppery, tending to violet; color popularly termed "brown"; pulp pink or rosy; meat white or amber white, soft; seed-rudiments small, soft; consistency firm, a good shipper for a fig; quality good—its brebas especially so-and it also sets them well; very productive also, with its second crop. One of the hardiest and most generally planted throughout this entire section.



TURQUIE BRUNE

Turquie Brune. - Syns.: Verdale. - A key Brown; straggling grower, weak and feeble; two year trees four and one-half feet high with tendency to stool; foliage open and very small, "Lineate."-FRUIT medium, 40x46 mm.: short conical, rather amorphous, sometimes approaching globular, occasionally oblate with a swollen cheek and no neck; pedicel short and thick; apex truncate; eye small, closed; color greenish yellow overspread with dirty brown; skin thin, rather tough, adherent; meat yellowish white, thin; pulp amber; seed-rudiments small, few

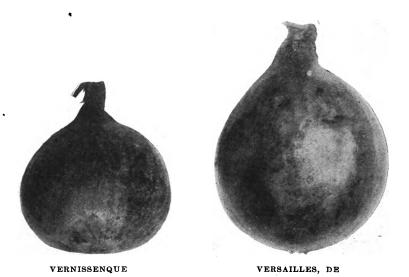
to medium; quality good to very good with a high sugar content. This specimen has no connection whatever with the *Turkey Brown* of this section but is closely akin to if not identical with *Dalmatian*, *Magnolia* or *Doree*. The exporters doubtless made a mistake in labeling.

Verdale Longue.—Syns.: Grosse Verdale; Verdala; Gironetta—Specimens (a) and (b) from Barber and Davis respectively, made a vigorour initial growth and are very stocky and healthy, but too young for detailed description.

Specimen (c) from Nabonnand & Co., moderately vigorous with tall erect habit; nine feet high at two years of age; foliage heavy, open; full medium, "Cordate." A very shy and late bearer, frost cutting off crop before maturity.

Vernissenque.—Syn.: Bernissenque.—A tall erect and vigorous grower with arboreal habit and canopied foliage; leaf variable in size from medium

to very large, "Cordate."—FRUIT small to medium, 35x38 mm., globular with short neck and short thick pedicel; apex sometimes truncate; ribs obscure or wanting; eye small, closed, scales small, rosy purple; color deep rose purple spotted with brown; skin thin, tough, elastic and closely adherent; meat greenish white and very thin; pulp deep pink, inclined to rose; seed-rudiments large, numerous; quality fair to good. Very late, ripens in latter part of October and is also a shy bearer.



Versailles, de.—Syn.: Abondance.—A strong grower with tendency to arboreal habit; foliage open; leaf large, thick, leathery, "Cordate."—Fruit medium, 40x40 mm., irregular and misshapen but soft and plastic like putty; apex abrupt; no ribs nor neck; pedicel very large, long and robust; eye raised, almost protruding, large and closed; color amber or golden spotted with dark brown; skin moderately tough, elastic, adherent; meat amber white, striate; pulp light rose, delicate in texture; seed-rudiments large, few; quality good to best; a delicious fig for the family table, but unprepossessing in appearance and too soft to handle well. Unfortunately a very shy bearer. Season latter part of September.

Violet, Early Round.—Syns.: Early Ronde Violet; Round Violette Hative, etc.—A miserably straggling grower; foliage of "Cordate" type; leaf full medium, three to five lobed, broad, with shallow sinus and medium petiole; has never borne at the Station and seems entirely worthless.



VIOLET SEPOR

Violet Sepor.—(a) Specimen from Davis.
—Vigorous and healthy, four and one-half feet at one year of age; stocky but too young to warrant comparison.

(b) Specimen from James.—Growth slow and feeble, though dense and bushy, tree only four feet high at two years; stools; leaf very small, "Cordate."—FRUIT small to medium, 39x44, conical with swollen cheek; no neck; apex turbinate, sometimes abrupt; ribs obscure; eye large, open, scales large, rosy; color amber or buff blotched with dark brown; skin thin to medium thick, tough, adherent; meat white, very thin, not spongy; pulp light rose; seed-rudiments small to medium, few; quality poor, mild with but small

sugar content. Moderately productive but of no value. Ripened Sept. 20 in 1906.

Walker.—Syn.: Ronde Noire?—A large, handsome, black fig from Macon, Georgia, not yet identified with any standard variety; growth very strong

and vigorous, apparently hardy and cold resistant; of spreading habit, very large "Latate" leaves and an enormous bearer, commencing to ripen its fruit about August 1st. and continuing until frost.-Fruit large, short conical or globular with no neck and short pedicel; color deep bluish purple with red pulp and of good quality. A most desirable variety and worthy of extensive propagation. May prove to be Ronde Noire of Eisen. Elsewhere in this Bulletin this fig tree is represented, together with its owner, Rev. William Bohler Walker, Rector of Christ Church, to whom the Station is indebted for its cuttings.



WALKER

# PART 2. SMYRNA FIG CULTURE.

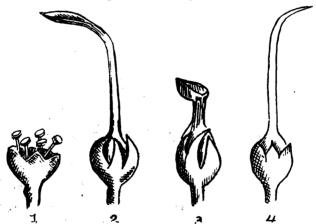
The possibility of the introduction and profitable establishment of this peculiar industry, as a unique contribution to the many horticultural resources of the South Atlantic and Gulf States, forms the second of the two divisions of the Station's work with figs. To test the matter it was of course, necessary to establish plats of both Smyrna and "Caprifigs," before colonizing the Blastophaga or "pollinating fig wasp."

Before proceeding further, in order to understand fully the position of the Smyrna fig and its distinctive peculiarities, it will be necessary to explain the unusual floral structure of the fig and the respective types to which it gives rise under the head of

#### 1.-INFLORESCENCE AND CLASSIFICATION.

The fruit of the fig, as all know, is a hollow pyriform receptacle, on the interior surface of which are located the flowers. These are of four kinds:

- 1. Staminate or Male—bearing pollen, but of course with no seed carpel at the base.
- 2. PISTILLATE or Female—with well developed ovaries or seed carpels, but, unless pollinated, incapable of development.



THE FOUR TYPES OF FIG FLOWERS—(1) Staminate or Male; (2) Pistillate or Female; (3) Aborted or Gall Flower; (4) Mule or Sterile. All greatly enlarged.

- 3. Gall Flowers—sterile organs whose only province is to shelter the Blastophaga or "Fig Wasp"—the sole agency possible in the fecundation of the fig, and
- 4. Mule or Sterile Flowers-incapable of performing any function whatever.

These four types of flowers are not all borne in the same fig at once, and their varied distribution gives rise to three distinct classes (comprising in all, seven sub-classes) into which our species of fig (*Ficus carica*) is divided.

The division is as follows:

CLASS 1.—DOMESTICATED Figs—possibly the best term for the division including the three snb-classes, Mission, Adriatic and San Pedro, which supply the naturally edible product so long utilized by man. This group contains neither Male or Gall flowers, and is divided as follows:

Sub-class 1.—Mission Figs—the most prominent of the three "naturally edible" divisions. These contain chiefly Sterile or Mule flowers, with a small number of Female or Pistillate flowers-so few, however, that for all practical purposes they may be considered as entirely wanting. There are (in common with the other two sub-classes) no Male flowers and no Gall flowers. To this division, as Dr. Eisen has shown, should be referred almost all of our Southern and California figs, and nearly all of the European figs, as well, notwithstanding the habit into which pomologists have quite generally fallen of classing all of these under the second division-"Adriatic" figs. While "Mission" figs thus have sterile flowers the receptacle nevertheless develops into an edible fruit, with false seed carpels, which are absolutely incapable of germination. Consequently no seedling can ever originate from the Southern fig; it belongs to a true "Mule" typeyet one attaining, as Dr. Eisen aptly puts it, "pomological" though not "botanical" maturity and ripening both its crops into edible fruit when not injured by cold or other vicissitudes of climate and season.

Sub-class 2.—Adriatic Figs-differing from the previous division only in the character of the first crop or "Brebas." This crop contains such a large proportion of Female flowers that (not "caprificated") it invariably shrivels and drops before reaching maturity. The second or main crop, containing Mule or Sterile flowers, like that of the "Mission" fig, develops (pomologically) an edible fruit. The inevitable loss of the first crop is therefore the chief distinction between the "Mission" and "Adriatic" subclasses. It is, however, difficult for the average grower to successfully compare the two by reason of the frequent loss of the first crop by the "Mission" type, also, from outside climatic causes; and there are no obvious "ear-marks" (other than their inflorescence) by which they may be distinguished apart. It is therefore not remarkable that there should arise considerable confusion and uncertainty over the matter. It is sometimes extremely puzzling, even to one reasonably familiar with plant physiology, to determine with accuracy the structure of hundreds of minute, immature flowers crumpled into a compass the size of a cherry, when the "brebas" are shed in spring-time; and frequently extraneous damage (as that of severe frost) to the brebas of some variety of "Mission" fig, recurring for one or two seasons, may lead to the erroneous conclusion that it never sets a first crop and hence belongs to the "Adriatic" type. On the other hand the maturity of a single crop of edible brebas locates the variety with certainty in the "Mission" column if it is also known to mature a second crop or later. "Mission" figs may and often do perfect a crop of brebas; "Adriatic" figs cannot.

Sub-class 3.—San Pedro Figs form a division directly the obverse of

the foregoing. While with the "Adriatic" fig the brebas have a predominance of Female flowers and hence fail to develop, with the "San Pedro" sub-class the brebas possess Mule flowers and attain an edible maturity, while the second or main crop has Female flowers only, and (unless caprificated) invariably drop. Each is a "one crop" division—the "Adriatic" type losing its brebas and the "San Pedro" type its second crop—while the "Mission" sub-class, in normal seasons, perfects both.

Class II.—SMYRNA Figs—These are, as their name indicates, of Asiatic origin, and to Syria, Asia Minor, Northern Africa and Greece their cultivation is to-day practically confined. The figs so widely distributed throughout Italy, France, Spain and Portugal are almost entirely of the "Domesticated" or Mule type.

"Smyrna" figs contain only Pistillate or Female flowers. pollinated artificially swell and grow, developing into the finest figs known to commerce. Unpollinated, they dwarf, shrivel and finally drop off. Pollinated "Smyrna" figs dry readily in even a semi-humid climate like that of California, and present, even in Florida and South Georgia, our only chance or hope of ever developing this branch of the fig industry. "Mule" figs only dry successfully in a rainless region, and here their profitable manipulation would be impossible; that is to say, the product, as compared with Asiatic, European or even California dried figs, would be found so inferior that the attempt would have to be abandoned. Pollinated "Smyrna" figs acquire a rich, aromatic, nutty flavor that is exquisite in the fresh product and extends to even the dried article. The finest grades of commercial dried figs are all of the "Smyrna" class. Of late years their culture has been successfully introduced, on a small scale, into California—the pioneer in the work being George C. Roeding, of the Fancher Creek Nurseries, at Fresno. Yet without the close companionship of the next class-"Caprifigs"-the "Smyrna" fig would be absolutely valueless, as self-pollination is of course impossible.

Class III.—CAPRIFIGS, or "Wild-figs" (literally "Goat-figs") were evidently the prototype of the entire race. They rarely develop edible quality and their province in nature is apparently to serve as pollinators for the Pistillate group. This they effect in a most peculiar manner. The "Caprifig" with its first crop, or "Profichi" (referred to more in detail further on) which is the one used in artificial pollination, bears three kinds of flowers. First, Staminate or Male, clustered in a compact mass around the interior rim of the "eye" (sometimes termed the "ostiolum" or "little mouth") their anthers or pollen cases blocking the exit like a screen of brushwood' The rest of the interior of the receptacle bristles with "Gall" flowers but there are no Pistillates. In the base or false ovary of the Gall flowers, which are merely degenerate Pistillates, the egg of the Blastophaga grossorum or "Fig Wasp"—a minute insect—is deposited, hatches and develops to maturity. The wingless males emerge first and with their powerful mandibles cut into the flowers containing the female wasps, partially release and impregnate them. The gravid females shortly complete the liberating process, and, being winged, at once seek to escape for the instinctive purpose of ovipositing. They emerge from the eye of the "Caprifig" after squeezing through the mass of pollen-covered anthers protecting the exit and seek other fruit in which to lay their eggs. Naturally they would enter the nearest "Caprifig" in the proper stage of development. But meanwhile, if the "Caprifig" containing the colony has been plucked from its stem and suspended from the branches of an adjacent "Smyrna" tree, the female, on emerging, forces her way into a fruit of the latter class, losing her wings in the process, and at once begins a frantic scramble around the interior, searching for the anticipated Gall flowers, in which to oviposit. Failing, necessarily, to find them, and incapable of again taking flight, she finally curls up and dies heartbroken, but not until she and her companions have between them pretty thoroughly pollinated every Female flower in the cavity with the plentiful store of pollen conveyed from the "Caprifig"—thereby insuring the development of the fruit.

It is in this way that "Smyrna" figs are artificially pollinated. The process is termed "Caprification," and requires, of course, for its conduct, the parellel cultivation of a sufficient number of "Caprifig" trees to furnish the necessary quantity of Blastophaga to pollinate the crop of Pistillate "Smyrna" figs. It is estimated that some 400 females, on an average, emerge from a normal "Caprifig" and from 50 to 100 figs per tree are needed for the thorough pollination of the crop, while the proportion of "Caprifig" trees to "Smyrna" trees should be, for thorough work, according to Eisen, about 1 to 50.

Seed of pollinated "Smyrna" figs (even when dried) are capable of germination, and from their planting it is possible to originate new varieties—a field of work that at no very distant day may offer an inviting opportunity to the patient experimenter in this section of the South. Yet it should be noted that all "Smyrna" seedlings are not "Smyrna" figs but true hybrids, with the hybrid tendency to revert more or less to the male parent—the "Caprifig"—thus greatly reducing the chance of obtaining a valuable product in the progeny.

To understand how the succession of broods is maintained with the Blastophaga it is necessary to examine briefly the habits of the "Caprifig.' Unlike most "Mule" figs, which, as prevoiusly stated, usually bear but two crops annually—the first crop or brebas, and the second or main crop—the "Caprifig" bears three distinct crops.

- 1. Profichi—on the old wood—first appearing about December and passing the rest of the winter as "buttons." They are caprificated, (in a natural way) by insects from the third crop, along in March, when about the size of a hazlenut. "Profichi" have many Male and Gall flowers, but no Female flowers, and is the crop used to caprificate "Smyrna" figs commercially.
- 2.—Mammoni—on new wood—first setting in June and maturing in August. These have Male, Female and Gall flowers and perpetuate the wasps for their own third crop. They also furnish, from the Female flowers, seed capable of germination.



3.—Mamme—on maturing wood—setting in the early fall, passing the winter in a nearly matured state and ripening before the "Profichi" in spring. They contain Male flowers and numerous Gall flowers and their function is to winter the Blastophaga for the natural caprification of the "Profichi"—thus perpetuating the species.

It will hence be seen that caprification is a rather involved process, and it becomes more so should the crop of "Mamme" chance from any cause to meet with accident. In such event the "Profichi" must be caprificated by the importation of "Mamme" that have escaped destruction in some other locality, or "Profichi" obtained elsewhere for caprification of the "Mammoni" and the "Smyrna" crop. The patience and drudgery necessary for the successful conduct of the "Smyrna" fig industry is an essentially oriental characteristic, but it is greatly to be doubted if it is adapted to the nervous energy and hustling disposition of the average American. should stand, in this regard, upon somewhat the same plane with tea-growing and silk culture, though it must be admitted that the industry is considerably increasing in California, and it is said that the U.S. Dept. of Agriculture is prepared to furnish a limited supply of Blastophaga for colonization to anyone in South Georgia, Florida or the Gulf States who has made a sufficient planting of "Smyrna" and "Caprifig" trees and has brought them up to the bearing age. As the Blastophaga already colonized in California are reported to be fortunately free from the parasitic enemies that decimate them in their native habitat it is very much to be hoped that all supplies for other parts of the country will be drawn in future from the Pacific coast and not imported from Asia Minor or Greece, thereby averting oneof the chief drawbacks to the successful culture of the "Smyrna" fig.

There are also to be noted two sub-variations or modifications of "Caprifigs," generally regarded as distinct and separate groups, although it is here found more convenient to include them as "modifications"—to wit: "Cordelia" and "Erinocyce" figs.

Modification 1.—Cordelia Figs.—These form a unique division whose European representative may possibly be, according to Eisen, the "Croisic" fig of France. Its peculiarity is a zone of Male flowers in the receptacle in addition to the Female flowers—and perhaps Mule or Sterile flowers, also, since the fruit is, to a certain extent, edible, and it is not probable that the development producing this edibility is due to self pollination, as this would require the maturity of the anthers at the exact time the stigmas became receptive—a rather unlikely conjunction. The zone of Male flowers produces pithy streaks in the fig, which considerably impair its quality; and, as a matter of fact, "Cordelia" figs are of more interest botanically than pomologically.

Modification 2.—ERINOCYCE Figs.—These are apparently confined to Europe and while differing materially from the "Croisic" or "Cordelia" type are yet, in common with it, only a modified form of "Caprifig." Their first crop (Profichi) contains Male and Gall flowers and their second crop (Mammoni) Female and Gall flowers. Neither this modification nor the preceding is of the slightest economical value.

SUMMARY

SCHEME OF CLASSIFICATION (IN TABULAR FORM) BASED ON INFLORESCENCE

Modification 2— ERINOCYCE Figs	Modification 1— Cornella Figs	III. CAPRIFIGS	II. SMYRNA Figs	Sub-class 3— San Pedro Figs	I. DOMESTICATED Figs Sub-class 1— Mission Figs Sub class 2— Addition Figs	CLASS
\ \ \ \langle \text{1st Crop} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(2nd Crop	2. Mammoni	1. Main and only crop— }		(1. Brebas	CROP
(Gall or Wasp Cells) (Female or Pistillate) (Gall or Wasp Cells)	(Character uncertain)	\Begin{align*} Male or Staminate \cdots \change Female or Pistillate \cdots \change \cha	Female or Pistillate	Mule or SterileFemale or Pistillate	Mule or Sterile  Mule or Sterile  Female or Pistillate  Mule or Sterile	FLOWERS
Inedible—drops.  Partially edible.	Self developing and partially edible.	Carry Wasps through summer Carry wasps through winter.	Drops unless caprificated. †Used for the caprification of Smyrna figs.	*Naturally edible.  Drops unless caprificated.	*Naturally edible *Naturally edible Drops unless caprificated *Naturally edible.	VALUE OR LUNCT ON

\*Prevented from perfecting at any time only by the season's vicissitudes. †Caprifigs are also (when self caprificated) edible a(though not regarded as a delicacy.

### 2. STATION COLLECTION.

To carry into effect the Station's work under this head the first step was to obtain from California a supply of Roeding's Caprifigs Nos. 1, 2 and 3, as well as several others, including some "wild specimens." With them we obtained all of the Smyrna figs that could possibly be found at Fresno. Chico, and the California sub-Stations. The latter were mainly the well known "Bulletin Smyrna" (Lob Ingir) and Roeding's "Calimyrna". Some of these died; the survivors, forming a quite limited list, are as follows:

#### CAPRIFIGS.

ON			
VARIETY	Source		
Capri	Patron John Tuohy, San Joaquin Valley Sub-Station, Tulare, Cal.		
Capri No. 1 (a)	J. H. Barber, Supt. S. Cal. Sub- Station, Ontario, Cal.		
Capri No. 1 (b)	Chico Nursery Co.		
Capri No. 2 (a)	Chico.		
Capri No. 2 (b)	Barber.		
Capri No. 3	Fancher Creek Nurseries, Fresno, Cal.		
	Capri No. 1 (a)  Capri No. 1 (b)  Capri No. 2 (a)  Capri No. 2 (b)		

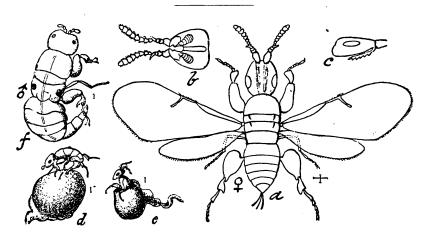
## SMYRNA FIGS.

STATIO	Ν̈́	
No.		Source
4163	Bulletin Smyrna (Lob Ingir)	-Chico.
4164	Calimyrna	Roeding
4165	Cassaba	_Barber.
4166	Kassaba	Roeding
4167	Maple Leaf	Roeding
4168	Purple Bulletin	Roeding
4169	Smyrna No. 1	Tuohy.
4170	Smyrna No. 2	-Tuohy.
4171	Smyrna, Wild	-Tuohy.

As the Caprifig must be at least four years of age before it can be expected to bear abundant crops, no attempt has yet been made to colonize the Blastophaga, and the Station has therefore no definite results to report and is merely waiting on the development of the trees. These have made a good growth the present season and are now large enough to bear next year should the coming winter spare them.

While it is scarcely hoped that at the isotherm of the Station—which is thrown by our altitude of 950 feet much farther north than our latitude would indicate—either the Smyrna fig or the Caprifig will be found sufficiently hardy to permanently withstand our climatic vicissitudes or to consistently and profitably perfect their fruit in seasons as moist as ours, yet it is possible to here maintain plats that will serve for a study of the problem and will suffice both to breed the Blastophaga and to furnish wood for distribution to those cooperating with us at more promising locations further South and West.

At all events the field of work which we have undertaken with the fig is intensely interesting and it is believed that valuable results are not only probable but eventually certain. Nothing but a definitely calculable amount of expense, time and effort now prevents the successful termination of the first division of our undertaking—the disentanglement of the nomenclature and synonymy of the fig—and although the culture of the Smyrna fig may never be made a commercial industry, it may yet be found possible to conduct throughout a considerable portion of this section, particularly along the coast, and may in time serve almost anywhere within the lower portions of the South Atlantic and Gulf States to contribute to the home table at little cost and less labor one of the supremest of delicacies.



Blastophaga Grossorum; a, adult female; b, head of same from below; c, head of same, side view, d, male operating; e, female issuing from gall; f, adult male enlarged – (L. O. Howard, Year book U. S. Dept. Agr., 1900.)

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