

A SUGGESTION IN REGARD TO THE HISTORY OF GRAPE
GROWING IN AMERICA

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Much has been written in regard to the history of grape growing in North America. Of all the fruits native of North America which have been adapted to cultivation, the grape is by all odds the most important. Its history is valuable, not only because of its dramatic interest and its general application to all agricultural development, but also, and particularly, on account of its significance as to the lines of endeavor which offer the most promise for the future. The only apology that can be given for a new offering to the numerous articles on this subject, is either new material throwing new light on this subject, or else a totally new attitude of viewing the subject. Some of the information given below, if now new, has never had attention called to it before and the attitude has not, to my knowledge, been even suggested.

Most of the early history of grape growing, in the part of the new world now known as the United States, is contained in brief references in volumes dedicated to other subjects. These references—usually only a sentence or a short paragraph—are so indefinite that they are comparatively worth-

less to the botanist or horticulturist. Briefly speaking, it may be said that all of the early attempts to raise European grapes in the eastern part of North America were failures. The degree of failure, however, will admit of some explaining.

From the southern portion of Pennsylvania northward the failure was so complete and speedy that very few individuals wasted money in a second effort. To the south, however, particularly in Virginia, the Carolinas, and Georgia, the vines grew quite satisfactorily at first, and in some neighborhoods it took quite a number of years to determine that grape growing was a non-paying industry. The reason for this difference in success in the two sections is undoubtedly due to the fact that the cultivated varieties of European grapes are not hardy in the sense that many of our American species are hardy. This fact alone would have prevented the European grapes from being cultivated in the northern states. This, however, did not account for their failure in the South. In the neighborhood of Philadelphia varieties were cultivated, which while they may have been injured by the winters, were cultivated for some years, and hence must not have been killed outright the first winter as is usually the case where these varieties are planted in western New York. As all who are familiar with the subject know, the reason for the failure of grape growing with European species in the portion of the United States east of the Rocky Mountains, is supposed to be due to the combined attacks of mildews, rots, and above all the phylloxera. That this belief is generally correct there can be but little question.

One phase of the subject which is still difficult to understand is in connection with the place of origin of our cultivated native sorts. In spite of the fact that success in grape culture was first secured in the South, the majority of the successful varieties, raised today, are of northern origin. This seems particularly difficult to understand, in view of the number of attempts made to raise European grapes in the South as compared with the North. No one knows, of course, how much money and effort were wasted in vain efforts to raise vinifera grapes, but in the estimation of the writer this amount is usually much underestimated. It was the most natural thing in the world that the emigrants to the new world should try to raise the same crops here that they had been in the habit of raising before their migration to this shore. This would mean that the English settlers as a class, not being familiar with the growing of grapes at home, made comparatively little effort at raising them here, and that they would credit any failures to this lack of knowledge of viticulture, and let it go at that. This would mean that New York and New England ceased making attempts at raising grapes both because their climate was particularly inclement and

their knowledge of grape growing previous to their advent here was less than that of their neighbors in the middle and southern states where there was a larger contingent of French and German settlers. What sparse accounts we have of the trials of these early growers indicate that these attempts were particularly numerous in the Carolinas and Georgia. Many of the French settlers of these states would not accept the verdict that grapes could not be grown in America. One trial was not sufficient for a neighborhood. Each individual had to make the trial himself, in many cases. The efforts seemed to go in waves. Some neighborhood would get interested in grape growing, money would be secured, and vines brought over from Europe. Much encouragement would be felt at first, this would be followed by more or less discouragement, and the efforts would be finally abandoned. In from fifteen to thirty years the memory of this attempt would be forgotten and the whole procedure would be gone through again. That certain neighborhoods made these trials repeatedly we have evidence; whether it was general we do not know. There is every reason to believe, however, that the history of one neighborhood did not differ materially from that of another in this particular. It extended over a greater period of time than most people realize. It probably continued through the latter part of the seventeenth, the whole of the eighteenth, and the first half of the nineteenth centuries. The present day historians of these early efforts at grape growing are fond of saying that it was not until the growers began to raise native varieties that they attained any degree of success. The writer is of the opinion that it was not until *long* after they tried raising native sorts that they began to have *any* success whatever. It hardly seems probable that the growers of New England, for instance, when they found as they soon did, that they could not raise European grapes, would not make any trials at raising the native sorts. What seems far more probable is that they *did* make trials to raise the native sorts, and that these failed to give satisfaction also, for reasons which will be indicated later.

In connection with these early efforts, it is necessary that we realize that the vines brought from Europe and planted out here, sometimes lives for many years in favorable locations before finally succumbing. Herbemont mentions one which was planted in his garden and grew for more than thirty years. That this was exceptional is indicated from his giving it as worthy of note, but it indicated that many of the vines planted in the South grew to maturity and bore fruit. This fact is important, as it probably had an important application in the development of our present day varieties. It is a striking fact that the first so-called native sorts which were honored with names and introduced into cultivation came

from sections where the first attempts had been made to raise European sorts. The first that we know of the so-called Cape grape, it was being raised by Peter Legaux near Philadelphia. Legaux had at that time raised or tried to raise European grapes. He supposed this Cape grape came from the Cape of Good Hope. In this we are sure he was mistaken, but where it did come from no one is presumptuous enough to say. The Alexander, another one of these early grapes, was said to have been found growing wild in the vicinity of an old vineyard of European vines. The Catawba, possibly an older sort than it is generally credited with being, also originated in a section where the European grapes were grown, to a limited degree, at least. The first we know of it is in Maryland; whether it originated there or further South, as some claim, is immaterial so far as this paper is concerned. The Cape grape, the Alexander, and the Catawba, the first three grapes to be raised successfully in any quantity or for any length of time, originated in the South and in the immediate section of vinifera grapes. The Isabella, another grape of about the same age, is also credited to the South, in this instance, South Carolina. These four varieties had a practical monopoly of the early successful grape growing in North America. All originated in that section of the United States where it had been found possible to raise Vinifera grapes with a temporary success.

The Alexander and Cape grapes appear to have been lost to cultivation. Some years ago the Geneva Station tried to get vines of these sorts but were not able to do so. It is consequently impossible to say much of their botanical characters. Both the Isabella and Catawba are considered by many present day investigators to have at least a trace of vinifera blood. The amount of vinifera blood in either of these varieties is doubtful, but it appears to be certainly present. In the case of the Catawba there may be room for a difference of opinion as to whether the fruit itself has a vinifera taste. The writer has always been of the opinion that southern raised fruit showed a quite perceptible European flavor. However, the susceptibility to mildew and the appearance of occasional seeds of this variety are points which are hardly matters of opinion and are not likely to be misleading. Professor Beach, who has raised large numbers of the seedlings, is of the opinion that many of these show more unmistakable sign of vinifera blood than the parent. The Isabella is, from a botanical standpoint, practically a duplicate of the Catawba. The same characters which may indicate European blood in the one are present in the other. In addition, the fruit is usually quite markedly oval. Whether this is an indication of European blood or not, I would not wish to be positive. Bartram is my authority for the statement that all native American varie-

ties are of round fruit. However, he is not very positive and mentions the Alexander as an exception.

It was not until about the middle of the last century that any success was obtained in originating varieties of grapes in New England and New York. In apples, pears, and most other fruits this northeastern section had at this time produced more native varieties than all of the remainder of the country put together, but few or no grapes had been produced. During the thirties and forties the Catawba and Isabella and a few other sorts, all of which appear to have been of southern origin, were obtaining a more or less precarious popularity in New England and New York. None of them were sufficiently vigorous, hardy, and disease resisting, to succeed, except in the more favorable locations. The growers realized that there was room for improvement in grape varieties for New England. The first of the New England originators started apparently during the late thirties or early forties. As is usually the case with such movements, its first indication was in a general interest in the subject, discussion in horticultural journals, the bestowal on the public of a whole lot of illy digested worthless advice, finally culminating after some years, in actual concrete efforts. The valuable results of these efforts appeared during the decade between the years fifty and sixty. During this time appeared Bull's Concord and Rogers' hybrids. It is needless to say anything of the value of the Concord. Rogers' hybrids have not proved particularly valuable from the commercial standpoint, but they certainly have attracted a widespread interest. They represent the first hybridizing effort with American grapes, and there are many who still think them superior to the host of varieties originated in a more or less similar manner by individuals who owed more to the inspiration of Rogers' achievement than many of them were willing to admit. At the time of their introduction, there was some questioning of their being hybrids at all, the critics claiming that they were simply the result of self fertilized seed from a native vine. Rogers' results were secured from the use of a supposedly wild vine fertilized with pollen from European vines raised in a greenhouse.

One of the perplexing things about the origin of grapes is that the amount of success attained has seldom been in proportion to the originator's knowledge of the subject. It is doubtful if any of our grape originators had as much knowledge of fruit growing in general and grape growing in particular, as Ricketts and Jacob Moore. Ricketts' grapes are practically all in the discards, and of Moore's productions the Brighton alone has a popularity in certain sections as a home sort.

The origin of the Concord is interesting, and I believe suggestive. The parent vine was a wilding secured by Mr. Bull and planted in his garden. Both Isabella and Catawba were growing in the same garden. In the opinion of Mr. Bull the Catawba was the male parent of Concord. Since he was known to have no technical knowledge of botany, his opinion has been generally disregarded. Even if it be accepted that Catawba or Isabella have an admixture of *vinifera*, any cross of these sorts with a pure native would have the *vinifera* in such slight quantity as to be of doubtful recognition.

All of the above mentioned facts are suggestive only. They indicate that there is a possibility of *vinifera* blood being far more widely disseminated in our cultivated varieties of grapes than is generally suspected. They do not, however, prove anything, conclusively. There is, however, one other fact which I believe has more weight than all else.

Attention does not seem to have been generally called to the fact that the later investigations of botanists appear to show that all of our American species of grapes are practically dioecious. The reason for the widespread supposition that our American species are like those of Europe in bearing both perfect and imperfect flowers appears to be largely due to the influence of Engelmann. He appears to have been deceived by being educated in Europe to commence with, and by using vineyard material largely for his investigations in America. Munson says, "In all my examination of many thousands of wild vines, including all American species, I found only one with hermaphrodite flowers, and that was probably a hybrid with cultivated *vinifera*." This is corroborated, so far as I am able to find out, by everyone who has studied grapes in their wild state. I have written to a number of correspondents in different parts of the country and found in every case, where the writer had made personal examination of wild vines that the results were the same as those of Professor Munson.

If this is correct, it throws a great deal of light on the early history of grape growing in this country. There is but little question but that many of the early growers tried growing native grapes and were discouraged by the fact that the vines were unfruitful. Certain of the early writers speak of certain wild vines which "did not take kindly to cultivation, * * * * * would not bear except in their native woods," etc. This is probably their way of describing the actions of an imperfect vine without a perfect vine near by. The early grape grower apparently failed for two reasons. He failed with European grapes because of failings of the vine, and he

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failed with native varieties because of a lack of fruitfulness. This is also the probable reason why so many of the early writers recommend the wild vines for arbors. They are strong growers, they furnish shade, but they furnish nothing else.

There is no question but that we have many *so-called* native varieties today which are self fertile, and the question naturally arises as to how they have become fertile. There are those who hold that this has been acquired as a direct result of cultivation. That is, that seedlings from cultivated wild vines have changed their flower characters from that of their parents. That plants do tend to vary more under the extra food stimulus of cultivation than in their native wild is believed by many and is quite probable. It is hardly a proved fact, however, and there is, so far as the writer knows, no evidence that this variation ever takes the form of a change from an imperfect to a perfect flowered condition. In fact, among many, the supposition is strong that the general effect of cultivation is to induce sterility rather than fertility in plants. There is too little evidence on this subject to make it worthy of discussion, but what is desired here is to point out that, in this method of reasoning, one goes out of one's way to ascribe a certain phenomenon to a cause which is not known positively to produce such an effect, rather than to take a cause which would be perfectly natural and which has a certain amount of corroborative evidence indicating it as the *actual* cause.

If we once accept the presence of European blood as the source of perfect flowers in all of our cultivated American varieties, which are self fertile, we find that it accounts for a host of things which can be satisfactorily accounted for in no other manner.

The reason why the first successful varieties originated in the South was that there the European grapes were being grown and hence natural hybridization was possible.

The reason why good varieties were originated during the middle of the last century in the North is that the culture of these southern sorts had, at that time, spread to the North, and they furnished the parent on one side of these northern productions.

The reason why there were so many disputes in the early days as to whether certain of these varieties were native or foreign was that, being hybrids, they possessed the qualities of both. Dufour could see European characters in the Cape grape because they *were* there; the botanists who later disputed him could see American characters, for a like reason. The dispute in regard to the blood of Alexander and Rogers' hybrids can be accounted for in the same way.

The reason why many today say that the *labrusca* unlike other East American species, has not complete immunity to

the evil effects of the attacks of phylloxera, is that their premises are wrong. So far as we can judge, New England, where the *labrusca* is supposed to have originated, has just as many phylloxera as any other part of the country and one would not expect to find this species differing in this respect from other species from east of the Rocky Mountains. Those who speak of this cite the somewhat fleshy roots of Concord, Diamond, and a host of other cultivated sorts. How much simpler it is to credit their more fleshy roots to the slight mixture of European blood in their composition.

The probable reason why the success of the better educated and better prepared grape breeder was seldom as great as that of his poorer and more humble competitor was that of the one's handicap in pocketbook was a positive advantage. Bull succeeded because he did not have money enough to buy a greenhouse. The successful market variety is apparently one which is all native except for having the single *vinifera* character of perfect flowers. Hence Bull's cross of Catawba or Isabella with a wild grape hit the bull's eye. With a glass house he would merely have antedated Rogers in making simple hybrids. Ricketts and others failed because they persisted in crossing *vinifera* hybrids, when their efforts should have been to eliminate the *vinifera* blood, so far as was consistent with the retention of the one character of perfect flowers.