

"And now, gentlemen of the United States Agricultural Society, farewell! Go back to your homes, and tell your friends what has been done at this meeting for the cause of agriculture, and encourage them as you have been encouraged.

"Continue your devotion to this bulwark of our country; continue inviolate our great Constitution; obey our self-imposed laws; preserve our blessed Union, and our republic will be immortal."

NATIVE GRAPES OF ARKANSAS AND TEXAS.

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The Patent Office having decided to "make a thorough experiment with our native grapes," to test their merits for wine and table use, I received instructions, dated July 1, 1857, directing me to proceed to Arkansas, and explore portions of that State, Texas, and the adjacent Indian territory, as far as practicable, to inspect the vines while in fruit, and to obtain certain information connected "with their growth and locality, to be employed in carrying out said experiment." After making those observations, and at the proper time, I was directed to collect cuttings of the vines, to be forwarded to such points as might be designated in future instructions.

Accordingly, I left the city of Washington on the 1st of August following, and proceeded by the most direct route to the Hot Springs, in Arkansas, the first point where the wild grapes are found in such abundance as to invite attention. At that place, with so many attractions to the naturalist, I spent several days, and made frequent short excursions in the mountain ridges and hills of the neighborhood. From the foot to the summit of those ridges, some of which are beds of *novaculite*, or the celebrated Arkansas oil-stone, two varieties of wild grapes are found in abundance. I was disappointed in one of the objects of the mission, that of observing the "fruit on the vines," for the frosts of the preceding April had almost entirely destroyed the crop, wild and cultivated, throughout the State. A few chance branches had escaped, and I found a native vine in the garden of Mr. Fullerton, with fruit on it, which enabled me to ascertain the varieties. These will be hereafter designated.

While at the Hot Springs, I learned from Mr. Whittington, a resident of the village, that he had some years previously collected a quantity of the wild grapes "from the hills," and expressed the juice with the view of making vinegar for family use. The following spring, finding the *wine* of such fine quality, he drew off about five gallons and set away the vessel containing it in a garret room in his house. There it remained undisturbed for two or three years. A guest from Little Rock, who had been a dealer in wines, being informed of the experiment, requested an examination, and decided that the wine was a first-rate claret.

Resuming my journey, I proceeded to Hempstead county, where I learned that the frosts of the preceding spring had been more severe than in any portion of the country I had traveled over. Not only was the fruit crop entirely destroyed, but the ornamental trees, in many instances, were killed to the ground. The forest trees, especially the oaks, had suffered severely. As it would have served no beneficial object to continue explorations, I determined to proceed no further, but devote the interval of time, before commencing to take off cuttings, to an examination of the portions of the counties of Hempstead and Sevier in which the native grapes are found, and to collect such information regarding them as the Office desired. Other obstacles presented themselves; a long-continued rainy season had set in; the streams became impassable; the mail failed in many of its trips; and nearly all travel was suspended, until the time of the ripening of the grapes was over. Beside, I had an attack of chills and fever, which were more prevalent then than they had been for many years previous.

Having waited until the first of November, I set out with a light two-horse wagon, in which boxes were placed to contain cuttings, and took a northerly direction, expecting that the first frosts of the season would be met in the mountains. The 8th of that month there was a killing frost, when I was in the Washita cove; and, in a day or two after, the vines were in a condition to admit of cuttings being taken. As I had anticipated, the roads in the mountainous country were not much traveled, and their condition was but indifferent. I performed most of the journey on foot, and had ample time to select cuttings from the vines on the way-side, and keep up with the wagon. In this way I passed through the counties of Sevier, Polk, Scott, and Franklin, as far as Mulberry river, where high waters prevented further progress. The country over which I traveled was generally mountainous, the spurs or ridges rising about eight hundred or a thousand feet above the plain; and, in one or two places, the boiling point of water indicated an altitude of eighteen hundred feet. This elevation can only be regarded as approximately ascertained. The prevailing rocks of the mountain ranges were sand-stones, and the soils resulting from them, of course, very silicious. The valleys are generally narrow, washed by the rivers and mountain streams. The prairie lands of Franklin county seemed to be connected with the sand-stone of the coal formation. Bituminous coal, of excellent quality, is mined in many places. The timber on the sandy soils is generally post oak, black jack, and nutmeg hickory; and it is worthy of special remark that the most extensive grape thickets are always associated with sandy soils where those trees are abundant. On high lands, termed the black-jack ridges, and distant from the settlements, where the woods are seldom burnt, the grape vines flourish with greatest luxuriance. Before leaving Washington, I had been informed by a gentleman who had resided in Arkansas, that I should be certain to find the white grape near Pleasant Hill post office, in Franklin county. Of this grape I could gain but little reliable information in the southern part of the State, where the citizens are mostly engaged in cotton planting, and scarcely cultivate fruit of any kind. This variety was first obtained in Scott county, where its singular appearance, in contrast with other vines,

attracted notice; but the larger portion was procured on the farm of Mr. Bryant, near Mulberry river.

Finishing the collection at this point, I returned to the town of Ozark, recrossed the Arkansas river, and proceeded to the west, to reach a point of the Grand Prairie, where I was informed that I should find the white grape vines in abundance. In this I was disappointed. After passing Waldron, I took the road which led to the Hot Springs, passing near the town of Mount Ida, in Montgomery county. Through the whole distance, the same general features marked the soil and productions which had been observed on the journey to the Arkansas, with the difference of occasionally presenting large groves of pine on the summit of the hills, with which the native grapes were closely associated.

After having made a collection at the Hot Springs, I took the road through the Caddo Cove, passing into Pike county, and through it to the starting point in Hempstead county, which was reached on the 14th day of December. As on the previous part of the route, I continued to make collections along the roadside, with a view of procuring all the varieties of native grapes. That course only was left open to me, as I had been disappointed in seeing the fruit on the vines; and to be certain of getting all, I determined to make as extensive explorations as the season would permit.

In the collection thus made at random it cannot be pretended that any accuracy could be observed in designating varieties by labels. No reliable information could be obtained from the inhabitants, and the most careful observers among them would only say "in a grape year the fruit could be gathered by the wagon load; that the grapes were the best they had ever seen, and were as large as the end of their finger or thumb." Therefore, in packing the cuttings I designated the collection as "Mountain," "Red River," and "Washita," from the circumstance that these varieties, growing together, are, nevertheless, more numerous multiplied in those localities. When they produce fruit they will be easily distinguished, and I propose that the names be continued.

The variety to be called the "Mountain" is found most abundantly on the silicious soils of the elevated country; though, in some portions of Sevier and Pike counties, it is often met in the light, loose, dry soils of the tertiary formation. As we approach Red river it becomes scarce, and is apparently superseded by the variety proposed to be called by that name. Allied to the species known to botanists as the *vitis aestivalis*, it is probably a sub-species. The growth is strong and vigorous, often short-jointed, with deeply colored bark near the joints. The branches are short, thick, very compact; and the berries as large as a medium size Catawba, covered with a bloom. The color is black. It begins to ripen about the middle of September, but the bunches will hang on the vines till winter. The skin is about the thickness of the Catawba, and the pulp reddish. In Arkansas, I learn that raisins of good quality had been made from it. With the amelioration which cultivation will doubtless produce, this will be a valuable grape in southern locations.

The "Red River" is also allied to *vitis aestivalis*. In its characteristics there is some resemblance to the preceding, but in general the

vine is not so vigorous in its growth, the bark a paler red and brown, and the fruit inclining to black, but not so deeply colored. The bunches are open, loose, and shouldered; skin thin, pulp reddish and more juicy than the "Mountain." Its flavor is sweet and sugary. From these grapes Mr. Whittington made the wine before alluded to.

When these varieties grow in shaded positions the extremities of the vines do not thoroughly ripen the wood for several joints back from the extremities, and the following season the buds on the ripened wood vegetate and take the same course as the growth of the former year. This condition in the growth for a few years gives the vine a bush form; and hence the common expression in Arkansas of the "bush grapes," or that the grapes grow on low bushes. The vines are, however, runners, where there is anything for them to clamber upon; but they never attain the large growth of the common summer grape-vine.

The "Washita" was occasionally found on the road from the Arkansas river to Hempstead county. It was first discovered on the Washita river, hence its name. Probably it is a species of fox grape, the *vitis labrusca* of the botanists. The vine is a vigorous grower, of a rusty-brown color, and the wood more soft and spongy than any other variety of grape. Having never seen the fruit, I can only give such description as I received from various sources, selecting those points on which there is no disagreement. All unite in assigning it high merit as a juicy, sweet grape, with a foxy aroma. The skin is thin, and the berries large. When fully ripe it varies in color, but is generally a light brown, or tinged with brown; while growing it is remarkably transparent and of a light greenish hue. Its period of ripening is earlier than other wild grapes, and so eagerly is it sought by birds, that it is exhausted before the neighboring planter is aware that it is ripe. Hence, it is not unusual to find persons who have resided in its midst for many years, yet who have no knowledge of its existence. Besides, it grows on the richer soils bordering the streams, and is, therefore, more likely to be destroyed as the lands are cleared and put under cultivation. Though preferring a rich, deep, alluvial soil, it is not a tenant of low, damp grounds.

Believing this to be a new and superior variety, and one that would be an acquisition to the wine-maker, I determined to spare no exertions to obtain it. This was the reason of my making such an extensive excursion. As far back as the year 1842, which I spent in Arkansas, my attention had been called to this variety by the late General Towson, United States army, though all my efforts to procure cuttings for him were unsuccessful. He was of opinion that it was the grape to which Colonel Long alludes in his expedition to the Rocky Mountains. It is said that the late Mr. Audubon had seen it on the Red River, and had pronounced it equal to any French variety. While on my excursion, I met the late Hon. Shelton Watson, judge of the circuit court, who assured me that this grape had been taken to France, and there had established a reputation for the highest excellence. In the town of Ozark, a very intelligent gentleman, the treasurer of the county, informed me that he was from the Rhine, was acquainted with the grapes grown in the wine countries, and "he did not believe a finer grape than

the Washita could be found in the United States or Europe." Perhaps his encomium may appear extravagant, but still his intelligence and powers of observation entitle his opinions to high regard.

I learned that several experiments in making wine had been attempted in Arkansas. Some years since, a prominent member of a temperance society made a barrel of wine, which act being considered a breach of its rules, he was cited to trial, convicted, and sentenced to make two barrels more the next season. Whether he complied with the sentence I am not able to state; but this much I feel bound to say, that if more attention were paid to the cultivation of the grape in Arkansas, much of its soil, unsuitable for cotton or grain crops, and regarded as comparatively valueless, would be as productive as the best cotton lands. So many varieties of fine grapes were not placed there by Nature without some beneficent object, and but energy and skill are required to bring out that object, and open new avenues to industry and wealth.

The mountainous region is proverbial for its health, the atmosphere pure, streams of water abundant, and the scenery, for beauty and sublimity, unrivaled. Sheep raising, where there are so many nutritious grasses, affording good grazing nearly the whole year, could be made a profitable business, and might be connected with vine culture.

In this place it may be proper to mention, that on the streams in the lower part of the State, the bottom lands are literally covered with muscadine vines, (*vitis vulpina*.) They vary in quality, and some of them, no doubt, would prove as good for wine as the Scuppernong of North Carolina. I did not learn that any experiments in wine-making from them had ever been made, but as an inducement to the trial, I will state that Mr. Longworth informed me that he would purchase, at a fair price, as much wine of those grapes as might be sent to him. He wished to obtain it to be used in flavoring his Catawba. The desideratum of American wine grapes, in his opinion, consists in their imparting the foxy aroma to the wine, a realization of which I entertain the most sanguine hopes in the successful cultivation of the Washita.

Having laid away the cuttings in sand, to preserve them until the collection should be complete, and having rested the team, I again set out, on the 30th of December, 1857, with a view of ascending the Red River as far as the Cross Timbers. In the condition of the roads at that season it was thought advisable to proceed through the Choctaw Nation, by Fort Towson, cross the river near the mouth of the Kiamechi, take the main road leading through Paris, Bonham, and Kentucky Town, and strike the Cross Timbers south of Preston. A great portion of this journey was through a prairie country, of a rich, black, calcareous soil, in which grape-vines are very seldom seen. In the pine lands, from the Arkansas line to Wheelock Academy, where the prairie is reached, similar grapes to those already collected are found; and likewise, in the red-oak lands, from the ferry on Red River to the town of Paris, there is great abundance of that variety proposed to be called "Red River." On my return by another route, through the timbered lands adjoining the prairies, it was of frequent occurrence, and very abundant in the Cross Timbers, where the soil is arenaceous, and the prevailing rock a sandstone, probably belonging to a coal

formation subsequent to the carboniferous period. The collection at that point was marked for the locality, in hopes that the varieties would be established when the cuttings produced fruit. A gentleman long resident in the Cross Timbers informed me that three varieties were common there.

Near the Cross Timbers, a Mr. Simcoe politely conducted me to a place where I obtained all the cuttings designated as the "Mustang." The general appearance of this vine resembles the muscadine, except the bark of the old wood inclines to detach itself in strips, like Catawba and other vines. It was described to me as a great runner, reaching the tops of the tallest trees, and to be a profuse bearer. In some portions of Texas it is multiplied to an extent almost incredible to a person who has never visited that State and who knows but little, except by report, of its extraordinary natural productions. I hazard nothing in saying, that if all the mustang grapes were made into wine, and sold at one dollar a gallon, the product would greatly exceed the value of a cotton crop. The chief excellence of this grape consists in its qualities for making wine, as the skin contains such acrid matter that the fruit cannot be eaten, without producing painful sensations to the inner coats of the mouth, and sometimes swelling. The skin must be broken, and the pulp withdrawn, which is said to be exceedingly sweet and juicy.

On my return from the Rio Grande, in March last, Dr. J. H. Lyons, of San Antonio, presented me with ten bottles of mustang wine, made the previous season from the wild grapes. Those bottles were distributed among the friends of native grape culture, by some of whom it was pronounced a good claret, wanting only age to bring out its qualities. One gentleman, not less distinguished as an agriculturist and friend to native vine culture than for his eminent talents and public services, remarked, in relation to the bottle sent him, that "the mustang wine has had so bad a chance from traveling so far and so recently that a proper judgment cannot now be passed on it. I regret that I did not let it rest two or three months, which is little time enough for it to settle after its travels. It would be pronounced common claret, a little pricked, by most persons. I still think, however, that I perceive in it the elements of a rich and highly-flavored claret; but as to its delicacy, whether it turns out Pineau or Gamay, no opinion can be formed from this bottle, under the circumstances."

It was not until the 8th of February that I returned from this trip, and immediately commenced arrangements for leaving the country with the collection. Being delayed in the means of transportation, I did not reach New Orleans until the 4th of March, and proceeding up the river to Memphis, I then forwarded suits of the cuttings to the different points designated in my instructions.

EL PASO GRAPES, OR GRAPES CULTIVATED ON THE RIO GRANDE.

The Patent Office having determined to continue the collection of American grapes, and wishing to obtain seeds and cuttings of those cultivated at Paso del Norte, in the department of Chihuahua, I engaged to make the collection in the manner agreed upon, and set