

**REPORT OF BOTANICAL
SURVEY OF SOUTHERN AND
CENTRAL LOUISIANA, MADE
DURING THE YEAR 1870**

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Report of Botanical Survey of Southern and Central Louisiana, Made During the Year 1870 by
A. Featherman

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REPORT
OF
BOTANICAL SURVEY

SOUTHERN AND CENTRAL LOUISIANA,

MADE DURING THE YEAR 1870,

By A. FEATHERMAN,

LECTURER ON BOTANY AND CHEMISTRY, LOUISIANA STATE UNIVERSITY.



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By A. FEATHERMAN,

Lecturer on Botany and Professor Louisiana State University.

LOUISIANA STATE UNIVERSITY, January 7, 1871.

Colonel D. E. Boyd, Superintendent Louisiana State University:

THE MORAL AND INTELLECTUAL INFLUENCE OF BOTANICAL STUDIES.

The botanical survey of the State of Louisiana is not only important in a scientific point of view, but it can not fail to be productive of beneficial practical results. Botany, as a branch of the natural sciences, produces a more salutary influence to elevate and refine society, and raise the moral standard of civilization, than all the other sciences combined. Flowers are familiar friends and loved companions in every household, where refinement and virtue give tone and character to the social circle. I can do no better than quote, in this connection, the eloquent words of an able English writer, and apply them to the study of botany in particular: "It is fearfully true that nine-tenths of the immorality which pervades the better classes of society, originate from the want of an interesting occupation to fill up the vacant time; and as the study of botany is as attractive as it is beneficial, it must necessarily exert a moral and even religious influence upon the young and inquiring mind.

"The youth, who is fond of scientific pursuits, will not enter into revelry, for frivolous and vicious excitement will have no fascination for him. The overflowing cup, the unmeaning or dishonest game will not excite him. If any one doubts the beneficial influence of

these studies on the morals and character, I would ask him to point out the immoral young man who is devotedly attached to any branch of natural science. I never knew such a one. There may be such individuals—for religion only can change the heart—but if there be they are very rare exceptions, and the loud clamors which are always raised against the man of science who errs proves how rarely the study of the Creator fails to exert an ennobling effect upon a well regulated mind. Fortunate, indeed, are the youths of either sex who early imbibe a taste for natural knowledge, and whose predilections are not thwarted by injudicious friends."

It may indeed be said of the botanist what has been said of the astronomer, that a botanist who does not believe in the existence of God is mad, for the sublime beauties of nature which are constantly presented to his mind, must necessarily lead him from nature to nature's God, whom he recognizes as the author of all those splendid marvels of creative wisdom, which are scattered all around him for the use and enjoyment of man.

THE IMPORTANCE OF BOTANY IN AGRICULTURE AND MEDICINE.

Botany has an intimate connection with agriculture, and its practical bearing in this respect has not been sufficiently developed. The agriculturalist who combines science with experience and practical observation, may derive some valuable hints from his botanical knowledge, which might lead to the most important results, not only in the cultivation of the plants, which are the sources of his wealth, but in banishing from his fields those troublesome weeds and grasses which keep his plows and boes busy during the whole period of the crop season. It is indeed a very remarkable fact that even physicians, otherwise well educated, know little or nothing about botanical science, when more than one-half of all the remedial agents employed, and some of them the most important of the pharmacopœia, are derived from the vegetable kingdom, while the other half, comprising mineral substances altogether incompatible with human organism, might be beneficially superseded by vegetable remedies of far greater efficacy and active powers, if physicians studied the numerous plants possessing medicinal virtues, which are diffused in the greatest abundance all over the surface of the globe. None of our medical schools has a chair of botany, which is certainly as great an anomaly in the educational progress of a nation

as if a law school had no professorship expounding the principles of the common and civil laws, which must be the foundation of the lawyer's professional acquirements, or if a theological school failed to require a knowledge of the Greek and Hebrew languages, which alone can enable the candidate for orders to expound the scriptures in spirit and in truth.

Besides your other valuable services in behalf of education the State of Louisiana owes you a debt of gratitude for the exertions made by you in providing the means to prosecute the botanical survey of the State, which will acquire for the University—strictly a State institution—one of the most valuable scientific collections, that will last for centuries if properly cared for, and which money could not buy nor favor procure. It is fit that Louisiana, the Empire State of the South-west, with its immense agricultural resources and its network of navigable streams, should be the first of all the States to place botany side by side with geology in the investigation of the physical and economic resources of the State.

The popular idea of a geological survey is that the geologist is prospecting—using an expressive term of the California miner—in order to discover the Ophir where gold is as abundant as common dust; or to find the New Castle where coal constitutes the solid crust of the earth. But these popular notions about geology have no application to Louisiana, for the nature of the geological formation of the State, is sufficient for the scientific geologist to determine at once, that these materials do not and can not exist here in a form to give them economic value. But while geology has undoubtedly a scientific and a practical side, botany has no less so. It is a curious fact in the history of education, that educated men should be entirely ignorant of the vegetable kingdom, which furnishes us with the bread we eat, the wine we drink, the fruits we relish, the clothing we wear, the most ornamental parts of the dwellings we inhabit, the light which changes the night into day, the ships as well as the materials of commerce which they transport, the fuel which equalizes the seasons and supplies the motive power of the steam engine and the locomotive. The vegetable kingdom, without which no living creature that breathes can live, is the most rich in resources and the most important in a commercial, artistic, mechanical and agricultural point of view. The study of botany is not only of the greatest interest to the natural philosopher, but it deserves to be

taught in every school, on account of its attractive features and the educational discipline it affords. It occupies, morally and mentally, a far higher rank than chemistry or geology, which treat only of inert matter and are acted upon by external forces, while botany treats of living organisms of complicated structure and wonderful arrangement.

SCIENTIFIC EDUCATION OF THE PLANTER AND FARMER.

Considering that the agriculturalist derives his wealth exclusively from the vegetable kingdom, and is, so to speak, the lord and master, who monopolizes its most valuable products, forcing nature by his constant attention and unremitting industry to yield up a hundred-fold the treasures confided to the fertile soil, it is still more strange that the educated planter and farmer should never have bestowed a moment's reflection upon the marvelous productiveness of the seed he sows broadcast over his land, and should never have investigated the principle of its germination, growth and development, and examined the structure and the nutritive element of the plants which are the life of his life and the source of his prosperity. He makes his daily rounds in his fields, watches the progressive advancement of his crops, counts up in his mind what quantity of sugar, cotton, corn, rice, wheat, oats, tobacco, or indigo each acre may yield, considers its actual value in money, but it never occurs to his mind that all these are living, self-supporting, and self-producing organisms, which God has created not merely for utilitarian purposes to supply the wants of the animal world, but as manifestations of His goodness and His wisdom, as living monitors to teach man his duty to labor and render himself useful, and to inspire him with an aim higher and nobler than merely to eat and drink and get rich, but to disenfranchise his soul from the enslaving materialistic ideas which cling to him and make him a mean and groveling creature.

The planters and farmers constitute in every country the majority of the population, and they are the most useful class of society. But by a perversion of human reason they have obtained but little attention from governments, except as a tax-paying class. We have, however, reason to be proud of our country, for its government has recognized the fact that the stability of free institutions must rest upon an educated and refined yeomanry, and it has consequently granted munificent donations to the States for the establishment of

agricultural schools, where the planter and farmer may not only receive a literary but a scientific and professional education. Medical schools, law schools and theological schools have been in existence for centuries, but a school for agriculture, the most useful and the most wide-spread of all professions, would have been considered, even fifty years ago, the most absurd of all institutions.

The agricultural college of Louisiana, which is soon to be established, should form one of the departments of the University, for it offers all the advantages such a school requires without much additional labor and expense. It has the geological and mineralogical cabinet. It will have one of the most extensive botanical museums of the South. It has already professors of chemistry, geology, mathematics, engineering, botany, modern languages, and it has also a commercial department, which are the principal branches taught in agricultural schools. It only needs in addition professors of applied chemistry, of practical agriculture and the mechanic arts. As the funds derived from the sale of the land scrip can not be diverted for the construction of college buildings, the University buildings, wheresoever located, could be so constructed as to combine both schools, and would thus save the State considerable expense.

AGRICULTURAL RESOURCES OF LOUISIANA.

The agricultural resources of Louisiana are very great. There is no State in the Union, and no country on the globe of equal dimensions, which can be compared with her in the salubrity and mildness of her climate; the extent of her alluvial and arable lands; the variety of her agricultural industry; the numerous navigable streams, by which she is intersected, and her facilities for ocean navigation. A State for which nature has done so much, and man has done so little; a State where the orange and banana ripen their fruit in the open air, and give to it an intertropical character; a State where cotton, the most valuable product that feeds the commerce of the world and regulates international finances, flourishes in its highest perfection; where sugar, the indispensable luxury of every household, can be produced in quantities sufficient to supply forty per cent. of all that is consumed in the United States; where rice is cultivated for exportation, where corn grows most luxuriantly, where tobacco of superior quality can be produced, and wheat and oats, and all other cereals and almost every other product of the field, the garden and

the orchard would thrive with a vigor unsurpassed by any other climate; a State that possesses such invaluable natural advantages, should be foremost in science and literature, and in institutions, created and designed for the diffusion of useful knowledge. It should strive to become the modern Greece of America for learning and refinement; and the Italy of the western continent for its inexhaustible fertility, and the neatness, beauty and high culture of its farms and plantations.

I trust I may be pardoned for this ardor in the cause of civilization, but I feel a deep interest in the State of Louisiana. I know her people to be a peculiar people; they, like the Virginians, still retain some State pride, they never call themselves by the indefinite and vague name of Americans, but they are Louisianians in manners, sentiments and feelings. They combine the disinterestedness and humane sympathies of the French and Spaniard with the chivalric bearing and the practical sense of the Englishman. I know what civilization ought to expect of them; and I equally know that they can and will accomplish the high destiny reserved for them, which will fill a noble page in the world's history.

SOIL OF LOUISIANA, DIVIDED INTO CLASSES.

The alluvial lands of Louisiana, protected by an effectual levee system, would present the most magnificent agricultural domain that can be found anywhere within the limits of the same extent of country.

The object which I had in view in traveling through the State enabled me only to visit about eight or nine parishes. But I was struck with astonishment at the inexhaustible fertility of the soil extending over such a vast area, as I was passing in my excursions through the alluvial and marsh prairie regions of the Red river, the Mississippi, Bayou Barataria, the Atcha'ulaya and the Teche, comprising millions of acres of the most fertile and most productive lands. The alluvial lands below Red river are estimated at 7,860,000 acres, which, if cultivated, would be capable of supporting a population of ten millions of people, in addition to the fertile lands in the interior, not subject to overflows and requiring no protection.

The soil of Louisiana, scientifically considered, may be divided into the following classes: