

CHAPTER I

The Part the River Played

Before there could be a city, there had to be a place for a city, but for millions of years, there was no land where New Orleans stands today. The entire state of Louisiana was part of a huge body of water, an extension of the sea into the continent. The Mississippi River did not exist until one million years ago (a brief period in geologic terms), when it began to meander southward unobtrusively.

During the Ice Age, twenty-five thousand years ago, sheets of ice covered the North American continent but did not come within four hundred miles of the site of New Orleans. The Ice Age wiped out a number of other drainage systems in the Midwest and rerouted drainage toward the Mississippi, enlarging the river considerably. Embedded in the ice were tons of debris, and during the period, there were violent windstorms that deposited silt in the Mississippi Basin. Then, when the ice melted, the water flowed rapidly, taking its debris with it and causing the Mississippi to extend its delta, filling in its southern end.

As the delta filled, the sea retreated, leaving Lake Pontchartrain behind, a child of the Gulf, separated from its parent about five thousand years ago. Between the lake and the river, a stretch of swampland emerged, which would in time become the site of the city of New Orleans.

Of all the geologic factors that shaped the site of the city, the river played the leading role. Its serpentine course and erratic behavior in the last several thousand years determined the exact location and dimensions of the city, the arteries of transportation and communication, and even, in time, the patterns of colonization and styles of architecture. The colonists who would later settle on the crescent of marshland would be forced to develop a lifestyle that could be supported by their water-locked environment. It is the story of these people that will be told here.

The process of shaping and molding is not complete, even today. The city is still sinking at a rate of approximately three inches per century. There are places in the delta where sugarcane fields, planted in the eighteenth century, are now under water. Yet, there would not have been a city at all, a site for a city, or a delta, except for the Ice Age and its aftermath.

The bedrock, or sand strata, that lies on the floor of the saucer beneath New Orleans is of pre-glacial material, dating back to the Pleistocene era of one million or so years ago. It consists of clay, silt, and silty sand. North of Lake Pontchartrain, this Pleistocene material is at the surface, forming a bluff paralleling the lakeshore. The Pleistocene has eroded into low hills covered by beautiful pines, an area without “foundation” problems or flooding. This marvelous Pleistocene land (now the sites of Mandeville, Madisonville, and Covington) is the result of faults in the earth’s crust, which have allowed the material to crop out. From the north shore of the lake, the material drops below the surface of the water, dipping gently southward, until it rests some seventy feet beneath the city of New Orleans. Because of the range of stability, no New Orleanian would think of erecting a building of any height or weight without first sinking pilings to gain solid footing on the bedrock.

Except for levees, there are no natural land surfaces in the city that are higher than fifteen feet above sea level. Canal Street meets the river at an elevation of fourteen feet above sea level; Jackson Square, only six blocks downriver, is only ten feet above sea level. The Tulane University area is a mere four feet above sea level, while the intersection of Broad and Washington Streets (originally part of the backswamp, now Mid-City) is two feet below sea level. All of these facts, part of the geologic picture of the city’s relationship with the river, help us to understand many things about the life of the natives of the city.

The earliest known waterways through the city of New Orleans are two abandoned distributaries of the Mississippi: Bayou Metairie and its eastern sector, Bayou Gentilly. Between 600 BC and AD 1000, Bayou Metairie wandered away from the Mississippi about twenty miles above the French Quarter, near today’s Kenner, and strayed eastward toward the Gulf of Mexico, running more or less parallel to the river. The eastern portion of this distributary is shown on some old maps as Bayou Sauvage, on others as Bayou Gentilly. In time, the river abandoned these wanderers, leaving them to meander lazily through the marshes of the backswamp.

The course of these two connected waterways was, roughly, along Metairie Road and City Park Avenue to Dumaine Street, across Bayou St. John, then left to Grand Route St. John, then right to Gentilly Boulevard, which becomes Old Gentilly Highway.

The Metairie and Gentilly Bayous were never important to the early settlers as a water route, but became important because alongside developed a levee of well-drained soil, which provided a flood-free land route into the city from the west by Metairie Road and from the east by Gentilly Road (Chef Menteur Highway). There is another land route into the city from the west, along the riverfront from Baton Rouge, called River Road. From the east, however, Gentilly “Ridge” is the main road, for it carries both national highways (US 90) and the main line of the Louisville and Nashville Railroad. During the Civil War, the federals used maps showing these highways as routes of entry into the city.

Over the centuries, the river built delta land by depositing material where it empties into the sea, forming sandbars, which in time became islands. The islands split the river into two or more distributary channels. This is how the Metairie and Gentilly Bayous were formed. The same thing is happening today about twenty miles below Venice, Louisiana, where the river divides into three major distributaries: Pass L’Outre, South Pass, and Southwest Pass. Southwest Pass is deepest and carries the largest volume of traffic.

Another method the river has of making delta land, which is more important to the development of a city, is by abandoning its lower course for hundreds of miles and lunging out to the sea by an altogether different route. The river does this regularly every several hundred years, leaving behind great gashes across its delta. The Mississippi as we know it today took up the diversion near New Orleans sometime between AD 1500 and 1600.

We are forced to wonder under what conditions a river jumps its banks. An understanding of how levees form might help to clarify. During a flood, the fast-moving waters of the river pick up heavy material and, spilling over its banks, deposit the material, systematically raising the banks (or natural levees) with the flood. Artificial levees, which are built on top of these natural levees, may be thirty feet high and faced with concrete. They are among the most prominent landforms in New Orleans. The natural levee may be only ten to fifteen feet above sea level but a mile or two wide, sloping downward

from the river so gently that the decline would not be noticeable in a moving vehicle.

Natural levees end where they merge with the backswamp (lowland). Natural levees provide the only well-drained land in southeast Louisiana, which is the reason why most settlements, urban or rural, were located on natural levees (of either the Mississippi or smaller streams). For one reason, in colonial times, the settlers had only the Mississippi for transportation. For another, it was the only place to build roads and buildings that were fairly safe from floods.

So, for the first two hundred years, the city was laid out along the natural levees of the Mississippi River and Bayous Metairie and Gentilly (Sauvage). The city came to an abrupt end when it reached the backswamp.

Prior to 1700, Bayou Metairie was called Bayou Chapitoulas (or Tchoupitoulas) after an Indian tribe of that name, who lived near the stream's confluence with the Mississippi River. It was renamed Metairie (meaning farm) by the French settlers who established plantations there. Traces of the original bayou may still be found in Metairie Cemetery. Bayou Gentilly, originally called Bayou Sauvage, was so named by the French because the French word *sauvage* meant savage, wild, or untamed and was used to describe the Indians. Bayou Sauvage therefore meant Bayou of the Indians or Indian Bayou. It was renamed Bayou Gentilly around 1718 to commemorate the Paris home of the Dreux brothers, early settlers along the waterway.

The upriver end of town is surrounded on three sides by the river, which sweeps a giant semi-circle around that part of the city. The remainder of the upriver area is closed off by the lower, natural levees of the abandoned Metairie distributary. Thus, a "bowl" is created, which is, of course, below sea level. (This area is now Mid-City.) In the last century, a pump was invented to drain the water from Mid-City and make it habitable, but in prehistoric times, when the "bowl" filled, it spilled over into the lowest place in the Metairie levees. Over the centuries, a channel formed there, small but immensely important to early New Orleans commerce. The channel was later called Bayou St. John, and it flowed northward into Lake Pontchartrain.

Long before the white man came to Louisiana, the Indians traveled from the Gulf of Mexico, through the Mississippi Sound, Rigolets Pass, Lake Borgne, and Lake Pontchartrain into Bayou St. John, which the Choctaws called Bayouk Choupic or Shupik (Bayou Mudfish).

basin covering 1.25 million square miles, including parts of thirty-one states and two Canadian provinces.

With a river of such enormity, any big flood could cause the water to break through its natural levee and spill over into the backswamp. Such a breakthrough is called a crevasse, a natural disaster feared by early settlers because it could pick up miles of farmland and wash it away completely. In addition, a crevasse made wide splits in the river's road, paralyzing transportation and communications. A crevasse at the Sauvé Plantation in 1849 caused an uncontrolled flood into Mid-City. The greatest danger of such a crevasse is that once the river jumps its banks, there might be no way of getting it back. The possibility exists that it might have permanently changed its course. The Sauvé Crevasse was brought under control, however, and the danger was averted.

There is geologic evidence that the Mississippi River has changed its course many times in the past five thousand years, leaving old channels, each with its own delta. The oldest visible course is now occupied by Bayou Teche. A more recent ancestor of the Mississippi is Bayou Lafourche, which was apparently the last course it took before the one it now follows. Another early route is the St. Bernard Delta east of New Orleans.

The Mississippi has run its present course since the sixteenth century. It was on the verge of jumping again when explorers appeared on the scene. If such a jump were to occur now below New Orleans, it would require a whole new system of navigation from the Gulf to the City. But if it were to occur above New Orleans, the result would be disastrous. The largest port in the United States would no longer be situated on a river but a stagnant stream.

New Orleanians can recite a litany of difficulties with which they live involving the river:

1) Most of the city is below sea level, while the river flows ten to fifteen feet above sea level.

2) The present Mid-City area, lying as it does in a bowl, used to flood constantly and was a breeding ground for yellow fever and malaria. The swamp teemed with snakes and alligators, and, when dry, was the consistency of glue.

3) The bedrock beneath the city, which is only compacted clay, is seventy feet below the surface in some places.

4) The only avenues into the city when the white man came were

the natural levees. During flood times, if crevasses occurred, the levees would be cut and transportation disrupted.

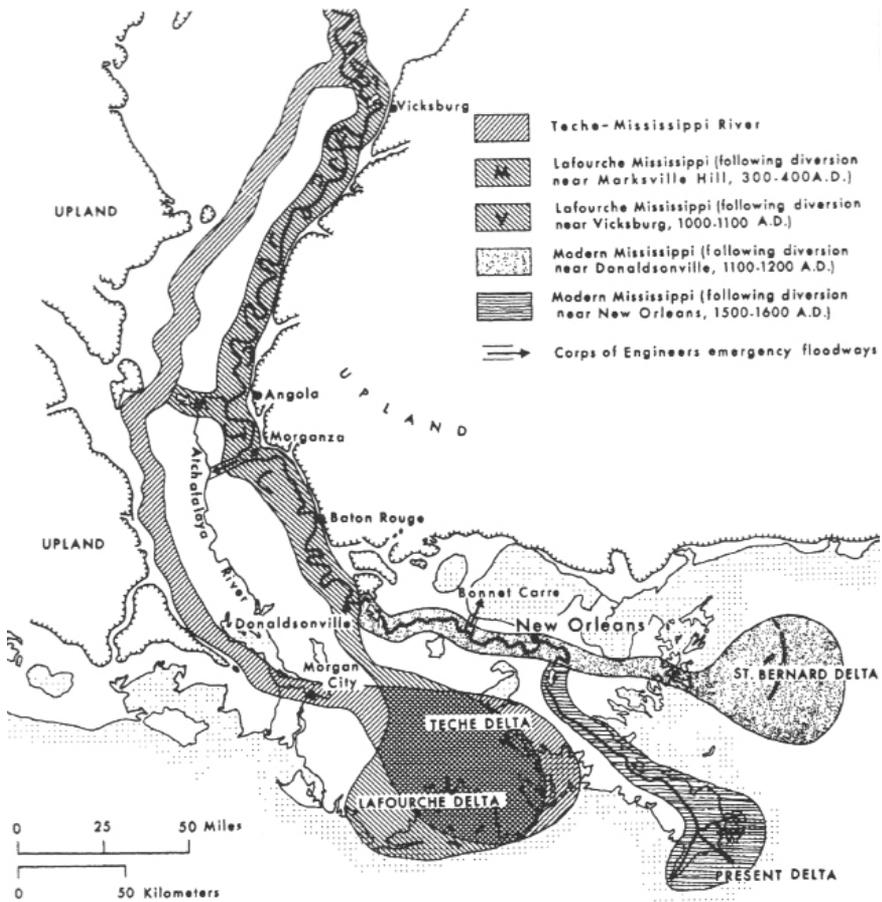
5) Hurricanes struck frequently from the Gulf and still do, driving the tides ahead of them, often in the direction of the city.

In view of all of this, one wonders why almost a million people live and work in New Orleans. But more than that, one wonders why Jean Baptiste Le Moyne, Sieur de Bienville, chose such a site for his city. To Bienville, it was simple: it was the logical and necessary spot for a city.

It was clear to Bienville that the river demanded that a city exist at its mouth, but in all of the two hundred miles south of the site of Baton Rouge, it provided no place to put one. Naturally, the settlers wanted high ground, and the site of Baton Rouge met that requirement, but it was too far upriver to be convenient to ocean-bound ships.



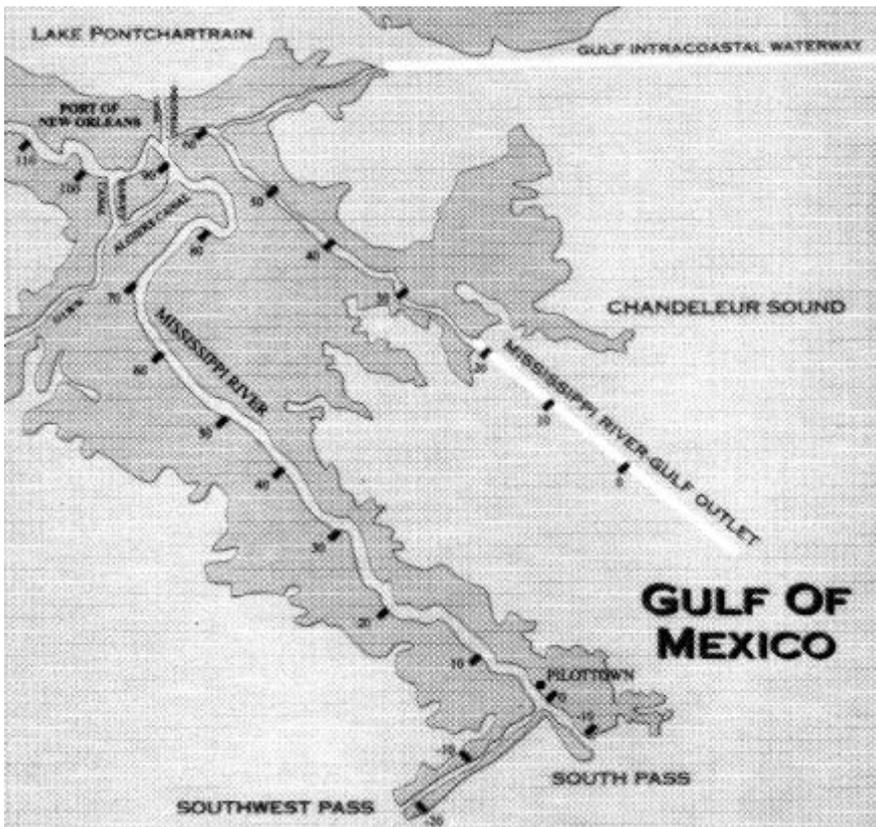
Map dated 1849. Shows areas of New Orleans flooded after the Sauvé Crevasse, May 3, 1849. Darkest areas were worst. Mid-City was nine feet under water. Bayou St. John connects the Carondelet Canal (Old Basin Canal) to Vieux Carré (First Municipality). The New Basin Canal connects lake to Second Municipality and the City of Carrollton, a suburb.



Mississippi River and ancient deltas. In the mid-twentieth century, the river threatened to jump its course, either into Lake Ponchartrain at Bonnet Carré or into the Atchafalaya at Morganza. Either would have been disastrous to New Orleans. The Army Corps of Engineers built spillways at both locations to prevent flooding and keep the river on present course.

The site of the old Indian portage from the Mississippi River to Bayou St. John could be reached not only by coming up the river from the Gulf but also by traveling westward from the Gulf Coast through the Mississippi Sound through Lake Borgne and into Lake Pontchartrain. This was the place where Bienville decreed that the city of New Orleans would be built.

The Mississippi River Basin is shaped like a funnel, and the city that was to be founded on Bienville’s “Beautiful Crescent” of land in the bend of the river would control the tip of that funnel. It would be the gatekeeper to the richest river valley on earth. This was the destiny of New Orleans. Had there been nothing more than a sandbar in that



From bottom right to upper left: *Water from Gulf of Mexico approaches the Port of New Orleans and the Intracoastal Waterway.* (Courtesy Port of New Orleans)

bend of the river, Bienville would have urged his settlers to camp on it, fighting the elements until their own ingenuity provided the answers to their problems. This, of course, is what eventually happened, for the settlers did not leave. They endured with proprietary pride, and slowly, against the indomitable odds, the city grew and prospered.

Almost every river in the world provides a site for a city near its mouth where there is high ground on which to build and where the river is narrow enough for land traffic to cross it conveniently. But not the Mississippi. At the mouth of almost every river there is an embayment, where the sea has entered the mouth of the river and flooded it, forming a bay at the point where the river narrows. But the Mississippi does not narrow at any point. At the foot of Canal Street, it is nearly a half of a mile wide. It runs uniformly wide for hundreds of miles. It does not provide any site for a city south of Baton Rouge. It does not form a bay, and it wildly jumps its riverbanks every five or six hundred years, aloof and indifferent to the needs of man.

The river last jumped its riverbed in the sixteenth century to follow a diversion near New Orleans instead of near the city of Donaldsonville, to which it had diverted in the twelfth century. So, in 1541, the scene was set for the discovery of the river in its present location, and into this chapter of history sailed Hernando De Soto, a Spanish explorer, the first European to locate and describe the Mississippi River Valley.