

studiEAUX: A Wetlandscape Workshop

ONEZIEME MOUTON

University of Louisiana at Lafayette

"The more superficial a society's knowledge of the real dimensions of the land it occupies becomes, the more vulnerable the land is to exploitation, to manipulation for short term gain." Barry Lopez

A large portion of farmland in southwest Louisiana, essentially most of the land lying south of LA Highway 14, was once a natural flood plain. This area in the last century has been levied and topographically controlled by farmers in order to take advantage of the rich topsoil for growing rice, soybeans, and sugar cane. The petro-chemical industries during this same time period have created an extensive network of levied canals that run throughout south Louisiana from the highlands to the Gulf of Mexico in order to access and extract natural resources below the surface. The Army Corps of Engineers has also altered the natural flow patterns of the Mississippi River and its distributaries that flow through this area (Atchafalaya, Teche, and Vermilion) as a means of assisting in flood control. Many of the homes and businesses in this once natural flood plain favor a design that does not signify their context.

All of these events have contributed to an economic prosperity within the state of Louisiana as well as for the entire country, but a latent cost of manipulating the landscape over the last century is now revealing itself in the form of a large-scale natural catastrophe across the entire Louisiana coast. The magnitude of this catastrophe was made evident by the massive flooding caused by hurricanes Rita and Katrina in 2005, and again by hurricane Ike in 2008.

Due to these catastrophic events, the general public has become more aware of just how deteriorated the Louisiana wetlands have become, and

the inquiries as to the causes are now being more widely discussed. With the natural flow patterns of the Mississippi River and its distributaries altered, the sediment that once constantly flowed into the wetlands as a replenishing and building mechanism, has been turned off. The myriad of canals and levees that network throughout the Louisiana wetlands not only interrupt the flow of any sediment that hypothetically could still make it into the marsh system, but these levees also interrupt the sheet-draining of fresh water across the surface of the marshes. This sheet-draining effect is critical to the existing plant life on a daily basis and vital for flushing out the salt-water after a storm surge from the Gulf of Mexico. The largest of these canals and levees are the shipping lanes from the Gulf of Mexico to inland ports. Despite the best efforts of the Army Corps of Engineers to keep the salt water from penetrating into the marshes from these deepwater channels, there is still a rapid rate of marsh decay due to saltwater intrusion. The entire wetland is experiencing a subsidence (sinking) at a rate that is not explainable by natural circumstances. Although it is yet to be widely accepted, a controversial explanation for the accelerated subsidence is due to the massive extraction of oil and gas from below the surface.

All of these conditions are exacerbated by the presence of homes, businesses and livestock that coexist in this once-natural flood plain. These systems that were constructed to create access and wealth, also created a sense of entitlement and false security. The economic and emotional investments made by several generations of families on this landscape have created a mentality that it must remain as

it is and continue to be used in the same manner at all cost. The idea of questioning or rethinking the area's occupation is not very well accepted due largely to the fact that the inhabitants have been invested in the landscape for several generations and have evolved into a unique culture of people because of it. The essence of the conflict at hand is that this highly adaptive culture of the people who have been inhabiting this particular landscape for so long is now being confronted with a new set of environmental conditions which they must adapt to in a time frame that seems to be almost overnight.

The gradual decay of the landscape conditions, even though the local culture was aware of it, was not acted upon or tested by nature until hurricanes Rita, Katrina and Ike. These events spotlighted all of the flaws and deficiencies in the entire system. The culture inhabiting the landscape gradually became more and more modernized over the last century, which removed them farther and farther away from a symbiotic or organic relationship with the landscape. As the landscape gradually deteriorated over time, the jeopardy of the inhabitants increased. One of the most striking realities that illustrate this case is the fact that so many slab-on-grade-homes were built in these once-natural flood plains. To this day a large percentage of the inhabitants that have chosen to continue living in this landscape, and were previously living in slab-on-grade homes, are lifting the homes (including the slab) onto above-ground pilings. Although this scenario demonstrates an incredible ability for a culture to adapt, it is also an indication of a backlash or disconnect between culture and landscape. This is not the first time that this disconnect has occurred in this area.

As it stands today, the wetlands of southern Louisiana are geographically divided into two distinct entities, the Deltaic Plain and the Chênière Plain. This line of demarcation between these entities is currently located at Vermilion Bay. The wetland area east of Vermilion Bay is referred to as the Deltaic Plain. It is the active delta zone of the Atchafalaya and Mississippi Rivers. The topography of this area can generally be described as porous and open-ended. To observe the edge quality of this region of the wetlands in relationship to the Gulf of Mexico from an aerial perspective is not unlike seeing the relationship between the canopy of an oak tree and the sky; it is forever open but still

defined as having an edge. Although it is in this region that most of the sediment currently flows through the wetlands, it is also where the greatest wetland loss has occurred. The three largest contributing factors to the wetland loss of this area are: 1.) The levying of the Mississippi and Atchafalaya Rivers have severed their connection to numerous distributaries that once delivered sediment evenly throughout the wetlands of the area. Now the sediment is channeled mainly through the Mississippi and Atchafalaya Rivers into the Gulf of Mexico where most of it slips off of the continental shelf. 2.) The barrier islands in the eastern part of the state that once formed an edge between the salt waters of the Gulf of Mexico and the wetlands have either deteriorated or disappeared. Salt-water intrusion is uncontrollable in these areas and as a result, the rate of wetland deterioration is drastically increased. 3.) Deepwater channels have been dredged north and south which connect the Gulf of Mexico to inland ports, in combination with the Intracoastal Waterway which runs east and west. These factors also contribute to saltwater intrusion to the wetland system. The combination of these factors has essentially caused an implosion of wetlands in this area. The landmass of the Deltaic Plain is disappearing in a random pattern not unlike the voids of vacancy that occurred in the most decayed urban inner city of the twentieth century.



In contrast to this, the wetland area west of Vermilion Bay is what geologists refer to as the Chênière Plain. It is an area approximately 110 miles long and 20 miles deep that reaches into east Texas. It is a unique topographical area that is comprised of a series of tree-covered ridges that lie mostly parallel to the coast in wave-like patterns (the word *chênière* is derived from the French word *Chêne*, which means oak tree.) The Chênière Plain is currently an inactive delta marsh, meaning that the Mississippi River delta was once located in this re-

gion, but the growth or expansion of the wetland due to sedimentary depositing has ceased. It can be considered to be a more mature and more stable marsh than the current marsh that exists in the eastern part of the state. One visual sign of this is the great bounty of centuries old live oak trees that blanket the various *chênières*.

To observe the edge quality of the wetlands of the *Chênière Plain* in relationship to the Gulf of Mexico from an aerial perspective would reveal a much more closed system with a more distinctive line of separation than the *Deltaic Plain*. In many parts of the *Chênière Plain*, the separation between the wetlands and the Gulf of Mexico is some form of a beach. These beaches or coastlines are constantly either waxing or waning depending on a number of factors, but mostly in the last several decades they have generally all been losing landmass. This is attributed mostly to the severing of the distributaries of the *Atchafalaya* and *Mississippi Rivers* and the same detrimental conditions that are affecting the *Deltaic Plain*. The wetlands of the *Chênière Plain* are also on a course of implosion, just as the wetlands of the *Deltaic Plain* are, although at a somewhat slower pace. The slower rate of decay is due in large part to the presence of the *chênières*, but it is feared that unless something is done to correct the current pattern of deterioration, it will soon become as porous as the *Deltaic Plain*.

To hone in on the line of demarcation between the *Deltaic Plain* and the *Chênière Plain* which occurs at *Vermilion Bay* would lead us to *Southwest Pass of Vermilion Bay*. *Southwest Pass* is formed by *Marsh Island* and the eastern edge of the *Chênière Plain*. *Marsh Island* is a completely detached landmass that forms the southern boundary of *Vermilion Bay* and is essentially what distinguishes *Vermilion Bay* from being part of the Gulf of Mexico. The interior landmass of *Marsh Island* is very porous and resembles the imploded look of the *Deltaic Plain*. Its coastline on the Gulf of Mexico, however, resembles more of the closed edge quality seen in the *Chênière Plain*. It is a hybrid of the *Deltaic Plain* and the *Chênière Plain*. It is the geographical transition element between the two entities.

Traveling by boat through *Southwest Pass of Vermilion Bay*, the landmasses on either side appear identical to one another. The only noticeable difference at sea level is that the *Deltaic Plain* marsh-

es seem to be more lake-like due to their porosity, and the *Chênière Plain* marshes appear to be randomly populated with clusters of oak trees. In many instances the *chênières* are located several miles inland from the coastline and are surrounded by marsh. They can be a geographical transition between a brackish marsh to the gulf side and a freshwater marsh to their inland side.

The most eastern *chênière* of the *Chênière Plain*, the one closest to *Southwest Pass* and the *Deltaic Plain* is called *Chênière au Tigre* (*Tiger Ridge*.) It is located approximately ten miles west of *Southwest Pass*. Its eastern edge begins as part of the coastline, and its western edge projects deep into the marsh. The *chênière* runs east and west, parallel to the gulf current, but a saltwater marsh begins at the intersection of the gulf and the *chênière* and veers off of it into the gulf which creates the perception that the *chênière* peels back into the wetland. It is at this point, at the eastern edge of *Chênière au Tigre*, where all of the dynamic forces acting upon the *Chênière Plain* can be observed in a densely arranged spatial configuration. This is the location of the battlefield for preserving the *Chênière Plain*.

Chênière au Tigre was once the site of a community comprised of approximately 75 families during the end of the 19th and the beginning of the 20th centuries. The *chênière* was home to a resort hotel, farms, cattle ranches, a post office, a school, a fishing community, and a graveyard. An infrequent but consistent series of hurricanes over the last century gradually diminished the vibrant full-time community, and in 1957 hurricane *Audrey* forced the closure of the resort hotel. The community from this point on transformed into an occasional camp community of cattle ranchers and hunters. The residents largely resettled slightly farther to the northwest in the levied farmlands that lie south of *Louisiana Highway 14*. Their descendants make up a significant portion of the current cultural identity in this area. In September of 2005, the tidal surge of hurricane *Rita* removed all of the man-made structures and artifacts that remained of the old civilization from *Chênière au Tigre*, with the exception of a few fragments of fences and tombstones from the graveyard.

Since hurricane *Rita* in 2005, little has been done to restore human activity on *Chênière au Tigre*. Cattle

ranching has not yet returned to the *chênière*. The native plant life is growing unabated and reaches a jungle-like density in the summer and dies back somewhat in the winter. In September 2008, hurricane Ike created a tide surge similar to the magnitude of Rita's. This caused the coastline to shift dramatically inward in places. Huge deposits of sand were removed from around the root systems of the oak trees nearest to the beach and deposited it nearly 50 yards inland.

These events have dramatically altered the landscape and caused considerable damage to property on the *chênière*. However, if it is possible to see beyond this tragedy, a stunning phenomena of nature becomes revealed. The *chênière* is incredibly resilient and displays an almost plastic morphology that responds very rapidly to the natural influences that act upon it. To walk along the *chênière*, only one year after hurricane Ike, feels like walking in a place that no man has ever seen before. In many ways, it no longer seems like a disaster zone but a beautiful virgin landscape that has not yet been ruined by man.

There are no roads that lead to *Chênière au Tigre*. One must either get there by boat or hike through the marsh that surrounds it. There are no power lines or running water. The only remaining traces of man on the beach are in the debris that has washed upon the shore. It is in this setting, at this site, and amidst the circumstances described thus far, that a series of experiential studies have been taking place with a small group of architecture students over the past three years. The objective of the study is to gain a deeper understanding of the many factors at play regarding the relationship between design and the wetlands of south Louisiana.

The initial proposal for the class centered on several fundamental questions. Would an experience like this be of any value to their education? How could an experience like this be contextualized in an academic environment? Could there be interactions and ripple effects in the greater community by endeavoring in such a project? Could any of the complex issues regarding the wetlands be introduced to the students? What does architecture have to do with the wetlands of south Louisiana?

The format chosen for the class was a research based seminar that was offered as an independent

study. Six second-year architecture students were enrolled in the first session, and ten students enrolled the following year. The parameters of the course were to: 1.) Research relevant precedents for inspiration and mentorship, 2.) Immerse the students into the wet-landscape for three days in a primitive camping situation, 3.) Document the landscape, 4.) Interact with the landscape, and 5.) Leave no trace behind.

The relevant precedents that were introduced and studied were 1.) John McPhee's *Control of Nature*, "The Atchafalaya" chapter, 2.) The introduction to *Plain Modern* "The Architecture of Brian MacKay-Lyons" by Malcolm Quantrill, 3.) Various essays by Robert Smithson and Donald Judd, and 4.) Andy Goldsworthy's *Rivers & Tides* (2001) video by Thomas Riedelsheimer. Students were also required to research the cultural history of *Chênière au Tigre*, and attend one town hall meeting that was hosted by the Army Corps of Engineers regarding Louisiana Coastal Restoration.

The reasoning behind the excursion lasting for three days is so that there is at least one complete day that is free from the interruptions of travel or contact with a developed environment. The first day is typically for traveling to the site, setting up camp, and initial site orientation. The third day is for final documentation of the projects, packing up camp, and traveling out. The second day is the heart of the excursion when most of the work takes place.

The process of slowing the students down and increasing their awareness is a key component of the excursion. Creating a situation that allows the students to mentally transition into the landscape is as much a part of the planned experience as the exercises that are conducted while on the *chênière*.



The transition is essentially a five-stage process. The first stage is from the urban landscape to the rural landscape, and the second stage of transition is from the rural landscape into the wetland landscape (wetlandscape.) Both of these stages are made in automobiles traveling on roads. The third stage of the transition, which is made by boat, is from the wetlandscape to the western edge of Chênière au Tigre. The fourth stage of transition is approximately a two-mile hike eastwardly along the chênrière to the beachfront. Each stage of transition slows down the speed of travel and correspondingly increases ones level of perception and awareness.

It is in the final stage of transitioning from the urban context, traveling across the chênrière at the speed of man, when the unique spatial configurations of the landscape, the topographical transitions, the variations of light and sound, and subtle change in the taste of the air begin culminate into an omniscensual experience. Upon reaching the intersection of the chênrière and the Gulf of Mexico, the traveler has a holistic realization that they have arrived at a point that is truly the "center of something."



From this point, the hike continues east along the beach. Space and distance are defined by washed up debris, oak trees, a few random pilings that were once part of a camp, and several rambling traces of tattered fences. The group explores, discusses, and decides where the campsite will be located. This, along with planning the layout of the tents is the first architectural exercise of the excursion. It is also another step in becoming orientated to the new context and its phenomena.

Usually, by the time camp is finished being set up and everything is in its place, sunset is near.

A small evening meal is prepared on the campfire by the group, and discussions about the day take place until the campfire is covered with sand and everyone retires for the evening.

The next morning, the campfire from the night before is uncovered, and the charcoal is dug out of the sand and distributed to the students for drawing and sketching during the excursion. For most students, this small act seems to be a mystical display of magic. A new fire is made on which coffee and bagels are prepared. The students are then sent out to explore, map, and record whatever they discover as interesting. They are allowed to either work individually or in teams of two. A time frame for returning back to camp is set for lunch.

During lunch, experiences and discoveries of the morning are shared through drawings and stories. This exercise is the "hidden site analysis." Without realizing it, the students have mapped out the defined spaces, edge conditions, topographical transitions, and key features of the area. Their typical descriptions are, "By the big oak tree with the broken branch." "Between the rope that's stuck in the sand and the first cove." "Where the sand on the beach changes."

Until this point, the students are unaware that they are going to be asked to design and build a temporal installation in an Andy Goldsworthy manner that reflects the research they have done prior to the excursion and the field research they are engaged in at the moment. After this discussion, inevitably, the first responses and initial ideas of the students are always centered either around the object or human scale, i.e., creating a living space or a totem with found objects, etc. This discussion is allowed to run its course, and then the students are asked to explain how their ideas interact with and speak about the landscape? It is at this point when the students realize that perhaps their initial ideas either fall short of, or entirely fail to address the landscape. This is generally the tipping point where the discussions become genuine and unique for the remainder of the excursion. New and adjusted ideas begin to emerge out of the current landscape experience and the prior research as fragile and fragmented proposals. As the impromptu seminar continues, the ideas are "workshopped" into a conceptual point of departure.



Students are allowed to continue working individually on the development of their projects from this point. Collaboration in teams of two is strongly encouraged. The deadline for completing the projects is sunset. The students are instructed that their projects may not cause damage to living plants or the environment as a whole, and that their projects must be temporal in nature and cannot permanently interfere with the landscape. All work must be documented during the process, and at the completion with sketches and photographs. At nightfall, the group reassembles at camp and stories about the process and projects are shared over a hearty meal.

On the final morning after breakfast, the group tours all of the projects. Each project is presented by its authors and documented in the morning daylight before they are disassembled. After lunch, camp is broken and the reverse transition back to the urban context begins. Usually, the transition going back to urbanity is just as shocking as the transition was in reaching the *chênière*.

Being immersed in the wetlandscape for three days, removed from the modern conveniences, and physically intervening with a site, establishes a relationship between the participant and the landscape that is profound and long lasting. The effects of this experience go far beyond the time and effort that was extended to the exercise. For a student to understand that there can actually be a real relationship

between a person and a landscape is the project's first measure of success. A student establishing a position on how to go about creating a relationship with a landscape in the future would be the second. With this in mind, it is the intention of the course to create a profound experience that students will use as a minimum standard to decide where the threshold of a superficial relationship with the landscape transcends into an authentic one.

While acknowledging that a relationship with the landscape or site can exist on many levels, the course tries to teach that the threshold where the relationship becomes authentic is at the point of interaction. The point can be further illustrated in the example of person who reads an article about a celebrity in a magazine. The reader most likely will retain enough information to have a conversation about the article with another person. However, even though the article may inform (or misinform) the reader about something concerning the celebrity, it does not constitute a relationship between the reader and the celebrity. This is the same surface level of knowledge as looking at the map or aerial photograph of a landscape.

Furthermore, if the reader sees the celebrity on the street or at an event, and manages to get a photo shaking their hand, this still does not constitute an authentic relationship. This is the same as walking through a landscape and taking pictures of it with a camera.

If however, the reader meets the celebrity on the street and engages them in a conversation, and this leads to having a drink, or dinner, or hunting or fishing or something of the like, the threshold of an authentic relationship gets crossed by engaging in an interaction. This becomes the equivalent to a temporal intervention in the landscape. It is the physical interaction with a landscape that establishes a relationship with it.

This series of wetlandscape excursions has been nicknamed *studiEAUX* (*pronounced studio.*) It is a play on words that nods to the Acadian culture of southern Louisiana; study + waters. In this particular area of America, where the landscape has been occupied by so many generations of families, understanding the complex and intertwined multitude of relationships that exist between the landscape and the culture that occupies it cannot be fully re-

alized overnight. What can be realized in a studiEAUX course, however, is that culture is composed of these complex relationships. Without complex relationships between people and landscape, there would be no culture. Culture cannot exist without some sense of place. In this case, it is the wetland-landscape that people are refusing to move off of even though it has become more susceptible to storm surges. Instead, they are choosing to adapt and outfit their homes and lifestyles in order to remain on the land of their ancestors.



It is imperative for students of architecture to value and understand culture in order to not destroy it. If landscape is one half of the ingredients that culture is made of, then it makes sense for architects to develop a relationship with it. Studying the other half of the recipe, the people, is either an exercise that can develop over a lifetime or as in the case of studiEAUX, many of the students are already “of the culture.” In the case of the latter, the task at hand is to reveal the value in what they already possess.

Relationships take time. Subtleties are perceived over time. In an *Architectural Record* interview with the Australian architect Glenn Murcutt (May 2005, pg. 106,) he was quoted as saying, “Rapidly and repetitiveness do not lead to right solutions. Perception gives us right solutions.”

The studiEAUX excursions are not designed to offer solutions to the complex problems that challenge south Louisiana. It is designed to create an awareness of the value that exists in the culture of the wetland-landscape. It is only with a complete understanding and a sincere appreciation of a culture that architects can make decisions that are sustainable to it, i.e. “right solutions.” The studiEAUX excursions are attempting to implement the foundation on which a lifetime of sensitive and mindful architectural decisions will be made.

“Perception” may truly be one of the biggest challenges that lie ahead regarding this issue. Besides the perception that “gives us right solutions,” there is also the perception that architects have of themselves, and the perception that others have of architects.

There is a typical conversation that happens when people of the wetland-landscape are first introduced to the studiEAUX project. It generally goes something like, “Are y’all planning on building condos out there?”

“No, we’re not thinking about building condos out there. As a matter of fact, we’re not really thinking about building much of anything out there.”

“Oh, I’m sorry. I thought you said y’all were architects.”