A Field Guide to Aquatic Habitats and Common Fauna of the Northern Gulf of Mexico: Chandeleur Islands, Louisiana to Perdido Key, Florida

Mark S. Peterson, Gretchen L. Waggy, The University of Southern Mississippi

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A field guide to aquatic habitats and common fauna of the northern Gulf of Mexico: Chandeleur Islands, Louisiana to Perdido Key, Florida

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I. Gulf Coast Research Laboratory Information

a) History-

The Gulf Coast Research Laboratory (GCRL) has had a unique 57-year history of research and education, and is the only state supported marine biology laboratory, as well as the main marine education and research component of The University of Southern Mississippi (USM). On August 28, 1947, the Mississippi Academy of Sciences officially dedicated the GCRL with the opening of the first official summer session at Magnolia State Park in Ocean Springs, Mississippi. The GCRL emerged from those early days with a two-fold focus: 1) scholarship, and 2) immediate impact on the economy of Mississippi. The evolution of the two-fold focus set into motion a creative environment still at work today as GCRL administrators, researchers, and educators merge sometimes contrasting missions, approaches, priorities and perspectives. GCRL faculty, their graduate students, and technical staff explore fundamental questions about the plants, animals and processes of Mississippi's coastal environments. At the same time, these professionals have a firsthand relationship with the practical realities and the concerns encountered by the people who live, work and play in those environments. The result is a unique institution that integrates scientific discovery with graduate, undergraduate and public education as well as with rapid and effective response to questions of public concern.

The Summer Field Program (SFP) is managed by the Department of Coastal Sciences of The University of Southern Mississippi. The SFP has 62 affiliate colleges and universities from 17 states, mainly in the Mississippi Valley of the United States (Map 1). The program serves about 80 undergraduate
Map 1. Map of the locations of the 62 affiliate colleges and universities. Listing of colleges and universities can be found in Appendix a.

and 35-40 graduate students annually with a broadly-based selection of courses that transfer through USM back to their home college or university. The program is very cost-effective for all students who seek marine science education and research experience in a unique setting. The Mississippi Sound as a study area couples offshore barrier islands, saline and freshwater marsh ecosystems, Pine Savannas, riverine ecosystems and extensive seagrass meadows. This region is also home to the endangered Gulf sturgeon (see Appendix a), the saltmarsh topminnow (a candidate species) and the Pascagoula River (the only non-dammed river of its size in the lower 48 states). This ideal location is very attractive to visiting research faculty for enumerable research opportunities. This region, associated natural habitats, and unique species also fosters the
integration of research and education opportunities that both faculty and graduate/undergraduate students embrace.

b) Facilities-

GCRL's 22 buildings house research and teaching laboratories, classrooms and offices (Map 2) where more than 220 researchers, technical and support personnel, and graduate and undergraduate students work. The Laboratory is also home to the Gunter Library (5,306 ft^2), one of the most extensive marine science libraries in the northern Gulf of Mexico region. The Laboratory's Ichthyological Research Collection includes 310,000 fish specimens from around the world. Finally, there is a 11,240 ft^2 dormitory for visiting students that was recently renovated and re-opened for the 2001 SFP session.
Among the Laboratory's vessels are the R/V Tommy Munro, a 97-foot oceanographic research vessel, the 38-foot steel M/V Hermes, and the 55-foot steel trawler R/V McIlwain. There are also small skiffs and canoes available for collecting purposes by enrolled students.

R/V Munroe  
M/V Hermes

R/V McIlwain

On the Laboratory's Biloxi campus, the J.L. Scott Marine Education Center & Aquarium houses Mississippi's largest public aquarium and features marine
educational programs and firsthand experiences for Mississippi residents and visitors of all ages. More than 81,000 children and adults visit the Center each year. About 31,000 of the Center's yearly visitors are involved in the hands-on education programs that have earned the Center an international, award-winning reputation. The facility's 48 aquariums, arranged around the 42,000-gallon Gulf of Mexico tank, showcase native creatures typical of Mississippi's waters from freshwater streams to open ocean.

c) Instructional faculty-

The majority of instructors come from the Department of Coastal Sciences faculty or the GCRL scientific or education staff (*).

<table>
<thead>
<tr>
<th>Resident faculty</th>
<th>Current visiting faculty and home institution</th>
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<tr>
<td>Patrick Biber, Ph.D.</td>
<td>Pat Biesiot, Ph.D., USM-Biological Sciences</td>
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<tr>
<td>Reg Blaylock, Ph.D.</td>
<td>Carol Cleveland, Ph.D., Northwest Mississippi Comm. College</td>
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<td>Marius Brouwer, Ph.D.</td>
<td>Walt Conley, Ph.D., State University of New York, Potsdam</td>
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<td>Sheila Brown, Ph.D.</td>
<td>Gregory Fulling, Ph.D., NOAA, NMFS</td>
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<td>Jinx Campbell, Ph.D.</td>
<td>Stan Kuczaj, Ph.D., USM - Psychology</td>
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<tr>
<td>Bruce H. Comyns, Ph.D.</td>
<td>Michael W. Morris, Ph.D., North Georgia College &amp; State University</td>
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<td>D. Jay Grimes, Ph.D.</td>
<td>Keith Mullins, Ph.D., NOAA, NMFS</td>
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<td>William Hawkins, Ph.D.</td>
<td>Stephanie Showalter, JD, University of Mississippi</td>
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<td>Richard W. Heard, Ph.D.</td>
<td>James Wetzel, Ph.D., Presbyterian University</td>
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<td>Eric Hoffmayer, Ph.D.</td>
<td>Mark Woodrey, Ph.D., Mississippi State University</td>
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<tr>
<td>Jeffrey Lotz, Ph.D.</td>
<td>Jack Gartner, Ph.D., St. Petersburg College</td>
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<td>Jerry McClelland, M.S.</td>
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<td>Robin Overstreet, Ph.D.</td>
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<td>Harriet M. Perry, M.S.</td>
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<td>Mark S. Peterson, Ph.D.</td>
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<td>Chet F. Rakocinski, Ph.D.</td>
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<td>Sharon Walker, Ph.D.</td>
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### d) Summer courses-

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II. Maps and Driving Directions

a) Directions to Gulf Coast Research Laboratory

Traveling from New Orleans, LA/Gulfport, MS directions (points West):
The Gulf Coast Research Laboratory is located at 703 East Beach Road in Ocean Springs, Mississippi. If you are traveling East on I-10, take the Ocean Springs Exit #50 and follow Hwy 609 (Washington Avenue) south for about 3
miles to U.S. 90; Turn left on U.S. 90 (Bienville Blvd.) and then turn right on Bechtel Blvd. (3rd traffic light, about 1.5 miles). Go across the railroad tracks and turn left on Government street (a 4-way stop). At the next 3 way stop, turn right on Halstead Road. Drive south to the beach and the GCRL entrance is located on the left (Maps 3 and 4).

Traveling from the Mobile, AL/Pascagoula, MS directions (points East): The Gulf Coast Research Laboratory is located at 703 East Beach Road in Ocean Springs, Mississippi. If you are traveling West on I-10, take the Ocean Springs Exit #57 and turn left (south) on Hwy 57. Take this to U.S. 90 (Bienville Blvd.) and turn right. Go about 4.5 miles (6th traffic light) to Hanley Road. Turn left on Hanley, go cross the railroad tracks, and then turn right on Government (a 4-way stop). Take a left on Halstead (a 3-way stop) and go south to the beach. The GCRL entrance is located to the left (Maps 3 and 4).

Map 3. Gulf Coast Research Laboratory, Ocean Springs in relation to I-10 and Hwy 90.
Map 4. Enlargement of Ocean Springs and the proximity of GCRL to Hwy 57.

b) Directions to the J.L. Scott Marine Education Center and Aquarium-

The J.L Scott Marine Education Center and Aquarium is located at 115 Beach Blvd. (US Hwy 90) in Biloxi, Mississippi at the western end of the Biloxi Bay Bridge. From I-10 take the I-110 Exit (#46). From I-110, take the Ocean Springs exit to US Hwy 90 and travel east 2 miles. Use the Isle of Capri entrance and go east at the traffic circle (Map 5).

Map 5: Location of J.L. Scott Marine Education Center & Aquarium in relation to I-10, I-110, and Hwy 90.
**Hours of Operation:**
Open daily from 9:00 am to 4:00 pm (Closed Sundays)

**Admission**
Group rates available
For Group Scheduling call (228) 374-5550

c) **Directions to the Audubon Aquarium of the Americas, New Orleans**-

**Via Interstate 10 West:** Take I-10 west to New Orleans. Exit at Canal/Superdome (exit 235B), turning right onto Canal. The Aquarium/IMAX® is located at the foot of Canal Street at the Mississippi River (Maps 6 and 7).

![Map 6: Route to Aquarium of the Americas from I-10 (exit 235B) in New Orleans.](image-url)
Map 7: Enlargement of Canal Street, Aquarium and surrounding area.

Hours:
9:30 a.m. to 6 p.m. – Sunday through Thursday
9:30 a.m. to 7 p.m. – Friday and Saturday

Ticket Prices:
Group reservations at (504) 581-4629 or 1-800-774-7394
50% non refundable deposit is due 2 weeks before visit

d) Directions to Dauphin Island Sea Lab Estuarium-
The DISL Estuarium is located 35 miles from Mobile. From I-10, take the Dauphin Island/Tillman's Corner exit (Exit 17-A). Travel south down Rangeline Road (HWY 193) to Dauphin Island. Take a left at the water tower onto Bienville
Boulevard. Go 2.2 miles and you will see the Estuarium on the left. Parking facilities are available (Maps 8 and 9).

Map 8: Location of Hwy 193 and Dauphin Island Sea Lab in relation to I-10.

Hours of Operation: The Estuarium is open 7 days a week

Summer hours
March 1 - August 31
Monday to Saturday 9:00 am to 6:00 pm
Sunday 12:00 pm to 6:00 pm

Winter hours
September 1 - February 28/29
Monday to Saturday 9:00 am to 5:00 pm
Sunday 1:00 pm to 5:00 p.m

Admission
Group rates available
For Group Scheduling contact Denise Keaton (dkeaton@disl.org)

III) Species lists, habitat descriptions, sampling gear, and species images (appendices b and c)-

a) Muddy/sandy bottoms- Unvegetated bottoms of sounds, lagoons, estuaries, river mouths, and offshore subtidal bottoms. Inshore bottoms exposed at low tide, usually submerged at high tide. Sometimes associated with tide pools.

**Inshore**

**Fish**

Atlantic stingray  
*Dasyatis sabina*

bay anchovy  
*Anchoa mitchilli*

inland silverside  
*Menidia beryllina*

Gulf menhaden  
*Brevoortia patronus*

threadfin shad  
*Dorosoma petenense*

scaled sardine  
*Harengula jaguana*

sand seatrout  
*Cynoscion arenarius*

spotted seatrout  
*Cynoscion nebulosus*

Atlantic croaker  
*Micropogonias undulatus*

silver perch  
*Bairdiella chrysoura*

southern kingfish (ground mullet)  
*Menticirrhus americanus*

southern flounder  
*Paralichthys lethostigma*

bay whiff  
*Citharichthys spiopterus*

fringed flounder  
*Etropus crossoptus*

hogchoker  
*Trinectes maculatus*

lined sole  
*Achirus lineatus*

blackcheek tonguefish  
*Symphurus plagiusa*

offshore tonguefish  
*Symphurus civitatus*

Atlantic cutlass fish  
*Trichiurus lepturus*

pinfish  
*Lagodon rhomboides*

sheepshead  
*Archosargus probatocephalus*
pigfish
inshore lizard fish
longnose killifish
gulf killifish
sheepshead minnow
sailfin molly
hardhead catfish
Atlantic needlefish
planehead filefish (juvenile)
lookdown (juvenile)
leatherjacket
Spanish mackerel (juvenile)
northern sennet (juvenile)
white mullet
striped mullet
Atlantic cutlassfish
Gulf butterfish
harvestfish
striped burrfish

Invertebrates
mantis shrimp
white shrimp
brown shrimp
grass shrimp
ghost shrimp
Louisiana ghost shrimp
brief squid
blue crab
horseshoe crab
striped hermit crab
long-wristed hermit crab
grey sea star

Offshore
Fish
southern kingfish
silver seatrout
white seatrout
Atlantic croaker
spot
pinfish
dwarf sand perch
rock sea bass
Gulf menhaden
scaled sardine

Orthopristis chrysoptera
Synodus foetens
Fundulus majalis-similis
Fundulus grandis
Cyprinodon variegatus
Poecilia latipinna
Arius felis
Strongylura marina
Monochanthis hispidus
Selene vomer
Oligopiltes saurus
Scomberomorus maculatus
Sphyraena borealis
Mugil curema
Mugil cephalus
Trichiurus lepturus
Pepilus burti
Pepilus alepidotus
Chilomycterus schoepfi
Squilla empusa
Litopenaeus setiferus
Farfantepenaeus aztecus
Palaemonetes spp.
Bifaria (=Callianassa) biformis
Lepidophthalmus louisianensis
Loliguncula brevis
Callinectes sapidus
Limulus polyphemus
Clibanarius vittatus
Pagurus longicarpus
Luidia clathrata
Menticirrhus americanus
Cynoscion nothus
Cynoscion arenarius
Microgogonias undulatus
Leiostomus xanthurus
Lagodon rhomboideus
Diplectrum bivittatum
Centropristis philadelphica
Brevoortia patronus
Harengula jaguana
striped anchovy
dusky anchovy
bay anchovy
Gulf butterfish
harvestfish
inshore lizardfish
offshore lizardfish
longspined porgy
bigeye searobin
bigheaded searobin
shoal flounder
fringed flounder
southern flounder
bay whiff
blackcheek tonguefish
offshore tonguefish
lookdown (juvenile)
Atlantic moonfish
blue runner (hardtail)
Atlantic bumper
hardhead catfish
gafftopsail catfish
blackedged cusk-eel
shrimp eel
least puffer
planehead filefish

Invertebrates
lesser blue crab
blue crab
spider crab
purse crab
Gulf purse crab
flat-clawed hermit crab
box crab
white shrimp
brown shrimp
leanback shrimp
common rock shrimp
rock shrimp
slender inshore squid
longfined squid
spiny-beaded sea star
grey sea star

Anchoa hepsetus
Anchoa lyolepis
Anchoa mitchilli
Pepriilus burti
Pepriilus alepidotus
Synodus foetens
Saurida brasiliensis
Stenotomus caprinus
Prionotus longispinosus
Prionotus tribulus
Syacium gunteri
Etropus cossotus
Paralichthys lethostigma
Citharichthys spilopterus
Symphurus plagiusa
Symphurus civitatus
Selene vomer
Selene setapinnis
Caranx crysos
Chloroscombrus chrysurus
Arius felis
Bagre marinus
Lepophidium brevibarbe
Ophichthus gomesi
Sphoeroides parvus
Monochanthis hispidus

Callinectes similis
Callinectes sapidus
Libinia dubia
Persephone mediterranea
Persephone crinita
Pagurus pollicaris
Calappa spp.
Litopenaeus setiferus
Farfantepenaeus azteicus
Rimpenaeus similis
Sicyonia brevis
Sicyonia dorsalis
Loligo plei
Loligo pealeii
Astropecten duplicatus
Luidia clathrata
c) **Oyster Reefs**—intertidal and subtidal structures composed of live oysters, oyster shell and distinct invertebrate communities. The only naturally occurring hard substrate in coastal Mississippi (Appendix e: 1998-1999 oyster coverage from the area south of St. Louis Bay, Mississippi).

**Fish**
- Gulf toadfish
- skilletfish
- naked goby
- code goby
- darter goby
- striped blenny
- spadefish
- bighead searobin
- pinfish
- sheephead
- black drum
- red drum
- Opsanus beta
- Gobiesox strumosus
- Gobiosoma bosc
- Gobiosoma robustum
- Ctenogobius boleosoma
- Chasmodes bosquianus
- Chaetodipterus faber
- Prinotus tribulus
- Lagodon rhomboides
- Archosargus probatocephalus
- Pogonias cromis
- Sciaenops ocellatus

**Invertebrates**
- grass shrimp
- snapping shrimp
- striped hermit crab
- blue crab
- flat-backed mud crab
- Atlantic mud crab
- stone crab
- oysters
- oyster drill
- Palaemonetes spp.
- Alpheus heterochaelis
- Clibanarius vittatus
- Callinectes sapidus
- Eurypanopeus depressus
- Panopeus herbstii
- Menippe adinia
- Crassostrea virginica
- Stramonita haemastoma

d) **Salt marsh**—regularly flooded, low-energy shoreline vegetated by salt-tolerant herbaceous plants. Zonation due to influence of tidal patterns. *Juncus roemerianus, Spartina alterniflora* and *Distichlis spicata*.

**Fish**
- naked goby
- code goby
- darter goby
- striped blenny
- pinfish
- killifish
- sheepshead minnow
- sailfin molly
- spot
- silversides
- mullet
- Gobiosoma bosc
- Gobiosoma robustum
- Ctenogobius boleosoma
- Chasmodes bosquianus
- Lagodon rhomboides
- Fundulus spp.
- Cyprinodon variegatus
- Poecilia latipinna
- Leiostomus xanthurus
- Menidia spp.
- Mugil spp.
Invertebrates
fiddler crabs
grass shrimp
snapping shrimp
white shrimp
striped hermit crab
blue crab
flat-backed mud crab
Atlantic mud crab
stone crab
oysters
oyster drill
ribbed mussel
marsh periwinkle
olive nerite
mud snail

Uca spp.
Palaemonetes spp.
Alpheus heterochaelis
Litopenaeus setiferus
Clibanarius vittatus
Callinectes sapidus
Eurypanopeus depressus
Panopeus herbstii
Menippe adinia
Crassostrea virginica
Stramonita haemastoma
Geukensia demissa
Littoraria irrorata
Neritina virginea
Nassarius vibex

e) Surf Zone- beaches where wave and current action produce erosion patterns (high energy); beaches within estuaries where fine sediment is deposited (low energy).

Fish
striped anchovy
dusky anchovy
bay anchovy
inland silverside
scaled sardine
Gulf menhaden
permit (juvenile)
Florida pompano (juvenile)
spot
Gulf kingfish
southern kingfish
striped mullet
white mullet
Atlantic stingray
spotted whiff

Anchoa hepsetus
Anchoa lyolepis
Anchoa mitchilli
Menidia beryllina
Harengula jaguana
Brevoortia patronus
Trachinotus falcatus
Trachinotus carolinus
Leiostomus xanthurus
Menticirrhus saxatilis
Menticirrhus americanus
Mugil cephalus
Mugil curema
Dasyatis Sabina
Citharichthys macrops

Invertebrates
common mole crab
square-eyed mole crab
long-wristed hermit crab
lady crab
blue crab
sand dollar
coquina clam

Emerita talpoida
Lepidopa websteri
Pagurus longicarpus
Ovalipes ocellatus
Callinectes sapidus
Melilta quinquiesperforata
Donax variabilis
giant cockle, knobbled whelk, lightning whelk, Gulf beach callianassid, beach mantis shrimp

**Dinocardium robustum**
**Busycon carica**
**Busycon contrarium**
**Callichirus islagrande**
**Coronis scolopendra**

f) List of commonly caught recreational fish species in Mississippi waters-

<table>
<thead>
<tr>
<th>Inshore Species</th>
<th>Offshore Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>White seatrout <strong>Cynoscion arenarius</strong></td>
<td>Cobia <strong>Rachycentron canadum</strong></td>
</tr>
<tr>
<td>Spotted seatrout <strong>Cynoscion nebulosus</strong></td>
<td>Spanish mackerel <strong>Scomberomorus maculatus</strong></td>
</tr>
<tr>
<td>Atlantic croaker <strong>Micropogonias undulatus</strong></td>
<td>Red snapper <strong>Lutjanus campechanus</strong></td>
</tr>
<tr>
<td>Spot <strong>Leiostomus xanthurus</strong></td>
<td>Dolphinfish <strong>Coryphaena hippurus</strong></td>
</tr>
<tr>
<td>Black drum <strong>Pogonias cromis</strong></td>
<td>Gag grouper <strong>Mycteroperca microlepis</strong></td>
</tr>
<tr>
<td>Red drum <strong>Sciaenops ocellatus</strong></td>
<td>Blue runner (hardtail) <strong>Caranx crysos</strong></td>
</tr>
<tr>
<td>Southern flounder <strong>Paralichthys lethostigma</strong></td>
<td>Black tip shark <strong>Carcharhinus limbatus</strong></td>
</tr>
<tr>
<td>Sheepshead <strong>Archosargus probatocephalus</strong></td>
<td>Spinner shark <strong>Carcharhinus brevipinna</strong></td>
</tr>
<tr>
<td>Hardhead catfish <strong>Arius felis</strong></td>
<td>Tripletail <strong>Lobotes surinamensis</strong></td>
</tr>
</tbody>
</table>

g) Sampling gear in various habitat types-

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Gear Type</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea grass</td>
<td>Seine net, Dip net, Snorkel &amp; mask, Cast net, Hook and line</td>
<td>All are available for summer classes</td>
</tr>
<tr>
<td>Muddy/sandy bottom Inshore and Offshore</td>
<td>Trawl, Seine net, Dip net, Yabby pump, Hook and line, Cast net</td>
<td>All are available for summer classes</td>
</tr>
<tr>
<td>Oyster reefs</td>
<td>Trawl, Hook and line, Cast net</td>
<td>All are available for summer classes</td>
</tr>
<tr>
<td>Salt marsh</td>
<td>Seine, quadrats, Breder traps, dip nets.</td>
<td>All but Breder traps are available for summer classes</td>
</tr>
<tr>
<td>Surf zone</td>
<td>Seine net, Dip net, Cast net, Hook and line, Yabby pump</td>
<td>All are available for summer classes</td>
</tr>
</tbody>
</table>

h) Study sites for various habitat types-

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Study Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seagrass or SAV</td>
<td>Chandeleur Islands – <em>Thalassia testudinum</em>; <em>Halodule wrightii</em>; <em>Syringodium filiforme</em></td>
</tr>
<tr>
<td></td>
<td>Grand Bay – <em>Ruppia maritima</em>; <em>Vallisneria americana</em></td>
</tr>
<tr>
<td></td>
<td>Horn Island &amp; Ship Island – <em>Halodule wrightii</em></td>
</tr>
<tr>
<td>Muddy/sandy bottom</td>
<td>Mississippi Sound</td>
</tr>
<tr>
<td>Inshore and Offshore</td>
<td>Chandeleur Islands</td>
</tr>
<tr>
<td>Oyster Reefs</td>
<td>Bay St. Louis (subtidal)</td>
</tr>
<tr>
<td>Salt Marsh</td>
<td>Davis Bayou (Ocean Springs) – <em>Spartina alterniflora</em>; <em>Juncus roemerianus</em></td>
</tr>
<tr>
<td></td>
<td>Mississippi Sound (along coastline)</td>
</tr>
<tr>
<td>Surf Zone</td>
<td>Horn Island &amp; Ship Island – south side of the barrier islands</td>
</tr>
<tr>
<td></td>
<td>Marsh Point (Ocean Springs)</td>
</tr>
<tr>
<td></td>
<td>Chandeleur Islands (east side)</td>
</tr>
<tr>
<td></td>
<td>Perdido Key</td>
</tr>
</tbody>
</table>
Map 10: Location of potential sampling sites.

Map 10a: Detailed map of Mississippi Sound and surrounding area.
Map 10b: Detailed map of Perdido Key sampling site.

Map 10c: Detailed map of the Chandeleur Islands.
IV. Local places of interest

a) Boat excursions-

SHIP ISLAND EXCURSIONS – (228) 864 – 1014

Summer Schedule Starting 2nd Saturday in May
7 Days a Week – Depart 9:00 A.M. & 12 Noon daily
Arrive Gulfport 3:40 P.M. & 6:15 P.M.

• Call for group discount rates (20+).
• Regular rate of $16.00 per adult.
• If the group is doing sampling, they must have a permit from the National Park Service.

BILoxi SHRIMPING TRIP
Virginia Eleuterius – (228) 385 – 1182

• Approximately 1.5 hour “marine adventure cruise” – Morning and afternoon excursions
• If requested they will give a narrative as they go. Cruise in waters between Deer Island and Biloxi shore.
• 42 ft boat, hold 40 people
• Will trawl and students can keep what they catch
• Departs from small craft harbor in Biloxi
• Call for reservations as soon as possible – at least 1 – 2 days in advance

Rates: $6.00 per person with instructor free

b) Museums-

MARITIME & SEAFOOD INDUSTRY MUSEUM

Rodin Kron – (228) 435 – 6320

• Owners of the Glenn L. Swetman and Mike Sekul Schooners
• Located on the eastern tip of the historic Point Cadet peninsula in Biloxi, MS
• Groups of 10 or more: $1.00 / person
• Regular rate: $2.50 per adult

WALTER ANDERSON MUSEUM OF ART - (228) 872-3164

The Walter Anderson Muesum of Art (WAMA) is dedicated to the celebration of the works of Walter Inglis Anderson (1903-1965), American master, whose depictions of the plants, animals, and people of the Gulf Coast have placed him among the forefront of American painters of the Twentieth Century; and to his brothers, Peter Anderson (1901-1984), master potter and founder of Shearwater
Pottery; and James McConnell Anderson (1907-1998), noted painter and ceramist.

Museum Hours:
October-April: Mon-Sat 9:30 a.m. to 4:30 p.m.  
Sunday 12:30-4:30 p.m.  
May-September: Mon-Sat 9:30 a.m. to 5:00 p.m.  
Sunday 12:30-5:00 p.m.

* Call for group rates 2 weeks in advance of tour

c) National seashore-

GULF ISLANDS NATIONAL SEASHORE—WILLIAM M COLMER VISITOR CENTER, OCEAN SPRINGS, MS

For more information: (228) 675-0074

The William M. Colmer Visitor Center, named for a veteran Mississippi congressman, is located at the end of Park Road. Presentations covering all aspects of the Gulf Islands National Seashore in Mississippi are available. A wonderful exhibit area that incorporates the art of local artist Walter Anderson explains the different ecosystems and features local plants and wildlife. An exhibition of work by other local artists changes on a quarterly basis. The twelve minute film "Tides, Winds, and Waves" is shown daily in the auditorium. Administrative Offices, restrooms, water fountains, and the Eastern National Bookstore are housed in the building. Park Rangers are available at the information desk to answer questions.

V. Scientific collection permit information-

LOUISIANA
Ms. Janet Abbott  
State of Louisiana  
Department of Wildlife and Fisheries  
2000 Quail Drive  
Baton Rouge, LA 70898

MISSISSIPPI
Traci Floyd  
Department of Marine Resources  
1141 Bayview Ave. Suite 101  
Biloxi, MS 39530  
(228) 374-5000 (x 5142)

ALABAMA
Vernon Minton  
Alabama Marine Resources  
P.O. Box Drawer 458  
Gulf Shores, AL 36547

FLORIDA
Lisa Gregg  
Division of Marine Fisheries  
620 South Meridian Street  
Tallahassee, FL 32399-1600  
850-488-6058  
lisa.gregg@fwc.state.fl.us
VI. Regional literature-

Classics-


Gunter, G. 1950. Seasonal population changes and distributions as related to salinity, of certain invertebrates of the Texas coast, including the commercial shrimp. *Publication of the Institute of Marine Science, University of Texas* 1(2):7-51.


**Review/summary**


*Recent*


Regional Keys-


VII. Acknowledgements

We would like to thank the Mississippi-Alabama Sea Grant Consortium for funding this project to MSP and KLH of DISL. Richard Heard, Sara LeCroy, and Jerry McClelland edited certain sections of the document, provided citations for regional literature, or made many helpful comments. Jim Franks, Read Hendon, and Chet Rakocinski provided images. Tut Warren and Bradley Randall provided the georeferenced oyster data set. Data for the 1992 seagrass coverage maps were provided by the National Wetlands Center in Lafayette, Louisiana. Marc Foster constructed the GIS maps of the seagrass and oyster data coverage.
Patricia M. Spitzer and Ken L. Heck Jr. of DISL also made important contributions to this study.

VIII. Appendices-

Appendix a. GCRL Summer Field program affiliate listing.

MISSISSIPPI
Alcorn State University, Lorman
Belhaven College, Jackson
Delta State University, Cleveland
Jackson State University, Jackson
Millsaps College, Jackson
Mississippi College, Clinton
Mississippi State University, Miss. State
Mississippi University for Women, Columbus
Mississippi Valley State University, Itta Bena
Rust College, Holly Springs
University of Mississippi, University
University of Southern Mississippi, Hattiesburg
William Carey College, Hattiesburg
William Carey College at the Coast

ALABAMA
Auburn University, Auburn

ARKANSAS
Arkansas Tech University, Russellville
Hendrix College, Conway
University of Arkansas at Little Rock
University of Arkansas at Monticello
University of Central Arkansas, Conway
University of the Ozarks, Clarksville

FLORIDA
University of Tampa

GEORGIA
Berry College, Mt. Berry
Shorter College, Rome

ILLINOIS
North Central College, Naperville

INDIANA
University of Evansville

IOWA
Drake University, Des Moines
Iowa State University, Ames
Wartburg College, Waverly
KENTUCKY
Eastern Kentucky University, Richmond
Morehead State University, Morehead

LOUISIANA
Louisiana State University, Baton Rouge
Our Lady of Holy Cross College, New Orleans
Southeastern Louisiana University, Hammond
Xavier University of Louisiana, New Orleans

MICHIGAN
Central Michigan University, Mount Pleasant

MISSOURI
Central Methodist University, Fayette
Northwest Missouri State University, Maryville
Southeast Missouri State University, Cape Girardeau
Southwest Missouri State University, Springfield
Truman State University, Kirksville

NEW YORK
Cornell University, Ithaca

OHIO
Bowling Green State University, Bowling Green

OKLAHOMA
Northeastern State University, Tahlequah
Southwestern Oklahoma State University, Weatherford

SOUTH CAROLINA
Presbyterian College, Clinton

TENNESSEE
Belmont University, Nashville
Carson-Newman College, Jefferson City
Christian Brother University, Memphis
Lambuth University, Jackson
Middle Tennessee State University, Murfreesboro
Rhodes College, Memphis
Tennessee State University, Nashville
Tennessee Technological University, Cookeville
Tennessee Wesleyan College, Athens
Trevecca-Nazarene University, Nashville
Union University, Jackson
University of Memphis, Memphis
University of Tennessee at Chattanooga
University of Tennessee at Martin

WISCONSIN
University of Wisconsin at Eau Claire
University of Wisconsin at Stevens Point
Appendix b. Photographs of common habitat

Marsh edge at the Grand Bay NERR site

*Phragmites australis in the Pascagoula River ecosystem*
Eastern distributary of the Pascagoula River estuary

Cat Island

Ship Island

Chandaleur Islands
Appendix c. Common organism photographs

Grey Snapper, *Lutjanus griseus*  
Red grouper, *Epinephalus morio*

Tripletail, *Lobotes surinamensis*  
Red snapper, *Lutjanus campechanus*

Silver perch, *Bairdiella chrysoura*
Dolphinfish, Coryphaena hippurus

Cobia, Rachycentron canadum

Greater amberjack, Seriola dumerilli

Red drum, Sciaenops ocellatus
Gulf sturgeon, *Acipenser oxyrhynchus desoti*

Southern flounder, *Paralichthys lethostigma*  
Gulf butterfish, *Peprilus burti*

Atlantic spadefish, *Chaetodipterus faber*  
Sheephead, *Archosargus probatocephalus*
Atlantic croaker, *Micropogonias undulatus*  
Spot, *Leiostomus xanthurus*

Southern kingfish, *Menticirrhus americanus*  
Spotted seatrout, *Cynoscion nebulosus*

Striped burrfish, *Chilomycterus schoepfii*  
Atlantic cutlassfish, *Trichiurus lepturus*
White shrimp, *Litopenaeus setiferus*

Brown shrimp, *Farfantepenaeus aztecus*

Pink shrimp, *Farfantepenaeus duorarum*

Blue crab, *Callinectes sapidus*

Box crab, *Calappa sp.*
Appendix d. Seagrass coverage maps based on 1992 data from the Chandeleur Islands, Louisiana through Pensacola Bay, Florida. Image 1 is a large-scale view from Chandeleur Islands, Louisiana through St. Andrews bay, Florida. Image 2 is a detailed view of the Chandeleur Islands. Image 3 is a detailed view of much of Mississippi Sound from Gulfport through the Alabama state line. Image 4 is a detailed view of Mobile bay, Alabama and associated islands. Image 5 is a detailed view of Perdido Bay and Pensacola Bay, Florida.

1.
Appendix e. Oyster bed coverage based on 1998-1999 data from areas south of St. Louis Bay, Mississippi.