OFFICE COPY ONLY



# GULF STATES MARINE FISHERIES COMMISSION

SIXTH ANNUAL REPORT 1954 - 55

To The

CONGRESS OF THE UNITED STATES
And to the

GOVERNORS AND LEGISLATORS

ALABAMA FLORIDA LOUISIANA MISSISSIPPI TEXAS

# SIXTH ANNUAL REPORT (1954-55) OF THE GULF STATES MARINE FISHERIES COMMISSION

To The

#### CONGRESS OF THE UNITED STATES

And To The

#### GOVERNORS AND LEGISLATORS

Of

ALABAMA
FLORIDA
LOUISIANA
MISSISSIPPI
TEXAS

Presented in compliance with the terms of the Compact and the state enabling acts creating such commission and Public Law 66-81st Congress assenting thereto.

Gulf States Marine Fisheries Commission
312 Audubon Building
New Orleans 16, Louisiana

#### IN MEMORIAM

#### William J. Hendry

In recognition of his invaluable service in support of state and federal legislation necessary to the formation of the Gulf marine fisheries compact and in further recognition of his devotion to duty as a member of the Commission since its formation, William J. Hendry was elected Commission Chairman at the sixth annual meeting, October 20-21, 1955.

The fine leadership qualities and knowledge of the fisheries possessed by our close friend would have contributed immeasurably toward the progress of the Comission during the year but for his passing in Okeechobee, Florida, November 10, 1955.

The record established by Mr. Hendry as a Commissioner reflects the highest in the performance of duty in the public's interest.

## Albert E. Hopkins

The passing of our good friend and scientific advisor, Dr. Albert E. Hopkins, in New York City, Febuary 17, 1955, will ever be deeply regretted by his many friends, particularly those who were so aware of his great store of scientific knowledge which he so gladly made available to all who sought his scholarly advice.

#### GULF STATES MARINE FISHERIES COMMISSION

#### ROSTER—DECEMBER 1955

David C. Jones, Jr.

Donald G. Bollinger

Chairman

Vice-Chairman

W. Dudley Gunn-Secretary-Treasurer

Emily C. Carr—Office Secretary

# \*COMMISSIONERS

#### **ALABAMA**

William H. Drinkard, Director

Alabama Department of Conservation,

Montgomery, Alabama

Garet Van Antwerp III, Senator,

State of Alabama, Mobile, Alabama

W. C. Holmes, M. D.

Foley, Alabama

#### FLORIDA

Ernest C. Mitts, Director

Florida Board of Conservation,

Tallahassee, Florida

David C. Jones, Jr., Representative,

State of Florida, Naples, Florida

(To Be Appointed)

#### LOUISIANA

L. D. Young, Jr., Executive Director,

Louisiana Wildlife and Fisheries Commission,

New Orleans, Louisiana

C. C. Burleigh, Senator,

State of Louisiana,

Franklin, Louisiana

Donald G. Bollinger,

Lockport, Louisiana

#### **MISSISSIPPI**

Walter J. Gex, Jr., President, Mississippi Seafood Commission.

Biloxi, Mississippi

Hermes Gautier, Senator.

State of Mississippi, Pascagoula, Mississippi

Louis Simmons,

Biloxi, Mississippi

#### **TEXAS**

Howard D. Dodgen, Executive Secretary,

Texas Game and Fish Commission,

Austin, Texas

Jimmy Phillips, Senator,

State of Texas,

Angleton, Texas

Travis Bailey,

Rockport, Texas

**★**Order of listing — Administrator — Legislator — Governor's Appointee

#### SUCCESSIONS ON THE COMMISSION DURING THE YEAR

William H. Drinkard vice Earl M. McGowin
Garet Van Antwerp, III vice Thomas A. Johnston, III
Ernest C. Mitts vice Charles W. Bevis

# COMMISSION OFFICERS ELECTED OCTOBER 21, 1955 FOR YEAR 1955-56

Chairman: William J. Hendry Vice-Chairman: Donald G. Bollinger

David C. Jones, Jr., designated Chairman succeeding William J. Hendry (deceased)

# STANDING COMMITTEES ROSTER - DECEMBER 1955

#### COMMITTEE TO CORRELATE FISHERIES LAWS

A. J. Harris, Jr., Assistant Attorney General, Alabama Department of Conservation, Montgomery, Alabama

Mary Schulman, Assistant Attorney General, State of Flordia, Tallahasse, Florida

Warren M. Simon, Attorney, Louisiana Wild Life and Fisheries Commission, New Orleans, Louisiana

Reece O. Bickerstaff, Attorney, Mississippi Seafood Commission, Gulfport, Mississippi

Erma Baker, Attorney,
Texas Game and Fish Commission,
Austin, Texas

# COMMITTEE TO CORRELATE RESEARCH AND EXPLORATORY DATA

Harold C. Loesch, Marine Biologist,
Alabama Department of Conservation,
Bayou La Batre, Alabama

F. G. Walton Smith, Director,

Marine Laboratory, University of Miami, Coral Gables, Florida

Percy Viosca, Jr., Marine Biologist, Louisiana Wild Life and Fisheries Commission, New Orleans, Louisiana

Gordon Gunter, Director,

Gulf Coast Research Laboratory, Ocean Springs, Mississippi

Howard T. Lee, Marine Biologist, Texas Game and Fish Commission, Rockport, Texas

#### SHELLFISH COMMITTEE

Harold C. Loesch, Marine Biologist, Alabama Department of Conservation, Bayou La Batre, Alabama

Robert M. Ingle, Assistant Director, Florida Board of Conservation, Tallahassee, Florida

Lyles S. St. Amant, Marine Biologist, Louisiana Wild Life and Fisheries Commission, New Orleans, Louisiana

Gordon Gunter, Director, Gulf Coast Research Laboratory, Ocean Springs, Mississippi

Howard T. Lee, Marine Biologist, Texas Game and Fish Commission, Rockport, Texas

#### ACKNOWLEDGEMENT

In submitting this sixth annual report the Commissioners wish to express their most sincere gratitude for the splendid cooperation of the members of the Congress and the Governors and Legislators of the compacted States. The Commission fully appreciates that such measure of success as has been attained in the past six years could not have been possible without such valued assistance. This acknowledgement is also extended to the directorates and staffs of federal, state and interstate agencies and to representatives of all organizations and individuals who have contributed toward the realization of the objectives of the Gulf States Marine Fisheries Commision.

Respectfully submitted,

David C. Jones, Jr., Chairman Donald G. Bollinger, Vice-Chairman W. Dudley Gunn, Secretary-Treasurer

# COMMISSION ACTIVITIES OCTOBER 1954 - OCTOBER 1955

The Commission met twice during the past year. Below is a summary of principal decisions reached at the two regular sessions:

#### MONTGOMERY, ALABAMA (MARCH 17-18, 1955)

#### Resolutions:

Requested the Department of Interior, Fish and Wildlife Service, to extend the menhaden biological research program to include menhaden of the Gulf of Mexico and that funds for such studies be allocated on a contract basis to universities of the Gulf States.

Recommended to the Department of Interior the calling of an early meeting of the American Fisheries Advisory Committee for study of programs which had been approved and to become acquainted with all facts and allocation of funds.

Established a Shellfish Committee to be composed of five scientists, one from each of the several member states, for the purpose of studying the problems of the shellfish fisheries.

The Commission Red Tide Committee appointed at the March 18-19, 1954 meeting was dissolved in order that the State of Florida and the Fish and Wildlife Service could establish such a committee composed of individuals directly concerned with the problem.

## CLEARWATER, FLORIDA (OCTOBER 20-21, 1955)

#### Resolutions:

Requested the Department of Interior, Fish and Wildlife Service, to furnish information on the availability and abundance of sardine-like fishes and anchovies in the offshore waters of the Gulf of Mexico adjacent to Alabama, Florida, Louisiana, Mississippi and Texas; to determine the commercial potentialities of such species with reference to human and animal consumption, and other purposes; and to determine the most efficient and economical gear with which to capture these fishes.

Requested the Department of Interior, Fish and Wildlife Service, to institute a program including such projects as will furnish information relative to the effects to water bottoms and aquatic life resulting from seismographic or geophysical activities and explorations and all development operations for gas, oil and/or other minerals.

Endorsed the action of the Louisiana Delegation in referring to the attorney general of each of the five Gulf States for appropriate action the matter of non-compliance of the U. S. Weather Bureau with that feature of Public Law 121, 84th Congress, which earmarks \$96,000 for the operation of a ship in the Gulf Coast areas to give earlier and better warnings for these coastal waters and which will be of particular benefit to the fishing industries and installations offshore oil drilling and production.

Proposed legislation related to federal aid in student fisheries education was considered but no action taken pending further study of the subject.

# STATE ACTIVITIES OCTOBER 1954 -- OCTOBER 1955

The Commission is pleased to present in summary some of the activities, and plans, of general interest of the marine fishery administrations of the compacted states, the directors of which agencies are members of the Commission. The research and development programs of the several states continue to produce much valuable information, which information is freely exchanged among the member states.

ALABAMA — The creation of snapper reefs in Baldwin County by dumping old automobile chassis from six to eight miles offshore in 70-80 feet of water has proven successful. During the year, 94,578 barrels of oyster shells were planted on the public reefs, this being one of the largest shell plantings yet undertaken by the Alabama Department of Conservation. No seed oysters were planted during the year. The developing of new oyster reefs is a continuing program. Some 1,800 acres of bottoms leased by the Department from a riparian owner have been planted and are now open for harvest. The yield is reported to be good. Research on shrimp in Mobile Bay continues. More in-

formation is desired on natural mortality, stocks available, migrations, and supplemental data on gear. A project involving the taking of fish by small mesh nets in the rivers empting into Mobile Bay to determine the advisability of permitting the use of such nets has resulted in much valuable data being secured. The 1955 session of the Alabama Legislature established a saltwater sport fishing license, the fee being \$1.15 for residents using a cane pole, and \$2.15 for residents using rod and reel. The exhibiting of fishery products by the Division of Seafoods at State Fairs has been a practice of the past several years. The Alabama Department of Conservation fishery research programs are progressing at its Cedar Point laboratory.

FLORIDA - Research on the mullet, snook, sailfish and tarpon is being done for the Florida Board of Conservation by the Marine Laboratory, University of Miami. Additional studies include shrimp net mesh and shrimp technology, and in cooperation with the Fish and Wildlife Service, marketing research, a survey to determine the value of the Florida sports fishing industry, and a fishery statistical program. An educational film to show fishermen and fish house operators the basic fundamentals of caring for the catch is in production. An agents correspondence course covering fishery biological and legal problems has been arranged to supplement courses offered in two agent training schools. An economist has been employed to visit hospitals, schools and fairs in interest of securing for industry a wider acceptance of mullet. In order to promote the leasing of bottoms the Board of Conservation expects to gather more information on salinity tolerances and predators, such work to be accomplished through a laboratory in St. Petersburg recently acquired from the University of Florida. No oyster reef rehabilitation work was done during the year in Flordia but a stepped-up program is planned for the coming year. The building of the Jim Winthrop dam at the confluence of the Flint and Chattahoochee Rivers is expected to provide a steady supply of water and greatly help oyster production in the Apalachicola Bay area, which area has been shrinking in production because of predator infiltration caused by abnormally high salinities. Although the so-called red tide has not been in evidence during the past year, research has continued in order that information might be accumlated which would be of value should the problem again arise.

LOUISIANA — The Division of Commercial Seafoods. Louisiana Wild Life and Fisheries Commission, continues with a program planned in the spring of 1953. The program is designed to provide data on the fishes, crabs and shrimp with regard to environmental requirements and population dynamics. This ecological plan, with emphasis on applied values, involves concurrent field investigations, which investigations are supported by laboratory confirmation. The zones of activity are primarily in the coastal environments, with supporting studies in freshwater areas from which the former derive their nutrient materials. In connection with the program, contracts have been executed with Tulane University and Louisiana State University. Cooperative projects have been entered into with Scripps Institute of Oceanography. Efforts are presently under way to join Woods Hole Institute in a marine tagging project. The Division of Commercial Seafoods vessel Albacore has demonstrated during the year that tuna can be taken in commercially important quantities by trawl boats using long-line gear. A directory of licensed wholesale dealers of Louisiana has been widely distributed. To better acquaint restaurant and hotel people with Louisiana fishery products, a display has been set up at national conventions held in key cities. During the year, the Division of Oysters and Water Bottoms initiated ten projects and study areas dealing with immediate problems of oil pollution and oyster mortality. The division completed an ecological and bacteriological survey of Calcasieu Lake. Preliminary investigations were made and reported on the effects of seismic operations on bottom character. A sampling procedure for certain Louisiana State University projects dealing with the handling and packaging of oysters has been set up. During the 1955 season 35,000 barrels of oyster shells were planted. In recent years the biological problems associated with summer oysters, ecological changes resulting from canaling, and predation by conchs has increased to the extent that the development of a long range and greatly expanded research program has become necessary. It is expected that from three to five professional marine biologists will be added to the staff of the division and each will have at least one biologist aid and a boat operator assigned to his project in order to form a complete unit that may be assigned to individual projects.

MISSISSIPPI — The Mississippi Seafood Commission continues to have all research done by the Gulf Coast Research Laboratory located near Ocean Springs where a new teaching laboratory is being added to existing facilities. The laboratory assisted in the selection of reefs for the planting of 80,700 barrels of oyster shells during the past season. Of the total, 60,000 barrels of shells were set out on St. Joe reef. The St. Joe planting has done so well it is expected steam stock will be available, conditions being favorable, by January or February 1956. Planting at various locations along the Mississippi Sound required the remaining 20,700 barrels of shells. These experimental plantings will be checked to determine their production potential, variations in quality, basic diseases, incidence of mortality, and effects of industrial activities such as dredging. Other work in progress at the laboratory is a study of the conch under controlled conditions with the view of determining the manner in which the animal attacks the oyster. A study of the sediments of the Sound has been completed. Additional work concerns a study of the marine fishes, and the collection of mollusks and sampling to determine edible qualities. A preliminary analysis of the problems of the biological management of the shrimp fishery has been made. A more complete analysis will be made available in the spring of 1956.

**TEXAS** — The cutting of a pass some 22 miles east of Galveston has brought new species of fishes from the Gulf into Galveston Bay and more shrimp, according to a survey made by the Coastal Fisheries Division of the Texas Game and Fish Commission before and after the pass was created. During the past season 500 barrels of shells were experimentally planted. A full time biologist has been assigned to the Galveston area, chief oyster production area of Texas, who has been studying reef populations, checking area and conditions of various reefs with reference to size of shells, counting spat, recording growth rates, and correlating findings with hydrographic data. An expanded reef rehabilitation program is expected to be undertaken next year with the Texas dredge shell industry furnishing shells without cost to the Game and Fish Commission for the latter to plant in selected areas. The Coastal Fisheries Division will supervise the planting. Field work continues as previously reported but due to the work load of the sectionally located biologists it has been necessary to station another biologist in the field. A film in sound and color featuring the marine fishes has been completed and is now being shown to television audiences. The 1955 Texas Legislature passed a law placing the minimum size of trout at 12 inches, redfish at 14 inches, and flounder at 12 inches, applying to the three lower counties of the state.

## U. S. FISH AND WILDLIFE SERVICE ACTIVITIES OCTOBER 1954 -- OCTOBER 1955

The Fish and Wildlife Service, named in the Gulf fisheries compact as the primary research agency of the Gulf States Marine Fisheries Commission, has continued with a number of programs previously recorded in these annual reports and has expanded during the past year the scope of research. Some of the programs thought to be of general interest are summarized in the following paragraphs.

The Gulf commericial exploratory fishing program continued during the year with the **Oregon** completing five longline tuna fishing cruises. One commercial-type trip was completed during which over 29 tons of yellowfin tuna were caught in 14 days. Deep water shrimp trawling accounted for four trips. One cruise was devoted to field trials of underwater television. The principal effort during the current year will be to measure the commercial potentials since trips to locate productive areas of both tuna and the red shrimp appear to be no longer necessary. Generally speaking, the yellowfin tuna have been located in abundance in approximately 125 feet of water over depth of 6000 feet; while red shrimp appear chiefly in 1200-1500 feet of water. A building to house the exploratory unit and provide space for a technological laboratory will be constructed in Pascagoula, Mississippi, in 1956.

Biological investigations are being continued at the Fish and Wildlife Service, Galveston, Texas, laboratory. Although the shrimp program has not been in operation long enough for any conclusions to have been reached, the program is progressing according to the Commission's research plan. Under contracts, a detailed anatomical study is being made of white shrimp by Tulane University, New Orleans, Louisiana; histological studies are progressing at Texas A and M College, College Station, Texas; and tagging methods are being developed by the

University of Texas, Port Aransas, Texas. This research is to provide a basis for identifying stocks of shrimp. Principal among the shrimp studies undertaken by the Galveston laboratory, headquarters for the program, is that of determining materials upon which the shrimp feeds, and research to describe conditions favorable for shrimp development and survival.

Research on the Gulf menhaden will begin in the immediate future. The two known Gulf species will be studied anatomically in the Galveston laboratory. Rearing menhaden in aquaria will also permit physiological studies and growth observations. In the field, spawning seasons and areas will be determined, and scale samples, length frequencies, and other data will be collected for use in learning rates of growth and survival.

Of particular interest to Florida are two programs which come under the supervision of the Galveston laboratory. The red tide studies are a continuing program with laboratory cultures of the causative organism being treated with various chemicals in effort to develop growth control agents. An experiment in which fine copper sulphate was spread over the sea surface with cropdusting planes was successful in eliminating the organisms from an area approximately one-fourth mile square. Research on sponges has been contracted to the Marine Laboratory, University of Miami, Coral Gables, Florida. The program is expected to provide information on the location and extent of grounds, density by species and sizes, rates of reproduction and growth, effect of non-selective taking of sponges, environmental factors such as current patterns affecting replacement, diseases, and effectiveness of the minimum size law.

The program of oyster and oyster predator research at the Pensacola, Florida, laboratory has been expanded considerably during the past year with the addition of scientific personnel and the letting of contracts to Florida State University, Tallahassee, Florida, and to Texas A and M College, College Station, Texas. The program has been divided into two major objectives. The oyster drill is being studied from a standpoint of both mechanical and biological control. The second major objective is that of learning more about the ecology of Gulf oysters in order to identify those factors responsible for a superior commercial product, both in quality of meat and quantity produced. A survey of all water bottoms along the Gulf has begun. In about

two years it is expected figures will be made available on the location of oyster reef acreage in all areas thought best for production.

In order to acquire knowledge with regard to the freezing and frozen storage of Southern oysters, the Fish and Wildlife Service has developed a program of much importance to industry on the Gulf. The College Park, Maryland, laboratory is headquarters for the program. Several contractors on the Gulf are doing fundamental research in connection with this program. Tulane University, New Orleans, Louisiana, is carrying on physiological investigation of bleeding and discoloration of oysters. Florida State University, Tallahassee, Florida, is making a study of environmental, composition, and processing variables on adaptability of Southern oysters for freezing. Louisiana State University, Baton Rouge, Louisiana, is investigating the effects of seasonal and geographic variables of quality of fresh and frozen oysters. This, like a number of programs on the Gulf recently made possible through the application of Public Law 466 funds, is still in the data collecting stage.

A program designed to develop new uses for fish oils is of considerable interest nationally because of the several species of fishes to be considered during the period of research. Since menhaden is the second ranking Gulf fishery from a standpoint of value to the fishermen, the program is of particular interest to the menhaden industry of the Gulf states. Projects have been contracted in a number of states. Participating in this area, Texas A and M Research Foundation, College Station, Texas, is running chromatographic analysis of the constituents of marine oils and Florida State College, Lakeland, Florida, is making a study of fish oil insecticides and fungicides for the citrus industry.

Some technological studies to develop background information for grade standards for natural sponges is being undertaken on a contract basis by the University of Florida to improve the marketing situation.

All stations are now filled by fishery statistical agents who will participate in the statistical program on the Gulf, which program is intended to gather more detailed information regarding the commercial fisheries. One objective of the program is to

eventually produce information on poundage production per unit of effort, by areas, for shrimp and other fisheries. Agents are now located at Key West, Fort Myers and Tampa, Florida; Pascagoula and Biloxi, Mississippi; New Orleans, Houma and Morgan City, Louisiana; Galveston, Aransas Pass and Brownsville, Texas.

Some gear research, formerly carried on by the exploratory commercial fishing activity, Pascagoula, Mississippi, is now centered at Miami, Florida, and a new vessel is under construction from which gear will be tested with particular emphasis on its operation as recorded by underwater photography and television.

PEAT, MARWICK, MITCHELL & CO.

Certified Public Accountants

Hibernia Bank Building

New Orleans 12, La.

July 18, 1955

#### ACCOUNTANTS' REPORT

Commissioners The Gulf States Marine Fisheries Commission New Orleans, Louisiana

We have examined the statement of income and expenses of The Gulf States Marine Fisheries Commission for the year ended June 30, 1955 and the related statement of resources as of that date. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying statements of income and expenses and resources present fairly the results of the financial transactions of the Gulf States Marine Fisheries Commision for the year ended June 30, 1955 and its resources at that date, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Peat, Marwick, Mitchell & Co.

# THE GULF STATES MARINE FISHERIES COMMISSION Statement of Income and Expenses Year ended June 30, 1955

### Income:

Member states contributions:		
Alabama		\$ 1,000.00
Florida	•	3,500.00
Louisiana		5,000.00
Texas		4,000.00
Mississippi		1,000.00
Total income	-	14,500.00
Expenses:		
Salaries \$10	0,109.08	
·	,325.02	
	00.080,1	
Stationery, printing and supplies	565.63	
Telephone and telegraph	483.87	
Postage	112.18	
Electricity	92.75	
Accounting	175.00	
Insurance	244.27	
Depreciation	327.26	
Meeting expense	279.08	
Sundry	29.16	
Total expenses		14,823.30
Excess of expenses over income	•	323.30
Resources of the Commission, June 30, 1954		9,757.89
Resources of the Commission, June 30, 1955	\$	9,434.59

# Statement of Resources

# June 30, 1955

Cash	\$ 8,736.72
Traveling advance	250.00
Meter deposit	10.00
Prepaid insurance premiums	92.59
Equipment — at cost less allowance for	
depreciation, \$2,056.80	484.09
	9,573.40
Less accounts payable	138.81
	\$ 9,434.59
•	

# THE GULF STATES MARINE FISHERIES COMMISSION Supplementary Information to Accounts June 30, 1955

(1) Cash receipts (see accompanying statement)  Collection of receivable from State of Mississippi	\$14,500.00 2,000.00
	16,500.00
Cash disbursements:	
Expenses (see accompanying statement) 14,823.30	
Equipment purchases 40.00	
\$14,863.30	
	$= \frac{14,565.60}{}$
Excess of receipts over	
disbursements	1,934.40
Cash balance June 30, 1954	6,802.32
Cash balance June 30, 1955	\$ 8,736.72
Comprised as follows:  National American Bank of New Orleans —  checking account  Petty cash	\$ 8,724.56 12.16
	\$ 8,736.72

# (2) Equipment:

	Cost	Depreciati	on Net
Balance at beginning of year:			
Automobile	\$1,645.80	1,405.80	240.00
Furniture and fixtures	855.09	323.74	531.35
	2,500.89	1,729.54	771.35
Additions to furniture and fixture	res 40.00		40.00
Depreciation allowance for year	· —	327.26	(327.26)
•	2,540.89	2,056.80	484.09
Balance at end of year:			
Automobile	1,645.80	1,645.80	
Furniture and fixtures	895.09	411.00	484.09
	\$2,540.89	2,056.80	484.09

(3) Fidelity bond insurance carried — \$10,000.00 each on chairman, vice-chairman and secretary-treasurer of the Commission.

BUDGET

### GULF STATES MARINE FISHERIES COMMISSION

## Fiscal Year 1955-56

Salaries	\$10,200.
Trayel	1,325.
Rent	1,080.
Stationery, Office Supplies and Printing	560.
Telephone & Telegraph	480.
Postage	115.
Electricity	92.
Accounting	225.
Insurance	245.
Depreciation	90.
Meeting Expense	275.
Social Security	96.
Miscellaneous (Sundry)	30.
•	\$14,813.

Approved by the Commission October 21, 1955.