Coastal Zone
Information
Center

WP

04420
C.2

JUN 25 1975

FISHES, BIRDS AND MAMMALS OF THE COASTAL AREA OF ALABAMA

[redacted]

Alabama Department of Conservation
and Natural Resources

Montgomery, Alabama

Alabama. Dept. of Conservation & Natural Resources
S964.A2F57 1975 c.1

S
964
.A2
F57
1975

Preparation of this Document

Approved by: Claude D. Kelley, Commissioner
Department of Conservation and
Natural Resources

Compiled by: Hugh A. Swingle
James E. Keller
Ralph H. Allen, Jr.

FISHES, BIRDS AND MAMMALS

OF THE COASTAL AREA OF ALABAMA

[redacted]

Alabama Department of Conservation
and Natural Resources

Montgomery, Alabama
June 1975

Property of CSC Library

Reproduction of this document in whole or in part by a user is permitted.

The preparation of this document was partially financed through a Federal grant from the Department of Commerce, National Oceanic and Atmospheric Administration, as authorized by section 305 of the Coastal Zone Management Act of 1972. The program was administrated by the State Planning Division, Alabama Development Office, Office of the Governor.

For Information Address:

Alabama Development Office
State Office Building
Montgomery, Alabama 36104

Unique Report Number: Ala - ADO - X996 - CZMP - 05

Abstract: Three hundred species of fishes, 313 species of birds and 58 species of mammals are found within the two coastal counties of Alabama. These two coastal counties contain more species of wildlife than any other area of the state due to the great variety of habitats which range from the marine waters of the Gulf of Mexico to the upland forest lands. Our coastal wildlife resources contribute to either the commercial, recreational or aesthetic interests of all persons and are one of the most valuable resources of the coastal area.

CONTENTS

		Page
I.	INTRODUCTION	1
II.	FISHES OF THE COASTAL AREA OF ALABAMA	6
III.	BIRDS OF THE COASTAL AREA OF ALABAMA	29
IV.	MAMMALS OF THE COASTAL AREA OF ALABAMA	52

ILLUSTRATIONS

Page

Figure 1. Coastal habitats of Alabama 5

INTRODUCTION

The two coastal counties of Alabama contain the largest variety of wildlife to be found within any region of the State of Alabama. The diversity of aquatic and terrestrial habitats ranging from the barrier islands and beaches along the Gulf of Mexico inland through the low-lying marshlands associated with the brackish and freshwater bays and rivers, through the swamplands of the delta rivers to the forrested uplands of the northern regions of the two counties is unique within the State. Even though the coastal area is becoming developed at an ever increasing rate, 71 percent of the land of Mobile County and 73 percent of Baldwin County were classified as forest lands in 1971. The land area of the two counties totals 1,803,584 acres. The water area within the two counties includes 72,496 acres of freshwater rivers and streams; 22,800 acres of privately owned ponds; 389,868 acres of brackish bays, sounds and rivers; and 107,500 acres of marine waters off the 46 miles of Gulf beaches. The fish and wildlife resources within this vast land and water area are one of the most valuable assets of our coastal area. During 1971, 3.1 million fishing trips were made in the salt, brackish and fresh waters and 1.2 million hunting trips were made within the three county regional planning district that includes Mobile, Baldwin and Escambia counties. Approximately 98 percent of the fishing trips, and probably a similar percentage of the hunting trips, were made within the two coastal counties. The multimillion dollar seafoods industry of Mobile and Baldwin counties is dependent upon both

the direct harvest of fishes and shellfishes from our territorial waters and the natural productivity of our estuaries which are utilized as nursery areas by a majority of the fishes and shellfishes taken in the offshore catch. The smaller freshwater commercial fisheries contributes several thousands of pounds annually to the local demand for fresh fish. The contribution our wildlife resources make in aesthetic values, or the richness of person's lives, is incalculable. Certainly the number of persons participating in birding trips, annual bird counts and other organized activities related to wildlife can be tallied, however the number of occasions and values we all derive from watching a flock of white pelicans soaring over the Battleship Parkway or simply watching a squirrel search for nuts in the back yard cannot.

For purposes of this study aquatic and terrestrial habitats of the coastal zone have been grouped into the following five general types.

Marine Habitat. Waters of the Gulf of Mexico from Dauphin Island and Fort Morgan Peninsula seaward to the state boundary (3 miles).

Barrier Island Habitat. Dauphin Island, Sand Island and Fort Morgan Peninsula. Aquatic habitats include the front and back beaches, tidal pools, marsh ponds, tidal bayous and ditches. Freshwater lakes on Dauphin Island and Fort Morgan Peninsula contain introduced freshwater fishes and are not included. Moving inland from the gulf, terrestrial barrier island habitat typically includes

the sandy front beach; the sparsely vegetated dunes; the interior flat sandy woodlands vegetated principally with pines, oaks and palmettos; marshland; and finally a narrow beach zone along the leeward side. Interior woodlands occur only on the easternmost one-third of Dauphin Island and the eastern half of Fort Morgan Peninsula. Sand Island has neither woodlands or marshlands.

Estuarine and Marshland Habitat. Aquatic habitats include the bays, sounds, bayous and tidal rivers which are brackish all or most of the year and the rivers and bays of the Mobile Delta south of the tree-line. Terrestrial habitat consists of salt and brackish marshlands vegetated principally by cordgrasses and rushes and freshwater marshes vegetated largely by cane and sedges. Slightly higher elevations are vegetated by shrubs and willows.

Delta River and Swampland Habitat. Aquatic habitats include the rivers, streams and lakes of the Mobile Delta north of the tree-line to and including the Alabama and Tombigbee rivers to the northern boundaries of Baldwin and Mobile counties. During periods of extreme low flow salt water is detectable in the Mobile River 30 miles inland. However, it is the bottom water of this one river that is largely affected and the Mobile Delta can generally be considered as fresh north of the tree-line.

Also included within this category are the Alabama portion of the Escatawpa River System and the Perdido River System north of Blackwater River. Terrestrial habitat includes the poorly drained river floodplains which are principally vegetated by cypress, tupelo, black gum, hickories, oaks and bays.

Upland Habitat. Well drained uplands vegetated largely by longleaf and slash pines, sweetgum, oaks, titi, gallberry and bays. Aquatic habitat includes sandy-bottomed streams with moderate to fast flowing water, including pools and rapids.

Fishes, birds and mammals of the coastal area of Alabama are discussed in the following sections.

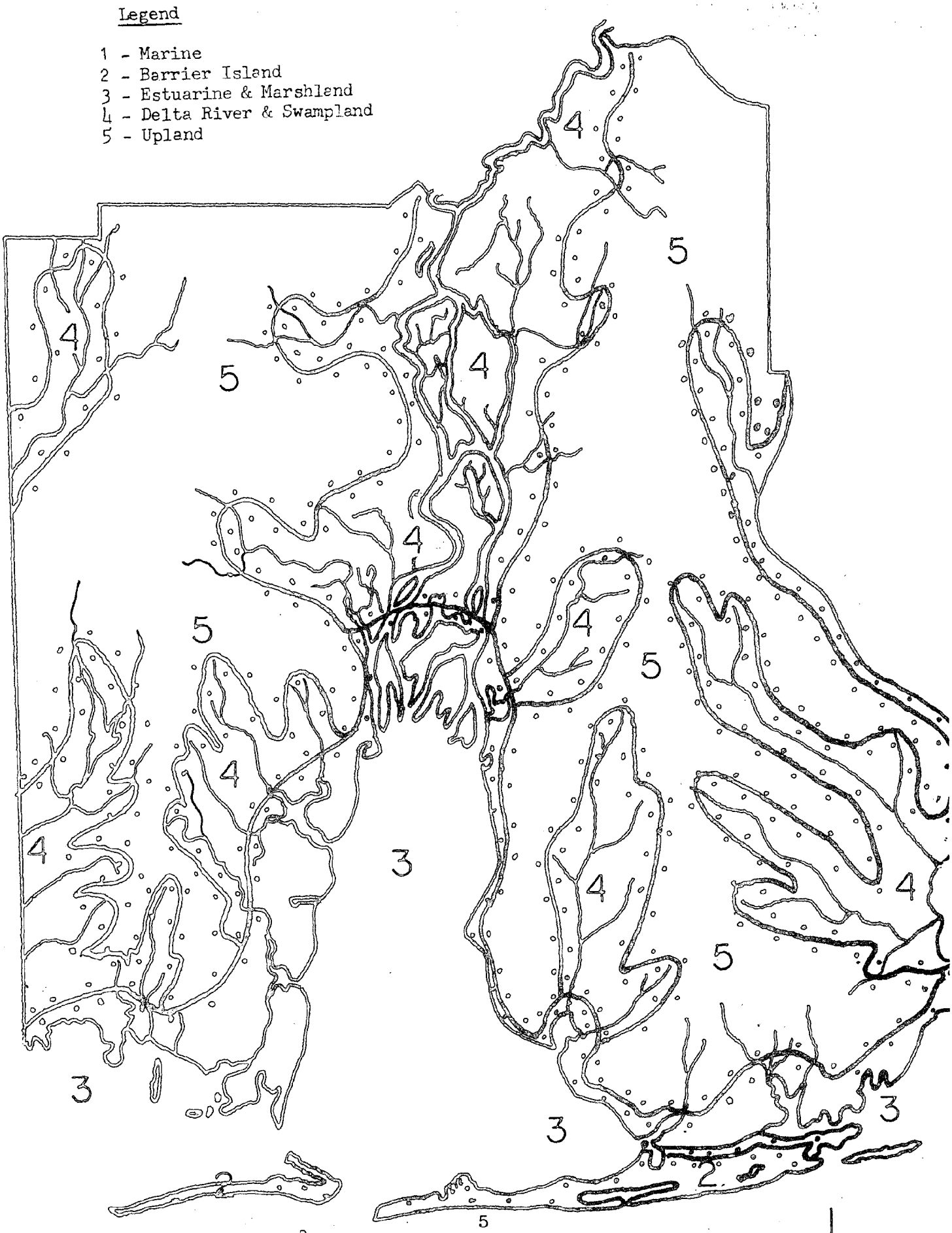

Figure 1. Coastal habitats of Alabama

FISHES OF THE COASTAL AREA OF ALABAMA

Hugh A. Swingle
Marine Resources Division
Dauphin Island, Alabama 36528

Introduction

Slightly more than 3 million sport fishing trips were made in salt, brackish and fresh waters of Mobile and Baldwin counties during 1971. The projected demand for recreational fishing will increase by 55 percent, or to 4.8 million trips, by 1980. The greatest increase will be in the demand for saltwater fishing trips. Data modified from the Auburn University Agricultural Experiment Station report entitled "Fishing in Alabama" are presented below:

	1971	1980
Freshwater Trips	1,138,007	1,494,064
Brackish water Trips	1,155,200	1,793,570
Saltwater Trips	770,130	1,467,473
	3,063,337	4,755,107

During 1971, 1,958 commercial fishermen were employed on 1,058 Alabama fishing boats and vessels which landed 34 million pounds of fish and shellfish valued at $14 million dockside. Sixty-two wholesale seafood and processing plants employed more than 2,000 people in 1971. The value of processed fishery products was $21 million during that year.

While most of the fish and shellfish landed at Alabama ports are harvested from offshore waters, the brackish and fresh waters of our coastal area are utilized as a nursery area by the young of most marine species taken in both the commercial and sport fisheries.

The great variety of aquatic habitats within the coastal area ranges from offshore marine waters of the Gulf, through the brackish water bays and marshes to the inland rivers and swamps and upland streams. Because of this great variety of habitats, there are more species of fishes found within the coastal area of Alabama than any other region of the State. Knowledge of the species composition of our coastal waters as well as the seasonal and areal distribution of these species is necessary for the protection and management of this important resource. While most of the freshwater fishes of our inland fresh waters show little tendency for migrating from place to place, this migratory pattern is characteristic of most of the saltwater fishes as well as many of the freshwater fishes in the freshwater streams and rivers along the coast which become brackish in late summer and fall as river discharge decreases. As salt content increases freshwater fishes generally migrate further inland to avoid brackish water while saltwater fishes may extend their range inland, as is the case with speckled seatrout which are commonly taken in the Mobile Delta and other coastal rivers during late fall. Most saltwater fishes, however, begin a seaward migration during late summer which is part of their normal migratory behavior. Early cold fronts further stimulate this off-

shore movement and flooding of the river systems later in the winter causes most of the saltwater fishes to leave the inside waters. Abnormally high floods, such as during 1961, 1973 and 1975, cause saltwater fishes to move further out into the Gulf than usual and some freshwater fishes to move down into Mobile Bay. During these years sunfishes, freshwater catfish and buffalo have been taken ocassionally near Dauphin Island by commercial fishermen. Following, and often during, the winter floods the great influx of larval or very small juvenile saltwater fishes begin entering the estuarine area. By April or May they reach their greatest abundance and may often be found in the same area and at the same time as juveniles of certain freshwater fishes. During the early spring when the salt content is very low there is multiple use of much of our coastal waters. Most freshwater fishes and most marine fishes are not found in low salinity estuarine water, which is often refered to as the common nursery area, but many of the more important freshwater sport fishes and most of the more important marine sport and commercial fishes are. Even though the number of species of fishes declines progressively as one moves further inland from the high, stable salinities of the Gulf of Mexico until entering permanent fresh waters, young of the so-called estuarine-dependent fishes are extremely abundant in the low salinity coastal waters. The fishes found in coastal waters can be divided into three types based upon their spawning location. These are the freshwater fishes, the estuarine fishes and the marine fishes. The latter two are not precise due to an incomplete knowledge of the life history of some species and most often are lumped together and refered to as saltwater fishes.

The following five catagories contain the fishes of the coastal area.

1 - Freshwater Resident. Species spawning in fresh water and not normally found in brackish water. Individuals may on rare ocassions, such as during winter and spring floods, be found in areas which are usually brackish during low flow periods.

2 - Fresh Water Entering Estuary. Species spawning in fresh water and which are commonly found in brackish water, although occurring most abundantly in fresh water. Juveniles are generally more abundant in brackish water than are adults.

3 - Estuarine Resident. Species spawning in brackish, estuarine waters, and either remain in brackish waters as young and adult or as young migrate inland to the brackish-freshwater interface or beyond into completely fresh water. Individuals are found in fresh waters along the coast, brackish bays and rivers, and marine waters for short distances offshore.

4 - Marine Entering Estuary. Species spawning in offshore, marine waters and commonly enter estuaries as juveniles and to some extent as adults. As juveniles, some species enter fresh waters inland of brackish water penetration, some are found in slightly brackish waters and are common or rare in strictly fresh waters, while others are found only in the lower more saline parts of the estuary.

5 - Marine Resident. Species spawning in offshore, marine waters and which only rarely stray into estuarine waters of the lower estuary.

Some species seldom come within 3 miles of our coastline and most migrate seaward during the low salinity and temperature periods during winter and early spring.

Effects of Man's Activities on Fisheries Resources

The two basic ways which man's activities detrimentally affect fisheries resources are reduction and alteration of aquatic habitat. Reduction of available aquatic habitat by filling water areas in almost all instances has a permanent effect on fisheries resources while physical or chemical alteration may have either a permanent or a temporary effect.

Between 1953 and 1971 approximately 2,200 acres of estuarine waters were filled to elevations above mean low tide. Filling of this water area resulted from construction of causeways, an airport, navigational channels and industrial and residential expansion. The areas filled range from small areas such as construction of a bulkhead along a water front lot to landfills of several hundred acres resulting from spoil disposal from navigational channels. Whether the filled area is removed from contributing in any way to fisheries resources depends upon the elevation of the fill. Areas filled to an elevation of only slightly above the water surface eventually may become vegetated with marsh grasses or other vegetation contributing organic debris to the surrounding waters. It is well documented that decomposition of vegetative matter contributes significantly

to the natural productivity of water areas. Considerable interest has recently been directed toward establishing marsh grasses on low-lying spoil banks of navigational channels in order to partially offset the loss of aquatic habitat resulting from channel construction and maintenance which is common place in most coastal areas.

Physical and chemical alteration of aquatic habitat has most likely had a far greater effect upon our fisheries resources than physical reduction of available habitat. There is very little water area left in Mobile and Baldwin counties that has not been altered to some degree by man's activities. The few exceptions include parts of the eastern side of the Mobile Delta and some of the smaller bays and inland streams of both counties. Altered areas within the brackish waters of the two counties include 131 miles of navigational channels dredged through 3,452 acres of waterbottoms for which 23,000 acres of additional waterbottoms are used for spoil disposal. More than 73,000 acres of our coastal waters are permanently closed to shellfish harvest and the remainder periodically closed due to high bacterial count in the water which is attributed in part to domestic and industrial pollution. Several hundred acres of water such as Chickasaw Creek, Three-mile Creek and portions of the Mobile River have been degraded by industrial effluents to a degree where they contribute very little to fisheries resources. Several hundred acres of coastal marshlands which at one time contributed to the productivity of our estuarine waters have been filled for industrial and residential expansion. Detri-

mental effects of habitat alteration range from those that are immediately obvious such as a fish kill or an oil spill to those causing a gradual change in habitat which can be detected only after years of monitoring. Certain pollutants may not be toxic to fishes but may be extremely toxic to fishfood organisms such as aquatic insects or crustaceans thereby reducing overall fisheries productivity. Other pollutants may accumulate within the flesh of fishes to a concentration where the fishes are no longer palatable or legally marketable. Discharge of effluents with high oxygen demand may cause temporary or permanent depression of dissolved oxygen content of the water preventing fishes from utilizing a localized area. High water temperature and increases in salt content decrease the solubility of oxygen causing low dissolved oxygen content in much of our coastal waters during summer. Addition of industrial or domestic effluents with high oxygen demand may have disasterous consequences, especially when discharged into small watercourses which have very little flow or flushing action. Channelization may be detrimental or beneficial depending upon circumstances. More species of fishes are found in the Mobile Ship Channel than on the adjacent bay flats due to the higher salt content of the bottom waters of the 40-foot channel. Channels which are considerably deeper than the adjacent areas also provide a somewhat more temperate winter environment. Most channels, however, have fewer species of fishes than unaltered adjacent areas due to reduction of habitat diversity. This is particularly true of channelization of small inland streams for so-called stream improvement projects. Deep channels, such as the Mobile Ship Channel, cause saltwater

penetration into previously freshwater areas altering the freshwater habitat. During periods of extreme low flow salt water has been detected in the Mobile River approximately 30 miles upstream from Mobile. The salt content of the bottom water of the Mobile River at the L & N Railroad trestle is occasionally as high as at Dauphin Island. Saltwater penetration into freshwater areas causes changes in the species composition of the fishes, aquatic invertebrates and aquatic vegetation of the area. Periodic maintenance is required on all channels to remove accumulated sediments. Disposal of material from initial construction and maintenance of navigational channels has always been a problem in coastal areas. Historically, dredged spoil has been deposited in water adjacent to the channel or on land as close to the channel as possible to minimize dredging costs. Nonmotile bottom dwelling organisms, which are relatively important food items for many fishes, are destroyed by open water disposal and dredging sediment from the channel. Most of these bottom dwelling species become re-established after a period of time but periodic maintenance may prevent complete repopulation both in the channel and on the spoil area. Disposal of spoil material on land has covered many acres of productive marshland and almost one-half of a large bay in the Mobile Delta. Recent environmental concern over marshland destruction and rigid diking requirements have reduced this destruction to some degree.

From a water quality standpoint, the smaller streams are more sensitive to environmental damage than are free flowing rivers or open bays

which are constantly being flushed by currents. Discharge of effluents into small tributary streams, especially brackish streams and bayous which normally have low dissolved oxygen during summer, causes considerably more problems than if discharged into larger bodies of water. Physical alteration such as channel construction also has more pronounced effects on the smaller waterways.

Fishes of the marine, brackish and fresh waters of the coastal area of Alabama are listed in the following tables.

FISHES

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Lampreys						
Southern brook lamprey	1				R	U
Least brook lamprey	1				R	R
Requiem sharks						
Finetooth shark	4	U	U	R		
Blacknose shark	4	C	U	R		
Bull shark	4	C	U	R	R	
Blacktip shark	4	C	C	R		
Silky shark	5	U				
Atlantic sharpnose shark	4	C	U	U		
Hammerhead sharks						
Scalloped hammerhead	4	U	R	R		
Bonnethead	4	C	U	R		
Smooth hammerhead	5	U				
Sawfishes						
Smalltooth sawfish	4	R	R	R		
Guitarfishes						
Atlantic guitarfish	4	R	R	R		
Electric rays						
Lesser electric ray	4	C	C	U		

Category: 1 - Freshwater Resident 2 - Freshwater Entering Estuary
3 - Estuarine Resident 4 - Marine Entering Estuary
5 - Marine Resident

C = Common U = Uncommon R = Rare

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Skates						
Clearnose skate	4	C	C	R		
Freckled skate	4	R	R	R		
Roundel skate	4	C	U	U		
Stingrays						
Southern stingray	4	R	R	R		
Atlantic stingray	3	C	C	C	U	
Bluntnose stingray	4	C	C	C		
Smooth butterfly ray	4	R	R	R		
Eagle rays						
Spotted eagle ray	4	R				
Cownose ray	4	U	R	R		
Manta rays						
Atlantic manta	4	R	R	R		
Sturgeons						
Atlantic sturgeon	2	R	R	R	R	
Shovelnose sturgeon	1				R	
Paddlefishes						
Paddlefish	2			R	U	
Gars						
Spotted gar	2			C	C	U
Longnose gar	2			C	C	U
Alligator gar	2	R	R	U	U	
Bowfins						
Bowfin	1				U	U

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Tarpons						
Ladyfish	4	C	C	U		
Tarpon	4	R	R	R	R	
Freshwater eels						
American eel	4	U	U	U	U	U
Moray eels						
Blackedge moray	4	U	U	R		
Conger eels						
Bandtooth conger	5	U				
Yellow conger	4	R				
Snake eels						
Key worm eel	4	R	R			
Whip eel	4	U	U	U		
Sooty eel	4	U	U			
Speckled worm eel	3	C	C	C	R	
Shrimp eel	4	C	C	U		
Palespotted eel	5	R				
Herrings						
Alabama shad	2		R	R	U	
Skipjack herring	2	C	C	C	C	
Gulf menhaden	4	C	C	C	C	
Yellowfin menhaden	4	R	R	R		
Gizzard shad	2	R	R	R	C	U
Threadfin shad	2	U	U	C	C	U
Scaled sardine	4	C	C	U	R	
Atlantic thread herring	4	C	C	R		
Spanish sardine	5	R	R			

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Anchovies						
Striped anchovy	4	C	C	U	R	
Dusky anchovy	4	U	R	R		
Bay anchovy	3	C	C	C	C	R
Flat anchovy	5	C	U			
Mooneyes						
Mooneye	1				U	
Pikes						
Redfin pickerel	2			R	U	C
Chain pickerel	2			R	U	U
Lizardfishes						
Largescale lizardfish	4	R	R	R		
Inshore lizardfish	4	C	C	C		
Minnows and Carps						
Carp	1				R	U
Silverjaw minnow	1				U	C
Cypress minnow	1					U
Silvery minnow	1					U
Speckled chub	2			R		
Silver chub	2			U		
Golden shiner	2			U		
Emerald shiner	1			R		
Ironcolor shiner	1			U		
Pugnose minnow	2			R		
Fluvial shiner	1					
Sailfin shiner	1					
Longnose shiner	1					
Tailight shiner	1					
Coastal shiner	2			C		
Cherryfin shiner	1					
"Silverband" shiner	2			U		
	1					
	2			U		

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Flagfin shiner	2			R	U	C
Weed shiner	2			U	C	C
Blacktail shiner	1				C	C
Mimic shiner	1				R	R
Bullhead minnow	1				U	U
Creek chub	1				R	U
Suckers						
Quillback	1				R	
Highfin carpsucker	1				U	
Blue sucker	1				R	
Creek chubsucker	1				R	U
Lake chubsucker	2			R	U	R
Sharpfin chubsucker	2				U	C
Smallmouth buffalo	2			R	C	
Spotted sucker	1				U	U
Blacktail redhorse	1				U	C
Freshwater catfishes						
Blue catfish	2			U	C	R
Yellow bullhead	1				U	U
Brown bullhead	2			R	U	U
Channel catfish	2			U	C	R
Black madtom	1				U	U
Tadpole madtom	1				U	U
Speckled madtom	1				U	C
Freckled madtom	1				R	C
Flathead catfish	1				U	R
Sea catfishes						
Sea catfish	3	C	C	C	R	
Gafftopsail catfish	3	U	U	U	R	
Pirate perches						
Pirate perch	2			R	U	U

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Toadfishes						
Gulf toadfish	3	C	C	U		
Atlantic midshipman	3	C	C	U		
Clingfishes						
Skilletfish	3		U	U		
Frogfishes						
Singlespot frogfish	4	U	R	R	R	
Sargassum fish	5	R	R	R		
Batfishes						
Pancake batfish	5	R				
Shortnose batfish	4	R	R	R		
Polka-dot batfish	5	R				
Codfishes						
Southern hake	4	C	R	U		
Spotted hake	4	C	R	U		
Cusk-eels						
Bearded brotula	5	U				
Crested cusk-eel	4	U	U	U		
Flyingfishes & Halfbeaks						
Atlantic flyingfish	5	R	R			
Ballyhoo	5	R				
Halfbeak	4	U	U	R		
Needlefishes						
Flat needlefish	5	R				
Atlantic needlefish	3	C	C	C	U	
Timucu	4	R	R			
Houndfish	4	R	R			

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Killifishes						
Diamond killifish	3		C	R	R	
Sheepshead minnow	3		C	U	R	
Golden topminnow	2			R	U	R
Marsh killifish	3		C	U		
Gulf killifish	3		C	C	R	
Saltmarsh topminnow	3		C	C		
Blackstripe topminnow	1				R	
Starhead topminnow	2			U	U	U
Blackspotted topminnow	2			R	C	C
Longnose killifish	3		C	U		
Pygmy killifish	1				R	R
Rainwater killifish	3			C	R	
Livebearers						
Mosquitofish	2		C	C	C	U
Sailfin molly	3		C	U	R	
Silversides						
Brook silverside	2			R	U	U
Rough silverside	3	C	C	U		
Tidewater silverside	3	C	C	C	U	
Pipefishes & Seahorses						
Lined seahorse	4	U	U	R		
Dusky pipefish	4	R	R	R		
Chain pipefish	4	C	C	U		
Gulf pipefish	3	U	C	C	R	
Temperate Basses						
White bass	1				U	
Yellow bass	2			R	U	
Striped bass	2			R	R	

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Sea Basses						
Rock sea bass	4	C	U	U		
Dwarf sand perch	4	C	R			
Speckled hind	5	R	R			
Red grouper	5	R				
Warsaw grouper	5	R				
Black grouper	4	U	R			
Belted sandfish	5	U				
Soapfishes						
Whitespotted soapfish	5	R				
Sunfishes						
Rock bass	1				U	U
Flier	1				R	R
Everglades pygmy sunfish	2			R	U	U
Banded pygmy sunfish	1				C	U
Bluespotted sunfish	2				C	
Green sunfish	1				R	R
Warmouth	2			U	C	U
Orangespotted sunfish	1				U	
Bluegill	2			C	C	U
Dollar sunfish	2			R	R	
Longear sunfish	2			R	C	U
Redear sunfish	2			C	C	U
Spotted sunfish	2			C	U	U
Spotted bass	1				C	C
Largemouth bass	2			C	C	C
Black crappie	2			R	C	
White crappie	1				C	
Perches						
Crystal darter	1				U	U
Naked sand darter	1				U	C
Scaly sand darter	1				R	R
Brown darter	1					R
Swamp darter	1				U	
Johnny darter	1				R	

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Cypress darter	1				U	
Speckled darter	1					U
Gulf darter	1				R	R
Banded darter	1					R
Yellow perch	1				R	
Freckled darter	1				R	
Blackbanded darter	1				R	C
Log perch	1				R	U
Walleye	1				R	
Bluefishes						
Bluefish	4	C	C	R		
Cobias						
Cobia	4	C	U	R		
Remoras						
Sharksucker	4	U	R			
Jacks & Pompanos						
African pompano	5	R	R			
Blue runner	4	C	C	R		
Crevalle jack	4	C	C	C	R	
Horse-eye jack	5	R	R			
Atlantic bumper	4	C	C	C	R	
Round scad	5	R				
Rainbow runner	5	R				
Bluntnose jack	4	R	R	R		
Leatherjacket	4	U	U	U		
Bigeye scad	5	R				
Lookdown	4	U	U	R		
Greater amberjack	5	U	U			
Almaco jack	5	R	R			
Florida pompano	4	C	C	U		
Permit	4	U	U	R		
Palometa	5	R	R			

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Rough scad	5	R				
Atlantic moonfish	4	C	C	U		
Dolphins						
Dolphin	5	R				
Snappers						
Red snapper	4	C	U	R		
Gray snapper	4	C	U	U	R	
Lane snapper	4	U	U	R		
Tripletail						
Tripletail	4	U	U	U		
Mojarras						
Spotfin mojarra	4	C	C	C	R	
Silver jenny	4	U	U	U		
Grunts						
Pigfish	4	C	C	U		
Porgies						
Sheepshead	4	C	C	C	U	
Pinfish	4	C	C	C		
Longspine porgy	4	U	U	U		
Drums						
Freshwater drum	1				C	
Silver perch	4	C	C	C	R	
Sand seatrout	3	C	C	C	U	
Spotted seatrout	3	C	C	C	U	
Silver seatrout	4	C	U	R	R	
Banded drum	4	C	C	U		
Spot	4	C	C	C	R	
Southern kingfish	4	C	C	U		

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Minkfish	4	R	R	R		
Gulf kingfish	4	C	C	R		
Atlantic croaker	4	C	C	C	U	
Black drum	4	C	C	C	R	
Red drum	4	C	C	U	R	
Star drum	4	R	R	R		
Spadefishes						
Atlantic spadefish	4	C	C	U		
Parrotfishes						
Emerald parrotfish	5	R	R			
Mullets						
Striped mullet	4	C	C	C	C	
White mullet	4	U	U	R		
Barracudas						
Great barracuda	5	R	R			
Northern sennet	5	C	C			
Guaguanche	4	U	U	R		
Threadfins						
Atlantic threadfin	4	U	U	U		
Stargazers						
Southern stargazer	4	C	C	R		
Blennies						
Seaweed blenny	4	R	R			
Striped blenny	3		U			
Florida blenny	3		R			
Crested blenny	3		R	R		
Feather blenny	3			R		
Freckled blenny	3		C	C		

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Sleepers						
Fat sleeper	3		C	U		
Spinycheek sleeper	3		U	U	R	
Emerald sleeper	3			R		
Gobies						
Frillfin goby	3		R			
Lyre goby	3		U	R		
Violet goby	3		U	U		
Darter goby	3		C	C	R	
Sharptail goby	3		C	C		
Freshwater goby	3			U	R	
Naked goby	3		C	C	R	
Twoscale goby	3		R	R		
Clown goby	3		C	C	R	
Green goby	3		U	U		
Wormfishes						
Pink wormfish	3			R		
Cutlassfishes						
Atlantic cutlassfish	4	C	C	C	R	
Mackerels & Tunas						
Wahoo	5	R				
Little tunny ("bonita")	5	C				
Atlantic bonito	5	R				
King mackerel	5	C	U			
Spanish mackerel	4	C	C	U		
Blackfin tuna	5	R				
Billfishes						
Sailfish	5	R				

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-Land	Upland
Butterfishes						
Man-of-war fish	4	R	R	R		
Harvestfish	4	C	C	U		
Gulf butterfish	4	C	C	U	R	
Scorpionfishes						
Barbfish	4	U	U			
Smoothhead scorpionfish	4	U	R			
Searobins						
Blackfin searobin	4	C	U	U		
Blackwing searobin	4	C	U	R		
Leopard searobin	4	U	U	U		
Bighead searobin	4	C	C	C	R	
Flounders						
Ocellated flounder	4	C	C	C		
Bay whiff	4	C	C	C	R	
Spotted whiff	4	U	U	U		
Mexican flounder	4	U	R			
Fringed flounder	4	C	C	C	R	
Gulf flounder	4	U	U	R		
Southern flounder	4	C	C	C	R	
Broad flounder	5	U	U			
Soles						
Lined sole	4	U	U	U	R	
Hogchoker	3	C	C	C	C	
Tonguefishes						
Offshore tonguefish	4	C	C	U		
Blackcheek tonguefish	4	C	C	C	R	

Species	Category	Marine	Barrier Island	Estuarine Marshland	Delta River Swamp-land	Upland
Triggerfishes & Filefishes						
Orange filefish	4	C	U	R		
Gray triggerfish	4	R				
Planehead filefish	4	C	C	U		
Boxfishes						
Scrawled cowfish	4	U	U			
Puffers						
Smooth puffer	4	U	R	R		
Southern puffer	4	R	R	R		
Least puffer	4	C	C	C		
Porcupinefishes						
Striped burrfish	4	C	U	U		

BIRDS OF THE COASTAL AREA OF ALABAMA

James E. Keeler
Game and Fish Division
Montgomery, Alabama 36130

Introduction

A total of 313 birds occur sometime during the year in the two coastal counties of Alabama. Some are permanent residents, others are found during the breeding season, while others spend the winter months in this area as their southernmost range. Twenty-three other species of birds are rare transients that frequent this area on an average of once every twenty-five years. These are accidentals and do not normally range here.

Some birds have become extinct such as the Carolina Parakeet and the Passenger Pigeon. Others are in the midst of range extensions. The Brown-headed Cowbird and the Robin although not known to breed in southern Alabama twenty years ago now breed as far south as Mobile.

Certain species of birds experience difficulty in their attempt to adapt to environmental changes. These are the specialists--and strict specialization can lead to extinction. These species possess at least one weak link in their life cycle which may be related to obtaining food, adjusting to changes in habitat, or show susceptability to certain pesticides or other chemicals released in their environment. A drastic change of this type may bring on extinction very quickly.

Like other forms of life, bird populations are not stable. But neither is the environment. Birds are good indicators of environmental change. When their habitat - whether nesting, feeding or resting is changed - an immediate response will be noted, especially among birds in restricted ranges. Acts of nature such as plant succession, hurricanes, tornados, flooding and fire are constantly changing the habitat. Add man's manipulation of the environment as another ingredient and the habitat is certain to change, often extensively and drastically.

Large scale man-made changes in the environment are noticeable to most people. River impoundments, clear-cutting, dredging and filling, urban expansion and highway construction are good examples. Not so noticeable are such changes as small stream channelization, clean farming and additional housing which have an impact on the ecosystem.

The use and, especially the misuse, of pesticides, herbicides and certain other chemical pollutants are an invisible force that definitely effects the environment. These can change the range and populations of birds very quickly. An excellent example is the Brown Pelican. Until 1957, the Brown Pelican was considered abundant along the Alabama gulf coast. Since that time, the local population was almost decimated by the widespread use of chlorinated hydrocarbon pesticides, especially DDT. The population declined from about 1,800 birds in 1956 to about 60 birds in 1971. Since the use of DDT and its allies has been banned or restricted, the Brown Pelican population is again increasing. In 1974, approximately 400 birds were recorded on the Alabama coast.

Of all vertebrate animals, birds are by far the most frequently observed and admired by the human population. Since birds occupy almost every ecological niche, they are commonly observed daily by most persons as they go about their everyday activities. This aesthetic value is impossible to convert into dollars and cents. Each year hundreds of professional and amateur ornithologists visit the various habitat types of the Alabama coast to study and observe birds. These activities include banding, counting, and the compiling of a list of all birds seen during a specified period.

Dauphin Island and the Fort Morgan Peninsula are areas recognized by ornithologists throughout the nation as "top birding areas". Due to their location, these barrier islands act as rest stops for migratory birds on their way to and from Central and South America. Migratory birds from Canada, the New England States and in fact, most of the states in the eastern half of the United States, funnel into this area for their southward flight across the Gulf of Mexico. Thus, the destruction of this habitat would produce profound effects on many species of birds in eastern North America.

The two coastal counties of Alabama provide excellent and diverse recreation for the sport hunter. All species of game birds found in Alabama are also present in Mobile and Baldwin counties. This area could be considered a sportsman's paradise. Mourning doves, waterfowl, coots, turkeys, quail, snipe, woodcock and rail provide sport hunters thousands of recreational days per year. During the 1974-75 hunting season, sportsmen could pursue some kind of game bird from October 5 to February 28, or a period of five months.

Dove hunting provides the sportsmen with the most number of recreation days, followed by quail, waterfowl and coot hunting. Dove hunting is becoming more limited in Mobile and Baldwin counties at the present time due to changes in farming procedures where the dual crop season is now being used. Once a crop is harvested, the land is immediately plowed and prepared for planting of the next crop. This procedure is not conductive to good dove management since waste grain is not allowed to remain on top of the ground over an extended period. Approximately three and one-fourth million doves are harvested throughout Alabama each year by over a hundred thousand hunters. No survey has been conducted in just the two coastal counties; however, it is safe to assume that over 200,000 doves are harvested annually each year in this area.

Waterfowl and coot hunting above and below Battleship Parkway provides recreation for a large number of hunters. Although waterfowl populations have decreased in the area in recent years it is due primarily to "short-stopping" of ducks and geese in the more northern states during the winter months. The Mobile Bay area produces food for ten times as many ducks that now frequent this area during the fall and winter. Aerial surveys show the duck population in Mobile Bay in 1974 to total 6,300 ducks and 21,800 coots. Duck hunters kill approximately one duck and three coots per hunting trip in Mobile Bay.

Quail hunting provides sportsmen with a number of recreation days in the upland areas of Mobile and Baldwin counties. They are more commonly found in the agricultural areas.

The wild turkey is abundant in the upland wooded areas in the northern half of the coastal counties. This species is considered a "trophy bird" by most hunters and choice hunting areas are usually leased by various sportsmen's clubs and hunting practices and procedures are strictly regulated by these clubs.

The Common Snipe, Woodcock, and the various species of rails and gallinules are present during the winter months for the specialized hunter. These birds provide some hunter recreation, however they are not harvested in large numbers since most sportsmen are not familiar with their secretive habits and lack the knowledge and incentive to pursue them.

Since Alabama contains only small acreages of barrier islands and estuarine and marshland habitat, it is extremely important that the remaining wild areas be preserved in their natural state. Continued human enchroachment and expansion of beach cottages, roads and industrial sites could quickly eliminate the habitat for numerous species of birds that are adapted to these unique areas in this state. Nesting sites for gulls, terns and other coastal birds are fast disappearing. Future plans for any type of construction should include considerations for the well-being of these bird populations.

BIRDS

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Common Loon	C-FWS R-Su		C-W	C-W	
Red-throated Loon	R-W		R-W		
Horned Grebe	C-FWS	C-FWS	C-FWS	C-FWS	
Eared Grebe		R-FWS	R-FWS		
Pied-billed Grebe	C-W	C-FWS R-Su-B	C-FWS	C-FWS	C-FWS R-Su-B
Greater Shearwater	R-SuF	R-F			
White Pelican		U-FWS	C-FWS U-Su	U-FWS	
Brown Pelican	C-SuS U-F R-W	C-SuS U-F R-W	C-SuS U-F R-W		
Gannet	C-WS	R-WS			
Double-crested Cormorant	C-FWS R-Su	C-FWS	C-FWS		
Anhinga				U-B-P	
Magnificent Frigate-bird	C-SSuF R-W	C-SSuF	R-Su		
Great White Heron		R-SuF	R-Su		
Great Blue Heron	M	C-P-B	C-P-B	C-P-B	C-P
Green Heron	M	C-SSuF-B R-W	C-SSuF-B R-W	C-SSuF-B	C-SSuF-

C = Common
U = Uncommon
R = Rare

S = Spring
Su = Summer
F = Fall
W = Winter

M = Migrants
P = Permanent Resident
B = Breeds

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Little Blue Heron	M	C-SSuF-B	C-P-B	C-P-B	C-SSuF-B
Cattle Egret	M	C-SSuF-B	C-SSuF-B	C-SSuF-B R-W	C-SSuF-B R-W
Reddish Egret	M	C-SSuF R-W			
Great Egret	M	C-SSuF R-W	C-SSuFW	C-SSuFW-B	C-SSuF-B
Snowy Egret	M	C-SSuFW-B	C-SSuFW	C-SSuFW-B	C-SSuF-B
Louisiana Heron	M	C-SSuFW-B	C-SSuFW-B	C-SSuFW-B	U-Su
Black-crowned Night Heron		R-P-B	R-P-B	R-P-B	
Yellow-crowned Night Heron		C-SSuFW	C-SSuFW	C-SSuFW-B	C-SuF
Least Bittern	M	C-SSuF-B R-W	C-SSuF-B	R-SSuF-B	
American Bittern		U-FWS	U-FWS	U-FWS	
Wood Stork			U-SF	U-SuF	
Glossy Ibis		R-SSuF-B			
White-faced Ibis		R-SuF			
White Ibis	M	C-SF	C-SF	C-SSuF-B R-W	R-SF
Canada Goose			U-W	U-W	
White-fronted Goose		R-FWS	R-FWS	R-FWS	
Snow Goose	M	C-F R-WS	C-F R-WS	C-F R-WS	R-F
Blue Goose	M	C-F R-WS	C-F R-WS	C-F R-WS	R-F

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Fulvous Tree Duck		R-FS		R-FS	
Mallard	M	U-FS	U-FS	C-FWS	U-FS
Black Duck	M		U-FS	C-FWS	
Mottled Duck		R-SSu-B	R-FWS	R-FWS	
Gadwall	M	U-FWS	C-FWS	C-FWS	U-FS
Pintail	M	U-FWS	C-FWS	C-FWS	U-FS
Green-winged Teal	M	C-FWS	C-FWS	C-FWS	U-FS
Blue-winged Teal	C-M	C-P-B	C-P	C-P	C-FS
American Widgeon	M	C-FWS	C-FWS	C-FWS	U-FS
Shoveler	M	C-FWS	C-FWS	C-FWS	U-FS
Wood Duck	M	C-P-B	C-P-B	C-P-B	C-P-B
Redhead	M	C-FWS	C-FWS	U-FWS	
Ring-necked Duck	M	U-FWS	U-FWS	C-FWS	C-FWS
Canvasback	M	C-FWS	C-FWS	C-FWS	C-FWS
Greater Scaup	M	R-FWS	R-FWS		
Lesser Scaup	C-M	C-FWS	C-FWS	C-FWS R-Su	C-FWS
Common Goldeneye		U-WS	U-WS		
Bufflehead	M	C-FWS	C-FWS	C-FWS	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Oldsquaw	M	R-WS	R-WS		
White-winged Scoter	R-FWS				
Surf Scoter	R-FWS				
Common Scoter	R-FWS				
Ruddy Duck	M	C-FWS	C-FWS	C-FWS	C-FS
Hooded Merganser			R-FWS	R-FWS R-Su-B	
Common Merganser		R-W			
Red-breasted Merganser	C-FWS R-Su	C-FWS R-Su	C-FWS	C-FWS	
Turkey Vulture		R-P	C-P-B	C-P-B	C-P-B
Black Vulture			R-P	R-P	R-P-B
Swallow-tailed Kite		R-S	R-SSu	R-SSuF	R-SSu
Mississippi Kite		R-SF	R-Su	R-SSuF	R-SSu
Sharp-shinned Hawk		R-SW U-F	R-FWS	R-FWS	R-FWS
Cooper's Hawk		R-SF	R-SF	R-SF	R-SF
Red-tailed Hawk		C-SFW R-Su-B	C-SFW	C-SFW	C-SFW R-Su-B
Red-shouldered Hawk		U-SFW	U-SFW	U-SFW	U-SFW
Broad-winged Hawk		R-S C-F	R-SW C-F	R-W C-SF	C-SSuF-B
Rough-legged Hawk		R-W	R-W	R-W	R-W

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Golden Eagle					R-W
Bald Eagle	M	R-FWS	R-FWS	R-FWS	
Marsh Hawk		C-FWS	C-FWS	C-FWS	C-FWS
Osprey	M	U-SSuF-B R-W	U-SSuF-B R-W	U-SSuF-B	U-SF
Peregrine Falcon	M	R-FS			
Merlin	M				
American Kestrel	M	C-FWS	C-FWS	C-FWS	C-FWS
Bobwhite		R-P-B			C-P-B
Turkey					C-P-B
Sandhill Crane		R-FWS			
King Rail		R-P-B	R-P-B	R-P-B	
Clapper Rail		C-P-B	C-P-B	U-P-B	
Virginia Rail		C-FWS	C-FWS	C-FWS	
Sora		C-FWS	C-FWS	C-FWS	
Yellow Rail					R-W
Black Rail		R-SSuF-B		R-S	
Purple Gallinule		U-SSuF-B	U-SSuF-B	U-SSuF	
Common Gallinule		C-P-B	C-P-B	C-P-B	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
American Coot		C-FWS U-Su-B	C-FWS U-Su-B	C-FWS U-Su-B	C-FWS
American Oystercatcher		R-P-B	R-P-B		
Semipalmated Plover		C-FWS	C-FWS	C-FWS	
Piping Plover		C-FWS	C-FWS		
Snowy Plover	M	R-P-B			
Wilson's Plover		U-SSuF-B			
Killdeer		R-W	U-W	C-FWS	C-FWS
American Golden Plover	M	C-S R-F			R-S
Black-bellied Plover		C-FWS R-Su	C-FWS R-Su	C-FWS R-Su	
Ruddy Turnstone	M	C-FWS R-Su			
American Woodcock				C-W	C-P-B
Common Snipe		U-FWS	U-FWS	C-FWS	C-FWS
Long-billed Curlew		U-S			
Whimbrel		C-S R-FW			
Upland Plover		C-S R-SuF			C-S R-SuF
Spotted Sandpiper		C-SF R-W	C-SF R-W	C-SF R-W	C-SF
Solitary Sandpiper		C-SF	C-SF	C-SF	C-SF
Willet		C-P-B	C-P-B	U-P-B	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Greater Yellowlegs		C-FWS R-Su	C-SF	C-FWS R-Su	U-SF
Lesser Yellowlegs		C-FS U-W R-Su	C-SF	C-FWS R-Su	U-SF
Knot	M	U-SSuFW			
Pectoral Sandpiper	M	C-SF	C-SF	C-SF	C-SF
White-rumped Sandpiper		R-S	R-S		
Baird's Sandpiper		R-SF			
Least Sandpiper		C-FWS R-Su	C-FWS	C-FWS	
Dunlin		C-FWS	C-FWS	C-FWS	
Short-billed Dowitcher		C-FWS R-Su	C-FWS	C-FWS	
Long-billed Dowitcher		U-SF R-Su	U-SF	U-SF	
Stilt Sandpiper		U-SF	U-SF	U-SF	
Semipalmated Sandpiper		C-FWS	C-FWS	C-FWS	
Western Sandpiper		C-FWS	C-FWS	C-FWS	
Buff-breasted Sandpiper		U-F R-S	R-F	R-F	
Marbled Godwit		U-F R-WS	U-F R-S	U-F R-S	
Sanderling		C-SSuFW	C-SSuFW	C-SSuFW	
American Avocet		U-FS	U-FS	C-FWS	
Black-necked Stilt		U-FS	U-FS	U-SSuF-B	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Red Phalarope	U-W				
Wilson's Phalarope		R-SuF		R-S	
Northern Phalarope	R-F				
Pomarine Jaeger	R-FS	R-FS			
Parasitic Jaeger	R-FWS	R-FS			
Great Black-backed Gull		R-S	R-FW		
Herring Gull	C-FWS	C-FWS R-Su	C-FWS	C-FWS R-Su	
Ring-billed Gull	C-FWS	C-FWS R-Su	C-FWS	C-FWS R-Su	
Laughing Gull	C-P	C-P	C-P	C-P	
Bonaparte's Gull	C-FWS	C-FWS	C-FWS	C-FWS	
Gull-billed Tern		U-SSuF-B R-W		U-SSuF R-W	
Forster's Tern	C-P	C-P-B	C-P	C-P	
Common Tern	U-P	R-P	R-P	R-P	
Least Tern	C-Su	C-SSuF-B	C-SSuF-B	C-SSuF-B	
Royal Tern	C-P	C-P	C-P	C-P	
Sandwich Tern	C-P	C-SSuF R-W	C-SSuF R-W	C-Su	
Caspian Tern		C-P	C-P	C-P	
Black Tern	C-Su	C-SSuF	C-SSuF	C-SSuF	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Black Skimmer	C-P	C-P-B	C-P	C-P	
Rock Dove				C-P-B	C-P-B
White-winged Dove		R-FWS	R-FWS	R-FWS	
Mourning Dove		C-P-B	C-P-B	C-P-B	C-P-B
Ground Dove		C-SSuF-B R-W	C-SF	C-SF	C-SSuF-B
Yellow-billed Cuckoo		C-SF			C-SSuF-B
Black-billed Cuckoo		U-SF			U-SF
Barn Owl		C-FWS R-Su-B			C-FWS R-Su-B
Screech Owl		C-P-B	C-P-B	C-P-B	C-P-B
Great Horned Owl		C-P-B	C-P-B	C-P-B	C-P-B
Burrowing Owl		R-FW		R-FW	
Barred Owl		C-P-B	C-P-B	C-P-B	C-P-B
Long-eared Owl		R-FW			
Short-eared Owl		R-FW	R-FW		
Chuck-will's-widow		C-SSuF-B R-W	C-SSuF-B	C-SSuF-B	C-SSuF-B
Whip-poor-will		R-FWS	R-FWS	R-FWS	R-FWS
Common Nighthawk		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Chimney Swift		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Ruby-throated Hummingbird		C-SF	C-SSuF-B	C-SSuF-B	C-SF R-Su-B
Rufous Hummingbird		R-FWS	R-FWS		
Belted Kingfisher		C-FWS R-Su-B	C-FWS R-Su-B	C-FWS R-Su-B	C-P-B
Yellow-shafted Flicker		C-P-B	C-P-B	C-P-B	C-P-B
Pileated Woodpecker		R-P-B		C-P-B	C-P-B
Red-bellied Woodpecker		C-P-B	C-P-B	C-P-B	C-P-B
Red-headed Woodpecker		U-SF R-SuW	U-SF R-Su-W	C-P-B	C-P-B
Yellow-bellied Sapsucker		C-FWS	C-FWS	C-FWS	C-FWS
Hairy Woodpecker		R-P-B	R-P-B	U-P-B	U-P-B
Downy Woodpecker		C-P-B	C-P-B	C-P-B	C-P-B
Red-cockaded Woodpecker		R-P-B			R-P-B
Eastern Kingbird		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Gray Kingbird		U-SSuF-B	U-SF		
Western Kingbird		C-F R-WS	R-FS		
Scissor-tailed Flycatcher		C-F R-SSuW	R-FS	R-FS	
Great Crested Flycatcher		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Ash-throated Flycatcher		R-FS	R-F		
Eastern Phoebe		C-FWS	C-FWS	C-FWS	C-FWS

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Yellow-bellied Flycatcher		R-FS	R-FS		
Acadian Flycatcher		C-SF	U-SF	U-SSuF-B	U-SSuF-B
Trail's Flycatcher		U-SF			
Least Flycatcher		R-SF			
Eastern Wood Pewee		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Olive-sided Flycatcher		R-SF			
Vermillion Flycatcher		R-FW			
Tree Swallow		C-FWS	C-FWS	C-FWS	C-FWS
Bank Swallow		R-SF	R-SF	R-SF	R-SF
Rough-winged Swallow		C-SF R-W	C-SF R-W	C-SF	C-SSuF-B
Barn Swallow	M	C-SSuF-B	C-SF	C-SSuF-B	C-SF
Cliff Swallow		R-SF	R-SF		R-SF
Purple Martin		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Blue Jay		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-P-B
Common Crow					C-P-B
Fish Crow		C-P-B	C-P-B	C-P-B	C-P-B
Carolina Chickadee		C-P-B	C-P-B	C-P-B	C-P-B
Tufted Titmouse		U-P-B	U-P-B	C-P-B	C-P-B

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
White-breasted Nuthatch				U-P-B	U-P-B
Red-breasted Nuthatch		U-FWS		R-FWS	R-FWS
Brown-headed Nuthatch		C-P-B	C-P-B	C-P-B	C-P-B
Brown Creeper		R-FWS	R-FWS	U-FWS	U-FWS
House Wren		C-FWS	C-FWS	C-FWS	U-FWS
Winter Wren		U-FWS	U-FWS	C-FWS	U-FWS
Bewick's Wren		R-FWS		R-FWS	R-FWS
Carolina Wren		C-P-B	C-P-B	C-P-B	C-P-B
Long-billed Marsh Wren		C-P-B	C-P-B	C-P-B	
Short-billed Marsh Wren		C-FWS	C-FWS	U-FWS	U-FWS
Mockingbird		C-P-B	C-P-B	C-P-B	C-P-B
Catbird		C-FWS	C-FWS	C-FWS	U-FWS
Brown Thrasher		C-P-B	C-P-B	C-P-B	C-P-B
Robin		C-FWS R-Su	C-FWS R-Su	C-FWS R-Su-B	C-FWS
Wood Thrush		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-
Hermit Thrush		C-FWS	C-FWS	C-FWS	C-FWS
Swainson's Thrush		C-FS	C-FS	C-FS	C-FS
Gray-cheeked Thrush		C-FS	U-FS	C-FS	U-FS

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Veery		C-FS	U-FS	C-FS	U-FS
Eastern Bluebird		C-FWS	C-FWS	C-FWS	C-P-B
Blue-gray Gnatcatcher		C-SSuF-B R-W	C-SSuF-B R-W	C-SSuF-B R-W	C-SSuF-B R-W
Golden-crowned Kinglet		U-FW R-S	U-FW R-S	U-FW R-S	C-FW R-S
Ruby-crowned Kinglet		C-FWS	C-FWS	C-FWS	C-FWS
Water Pipit		U-FS	U-FWS	C-FWS	C-FWS
Sprague's Pipit					R-W
Cedar Waxwing		C-FWS R-Su	C-FWS	C-FWS	C-FWS
Loggerhead Shrike		C-P-B	C-P-B	C-P-B	C-P-B
Starling		C-P-B	C-P-B	C-P-B	C-P-B
White-eyed Vireo		C-SSuF-B R-W	C-SSuF-B R-W	C-SSuF-B R-W	C-SSuF-B R-W
Yellow-throated Vireo		C-SF	C-SF	C-SF U-Su-B	C-SF R-W U-Su-B
Solitary Vireo		U-FWS	U-FWS	U-FWS	U-FWS
Black-whiskered Vireo		R-S			
Red-eyed Vireo		C-FS	C-FS	C-SSuF-B	C-SSuF-B
Philadelphia Vireo		R-FS		R-FS	
Warbling Vireo		R-FS			
Black and White Warbler		C-SF R-W	C-SF R-W	C-SF R-W	C-SF R-W

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Prothonotary Warbler		C-SSuF-B	C-SSuF-B	C-SSuF-B	C-SSuF-B
Swainson's Warbler		U-SF	U-SF	U-SSuF-B	U-SF
Worm-eating Warbler		C-S U-F	C-S U-F	C-S U-F	U-SF
Golden-winged Warbler		R-SF	R-SF	R-SF	
Blue-winged Warbler		C-S U-F	C-S U-F	C-S U-F	
Tennessee Warbler		C-SF	C-SF	C-SF	C-SF
Orange-crowned Warbler		U-FWS	U-FWS	U-FWS	U-FWS
Parula Warbler		C-SF R-Su-B	C-SSuF-B R-W	C-SSuF-B	C-SSuF-B
Yellow Warbler		C-SF	C-SF	C-SF	C-SF
Magnolia Warbler		C-SF	C-SF	C-SF	C-SF
Cape May Warbler		U-S R-F			
Myrtle Warbler		C-FWS	C-FWS	C-FWS	C-FWS
Black-throated Gray Warbler		R-FS			
Black-throated Green Warbler		C-SF R-W	C-SF R-W	C-SF	C-SF
Cerulean Warbler		R-SF	R-SF	R-SF	
Blackburnian Warbler		U-SF	U-SF	U-SF	
Yellow-throated Warbler		U-SF R-W R-Su-B	U-SF R-W R-Su-B	U-SSuF-B R-W	U-SSuF-B R-W
Chestnut-sided Warbler		U-SF	U-SF	U-SF	

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Bay-breasted Warbler		U-SF	U-SF	U-SF	
Blackpoll Warbler	M	C-S	C-S	C-S	C-S
Pine Warbler		C-P-B	C-P-B		C-P-B
Prairie Warbler		C-SF	C-SF	C-SF	C-SF R-Su-B
Palm Warbler		C-SF U-W	U-FWS	U-FWS	U-FWS
Ovenbird		C-SF	C-SF	C-SF	C-SF
Northern Waterthrush	M	C-SF	C-SF	C-SF	C-SF
Louisiana Waterthrush		C-SSu R-F	C-SSu R-F	C-SSu R-F	C-SSu R-F
Kentucky Warbler		C-SF	C-SF	C-SF U-Su-B	C-SSuF-B
Connecticut Warbler		R-F			
Mourning Warbler		R-F			
Yellowthroat		C-P-B	C-P-B	C-P-B	C-P-B
Yellow-breasted Chat		C-SF R-W R-Su-B	C-SF	C-SF R-W	C-SF R-Su-B
Hooded Warbler		C-SF	C-SF R-Su-B	C-SSuF-B	C-SSuF-B
Wilson's Warbler		R-SF			
Canada Warbler		R-SF			
American Redstart		C-SF	C-SF	C-SF U-Su-B	C-SF
House Sparrow		C-P-B	C-P-B	C-P-B	C-P-B

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Bobolink		C-S U-F	C-S U-F		C-S U-F
Eastern Meadowlark		C-FWS	C-FWS	C-P-B	C-P-B
Western Meadowlark		R-FW	R-FW		
Yellow-headed Blackbird		R-FWS			
Redwinged Blackbird		C-P-B	C-P-B	C-P-B	C-P-B
Orchard Oriole		C-SSu-B	C-SSu-B	C-SSu-B	C-SSu-B
Baltimore Oriole		U-SF	U-SF	U-SF R-W	U-SF
Rusty Blackbird			U-FWS	U-FWS	U-FWS
Brewer's Blackbird			C-FWS	C-FWS	C-FWS
Boat-tailed Grackle		C-P-B	C-P-B	C-P-B	
Common Grackle		C-P-B	C-P-B	C-P-B	C-P-B
Brown-headed Cowbird		C-FWS U-Su-B	C-FWS U-Su-B	C-P-B	C-P-B
Western Tanager		U-F R-WS			
Scarlet Tanager		C-SF	C-SF	C-SF	
Summer Tanager		C-SF	C-SF	C-SSuF-B	C-SSuF-I
Cardinal		C-P-B	C-P-B	C-P-B	C-P-B
Rose-breasted Grosbeak		C-SF	C-SF	C-SF	U-SF
Black-headed Grosbeak		R-FWS	R-FWS		

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Blue Grosbeak		C-SF	C-SF	C-SF	C-SF R-Su-B
Indigo Bunting		C-SF R-W	C-SF R-W	C-SF R-W	C-SF R-Su-B
Painted Bunting	M	C-S U-F	C-S U-F	C-S R-SuF	R-SF
Dickcissel		R-FWS	R-FWS	R-FWS	R-FWS R-Su-B
Evening Grosbeak				R-WS	R-WS
Purple Finch		R-WS	R-WS	U-WS	U-FWS
Pine Siskin		R-FWS	R-FWS	R-FWS	R-FWS
American Goldfinch		C-FWS	C-FWS	C-FWS	C-FWS
Rufous-sided Towhee		C-P-B	C-P-B	C-P-B	C-P-B
Savannah Sparrow		C-FWS	C-FWS	C-FWS	C-FWS
Grasshopper Sparrow		U-FWS	U-FWS	U-FWS	U-FWS
LeConte's Sparrow		R-W	R-W	R-W	R-W
Henslow's Sparrow		R-W		R-W	R-W
Sharp-tailed Sparrow		C-FWS	C-FWS		
Seaside Sparrow		C-P-B	C-P-B		
Vesper Sparrow		U-FWS	U-FWS	C-FWS	C-FWS
Lark Sparrow		R-FWS			
Bachman's Sparrow		R-F			R-P-B

	Marine	Barrier Island	Estuarine and Marshland	River Delta and Swampland	Upland
Slate-colored Junco		U-FWS	U-FWS	U-FWS	U-FWS
Chipping Sparrow		U-FWS	U-FWS	C-FWS	C-FWS R-Su-B
Clay-colored Sparrow		R-FW		R-FW	
Field Sparrow		C-FWS	C-FWS	C-FWS R-Su	C-FWS R-Su-B
White-crowned Sparrow		C-F U-WS	C-F U-WS	C-F U-WS	U-FWS
White-throated Sparrow		C-FWS	C-FWS	C-FWS	C-FWS
Fox Sparrow		R-W	R-W	R-W	U-W
Lincoln's Sparrow		R-FWS	R-FWS	R-FWS	R-FWS
Swamp Sparrow		C-FWS	C-FWS	C-FWS	C-FWS
Song Sparrow		C-FWS	C-FWS	C-FWS	C-FWS

MAMMALS OF COASTAL COUNTIES IN ALABAMA

Ralph H. Allen, Jr.
Game and Fish Division
Montgomery, Alabama 36130

Introduction

Baldwin and Mobile are Alabama's only coastal counties. Baldwin County has the further distinction of containing more acres of land and water than any other county east of the Mississippi River.

Because of their geographic location Baldwin and Mobile counties contain a diversity of habitats that provides a desirable environment for a wide avriety of mammals. These habitats include the gulf, barrier islands, sand beaches, dunes, salt and brackish bays, marshes, fresh water streams, lakes, wet swamps, dry swamps, upland forests and cultivated fields.

Some species of mammals, such as the beach mice, require a very selective habitat while other species like deer are able to adapt to a variety of habitats. Any disturbance such as extensive construction of cottages or building on the sand dunes nearest the surf could result in the extirpation of the entire population of the beach mice within the state. Deer on the other extreme are overpopulated and are causing severe damage to agricultural crops and natural vegetation in large areas of Baldwin County.

Other man-initiated changes in the environment that pose a serious threat to mammals include stream channelization, clear-cutting followed by pine monoculture, urban expansion, highway construction, draining of marshes and swamps, and pesticides.

At least three species of mammals not originally native to Baldwin and Mobile counties are now common in many areas within the counties. These are the red fox, armadillo and the nutria.

Rare and endangered species found within the counties include the Florida black bear, the cougar, two species of beach mice and three species of bats. A 1970 report of a cross between a red wolf and a coyote was reported from Mobile County. Further studies now indicate that this animal was probably a coyote rather than a cross as was first reported.

A more intensive study of the mammals of these two counties is needed. Such studies could possibly identify additional mammal species that have not been reported to date.

COMMON NAME	SCIENTIFIC NAME	MARINE HABITAT	BARRIOR ISLAND HABITAT	ESTUARINE & MARSHLAND HABITAT	RIVER DELTA AND SWAMPLAND HABITAT	UPLAND HABITAT
Opossum	Didelphis marsupialis	-	C	C	C	C
Carolina Short-tailed Shrew	Blarina brevicauda carolinensis	-	-	-	C-U	C-U
Least Shrew	Cryptotis p.parva	-	-	-	U	U
Howell Mole	Scalopus aquaticus howelli	-	U	-	U	U
Star-nosed Mole	Condylura c. cristata	-	-	-	R or A	R or A
Southeastern Bat	Myotis a. austroriparius	-	-	R	U	U
Big Brown Bat	Eptesicus f. fuscus	-	-	R	U	U
Red Bat	Lasiurus b. borealis	-	-	R	C	C
Seminole Bat	Lasiurus seminolus	-	-	U	C	C
Hoary Bat	Lasiurus c. cinereus	-	-	R	R	R
Yellow Bat	Lasiurus intermedius floridanus	-	-	R	U	U
Evening Bat	Nycticeius h. humeralis	-	-	R	C	C
Brazilian Free-tailed Bat	Tadarida brasiliensis cynocephala	-	-	-	U	U
Nine-banded Armadillo	Dasypus novemcinctus mexicanus	-	-	-	C	C

COMMON NAME	SCIENTIFIC NAME	MARINE HABITAT	BARRIOR ISLAND HABITAT	ESTUARINE & MARSHLAND HABITAT	RIVER DELTA AND SWAMPLAND HABITAT	UPLAND HABITAT
*Marsh Rabbit	Sylvilagus p. palustris	-	R	C	C	U
Cottontail Rabbit	Sylvilagus floridanus	-	U	R	U	C
Swamp Rabbit	Sylvilagus aquaticus	-	U	U	C	U
Gray Squirrel	Sciurus carolinensis	-	C	-	C	C
Bachman Fox Squirrel	Sciurus niger bachmani	-	-	-	U	C
Southern Flying Squirrel	Glaucomys volans saturatus	-	-	-	U	C
Southeastern Pocket Gopher	Geomys pinetis mobilensis	-	-	-	-	U
Beaver	Castor canadensis carolinensis	-	-	-	C	C
Marsh Rice Rat	Oryzomys p. palustris	-	C	C	U	-
Eastern Harvest Mouse	Reithrodontomys humulis	-	-	R	R	R
Old Field Mouse	Peromyscus p. polionotus	-	-	-	U	C
White-fronted Beach Mouse	Peromyscus polionotus ammobates	-	-	-	-	-
Florida Beach Mouse	Peromyscus polionotus trissyllepsis	-	-	-	-	-
Cotton Mouse	Peromyscus g. gossypinus	-	R	-	C	C

COMMON NAME	SCIENTIFIC NAME	MARINE HABITAT	BARRIOR ISLAND HABITAT	ESTUARINE & MARSHLAND HABITAT	RIVER DELTA AND SWAMPLAND HABITAT	UPLAND HABITAT
Golden Mouse	Ochrotomys nuttalli aureolus	-	-	-	C	C
Hispid Cotton Rat	Sigmodon h. hispidus	-	R	C	C	C
Wood Rat	Neotoma floridana	-	-	-	C	C
Louisiana Muskrat	Ondatra zibethicus rivalicus	-	C	C	C	C
Black Rat	Rattus rattus	-	C	C	C	C
Norway Rat	Rattus norvegicus norvegicus	-	C	C	C	C
House Mouse	Mus musculus brevirostris	-	C	C	C	C
Nutria	Myocastor coypus bonariensis	-	C	C	C	-
Coyote	Canis latrans	-	-	-	-	R
Red Fox	Vulpes fulva	-	-	-	-	C
Gray Fox	Urocyon cinereoargenteus	-	-	-	U	C
Florida Black Bear	Ursus americanus floridanus	-	-	-	U	U
Raccoon	Procyon lotor	-	C	C	C	C
Long-tailed Weasel	Mustela frenata olivacea	-	-	-	R or A	R or A

COMMON NAME	SCIENTIFIC NAME	MARINE HABITAT	BARRIOR ISLAND HABITAT	ESTUARINE & MARSHLAND HABITAT	RIVER DELTA AND SWAMPLAND HABITAT	UPLAND HABITAT
Mink	Mustela vison mink	-	-	C	C	C
Spotted Skunk	Spilogale p. putorius	-	U	U	C	C
Stripped Skunk	Mephitis mephitis	-	U	U	U	C
River Otter	Lutra c. canadensis	-	U	C	C	U
Mountain Lion	Felis concolor coryi	-	-	R	R	R
Bobcat	Lynx rufus floridanus	-	-	U	C	C
White-tailed Deer	Dama virginiana	-	U	U	A	A
Atlantic Bottle-nosed Daulphin	Tursiops truncatus	C	-	-	-	-
Black Pilot Whale	Globicephala	R	-	-	-	-
California Sea Lion	Zalophus californianus	R	-	-	-	-
West Indies Seal	Monachus tropicalis	P	-	-	-	-
Goose-backed Whale	Ziphius cavirostris	P	-	-	-	-
Sei Whale	Balaenoptera borealis	P	-	-	-	-
Pygma Sperm Whale	Kogia breviceps	P	-	-	-	-
Dwarf Pygma Sperm Whale	Kogia siomus	P	-	-	-	-
Fineback Whale	Balaenoptera physalus	P	-	-	-	-

SYMBOLS C-Common, U-Uncommon, R-Rare, A-Absent and P-Possible-(Specimens known from Gulf.)

*Found only in Baldwin County

NOAA COASTAL SERVICES CENTER LIBRARY
3 6668 14104 3994