

**Beatty Bayou Bird Survey
Beatty Bayou, Bay County, Florida**



**Report to: United States Fish and Wildlife Service
Panama City Field Office
Panama City, Bay County, Florida**

**by
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&
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**The St. Andrew Bay Environmental Study Team
BEST and BEST, Inc.
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Preface

The Friends of Beatty Bayou (FOBB), Inc. is incorporated as a non-profit organization under 501(c)(3) rules with the objective to restore, preserve, and enhance Beatty Bayou diversity and habitat quality. FOBB came into existence March 5, 2003. A *Beatty Bayou Management Plan* was published in September 2003. This management plan includes various projects to evaluate the ecological condition of Beatty Bayou. The following report is part of the effort to document the biology of the bayou.

The St. Andrew Bay Environmental Study Team (BEST) and the St. Andrew Bay Environmental Study Team, Inc. (BEST, Inc.) are two separate yet unified organizations by reason of their mission statements, goals, and adherence to the principle of non-advocacy. The mission of BEST and BEST, Inc. is to evaluate the status of the St. Andrew Bay ecosystem, identify problems where present, and recommend corrective actions if required. Goals include providing science based information to decision makers, improving coordination and communication through various forums, and providing public education regarding the St. Andrew Bay ecosystem and its estuary. The Natural Resources Habitat Subcommittee of BEST addresses issues of habitat and the environment that provide a place for our diverse biota to exist.

This year-long survey of birds is intended to provide a management tool for the U.S. Fish and Wildlife Service and other government officials and agencies as they review proposed actions in the Beatty Bayou watershed. The Service's mandate for bird management is the Migratory Bird Treat Act of 1918 [16. U.S.C. 703-712]. The baseline data can be used in planning for the watershed and in design of any restoration efforts.

A grant (Grant Agreement No. 401813G083) from the U.S. Fish & Wildlife Service Coastal Program to fund some of the restoration projects of the FOBB was part of the incentive for this survey. This is an "in-kind" project submitted under the grant to FOBB and represents over 52 hours of professional volunteer labor with a monetary value of \$950 based on the 2005 U.S. Department of Labor guidelines. The project also addresses action plans in The St. Andrew Bay Ecosystem, Our Environment. A Revision of "A Look to the Future" [Keppner, Edwin J. and Keppner, Lisa A. 2001. BEST Publication #0004], and therefore is submitted as a dual purpose publication of BEST.

A recommended citation for this project is as follows: Lamb, Neil J., 2006. Beatty Bayou Bird Survey, Beatty Bayou, Bay County, Florida. Report to the U.S. Fish & Wildlife Service from Friends of Beatty Bayou, Bay County, Florida and The St. Andrew Bay Environmental Study Team. BEST Publication # 0010.

Cover photo: Adult non-breeding Brown

Introduction

Many residents of Bay County, Florida were attracted to the area by the bountiful natural resources and the beauty of the bays and beaches. An unfortunate consequence of development in the county is the elimination or alteration of much of this natural ecosystem. Birds are visual indicators of the health of an ecosystem and reflect how nature is functioning in an area. The loss of intertidal habitat, fringing marsh grasses, seagrasses, and associated upland vegetation causes negative impacts on the birds that feed and nest in the area. Providing a baseline of bird species and numbers for Beatty Bayou and its perimeter shoreline is the primary purpose for this survey.

Materials and Methods

Monthly surveys were conducted from the water with a sit-on-top kayak beginning in the Recess Lagoon at the 9th Street culvert [latitude 30° 14.704'; longitude 85° 37.154'] and proceeding around the bayou in a counterclockwise pattern following the shoreline to the mouth of the bayou, along the Panama Country Club, up McCain Creek to the 9th Street bridge and back along the south shore to Recess Lagoon and the point of beginning. Figure 1 depicts the perimeter of Beatty Bayou and the area included in this survey. The standardized route was followed on all occasions and every species of bird, heard or seen, was recorded along with a tally of numbers. All birds observed were identified by sight or by call. Either 8x40 or 10x42 binoculars were used as necessary. Both terrestrial birds and those that were water-dependent or water-related were counted. The survey trips varied from one hour and 20 minutes to two hours, but averaged one hour and 35 minutes between the hours of 8:00 AM and 3:00 PM. Trips were random as to tide status, but extremely windy and/or rainy days were avoided.

Results

The actual observations are included in Table 1 with species and numbers by date. A total of 71 species of birds were recorded with total numbers of birds being 1,290 (Table 2). A classification of birds as water-related versus primarily terrestrial was used to analyze the data and is reflected in Table 2 where the bird species are listed with cumulative totals and number of sightings. Note that seventeen of the species were only seen on one date in the year-long survey. Nine of these seventeen were single birds.

The water-related species numbered 28 and totaled 658 individuals. The non-water-related species numbered 43 and totaled 632 individuals. The only species observed on every trip were mourning doves, northern mockingbirds, and northern cardinals.

Other species of animals recorded in Beatty Bayou during this survey include the following: American alligator, common cooter, southern ring-necked snake, southern stingray, striped mullet, longnose gar, bottle-nosed dolphin (total of 6 for 3 dates), eastern gray squirrel, river otter (twice in Recess Lagoon & creek), fiddler crabs, and periwinkle snails.

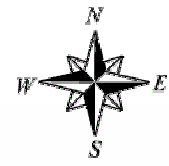


Figure 1. Beatty Bayou Bird Survey Boundary.



Table 1. Bird species and numbers by date of survey, Beatty Bayou.

	12/30/04	2/8/05	3/4/05	4/13/05	5/10/05	6/23/05	7/13/05	8/3/05	9/13/05	10/13/05	11/4/05	12/5/05
Common Loon		1	1									
Pied-billed Grebe							1					1
American White Pelican												130
Brown Pelican	1	2	8	1	4				2	3		4
Double-crested Cormorant		1	3								1	4
Anhinga											1	1
Great Blue Heron	2		1		1			1	2	1	3	2
Great Egret											3	1
Snowy Egret	1						1				1	1
Green Heron					2		7	2	1			1
Mallard			2					1				
Wood Duck			2								1	
Hooded Merganser			2									
Red-breasted Merganser												1
Turkey Vulture	1	2	2		1	5	1	1		2	12	2
Sharp-shinned Hawk											1	1
Cooper's Hawk					1					3		
Red-tailed Hawk	1											
Red-shouldered Hawk			2				1	1			1	
Osprey	1	1						2	2	1	2	1
Killdeer	8											
Spotted Sandpiper				1	1							
Herring Gull											1	
Ring-billed Gull	2	1	16									12
Laughing Gull	73	28	19	5			2		1			87
Forster's Tern					1		1		2			
Royal Tern			1							1		7
Mourning Dove	2	4	4	11	11	19	920	10	5	2	11	
Eurasian Collared Dove				5		1	2	3		1		
Chimney Swift				2	5	4	5					
Belted Kingfisher	5		4					3	5	4	6	4
Northern Flicker										1		5
Pileated Woodpecker			2									
Red-bellied Woodpecker	2	1	4	4	1	3		3	1	6	4	
Downy Woodpecker			1	2	2	3				1	1	1
Yellow-bellied Sapsucker			1									
Great-crested Flycatcher				9	3	4	4					
Eastern Phoebe											1	
Barn Swallow				5						15		
Purple Martin				2	2	3						
Blue Jay	10		13	18	5	23	6	18	15	29	26	1
American Crow						2						
Fish Crow			4	2	4	4	3		15		2	
Carolina Chickadee	4			2			2			4	4	2

Table 1 (cont'd). Bird species and numbers by date of survey, Beatty Bayou.

	12/30/04	2/8/05	3/4/05	4/13/05	5/10/05	6/23/05	7/13/05	8/3/05	9/13/05	10/13/05	11/4/05	12/5/05
Tufted Titmouse		1	2	1	3	1	2	1	2	11	5	3
Carolina Wren	1	2	6	4	3	9	5	9	1		3	
Northern Mockingbird	6	2	4	10	8	6	9	5	2	12	7	3
Gray Catbird										1	1	
Brown Thrasher				3		8	1	2		3		
American Robin			2								1	
Eastern Bluebird										1	3	
Blue-gray Gnatcatcher												1
Ruby-crowned Kinglet	2		2	1							2	
Cedar Waxwing		15		5								
European Starling				6	6	6		5		37	1	
Red-eyed Vireo				2								
Northern Parula Warbler				1	1	2						
Yellow-throated Warbler										1		
Yellow-rumped Warbler	8	4	9								8	15
Pine Warbler												
House Sparrow	10		4	8	4	6	10	14	2	4	1	6
Red-winged Blackbird			1	8	15	13	11	1	3	16	2	
Orchard Oriole				3		1						
Baltimore Oriole									1			
Common Grackle				3	1	1				37		
Brown-headed Cowbird						1						
Northern Cardinal	2	3	13	11	7	15	12	16	4	20	8	4
House Finch			3			2	2	2	2			
American Goldfinch	5	3	14	2								
Eastern Towhee	2	1	3	1		5	2	1		2		
Chipping Sparrow		4									2	10
Swamp Sparrow	3											

Note: Water-related species are in bold print; all others are non-water-related species.

Table 2. Bird species recorded in 12 surveys from December 2004 through December 2005. Water-related species are in bold print.

		Number of <u>Sightings</u>	Total <u>Birds</u>
Common Loon	<i>Gavia immer</i>	2	2
Pied-billed Grebe	<i>Podilymbus podiceps</i>	2	2
American White Pelican	<i>Pelecanus erythrorhynchos</i>	1	130
Brown Pelican	<i>Pelecanus occidentalis</i>	8	25
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	4	9
Anhinga	<i>Anhinga anhinga</i>	2	2
Great Blue Heron	<i>Ardea herodias</i>	8	13
Great Egret	<i>Ardea alba</i>	2	4
Snowy Egret	<i>Egretta thula</i>	4	4
Green Heron	<i>Butorides virescens</i>	5	13
Mallard	<i>Anas platyrhynchos</i>	2	3
Wood Duck	<i>Aix sponsa</i>	2	3
Hooded Merganser	<i>Lophodytes cucullatus</i>	1	2
Red-breasted Merganser	<i>Mergus serrator</i>	1	1
Turkey Vulture	<i>Cathartes aura</i>	10	29
Sharp-shinned Hawk	<i>Accipiter striatus</i>	2	2
Cooper's Hawk	<i>Accipiter cooperii</i>	2	4
Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	1
Red-shouldered Hawk	<i>Buteo lineatus</i>	4	5
Osprey	<i>Pandion haliaetus</i>	7	10
Killdeer	<i>Charadrius vociferous</i>	1	8
Spotted Sandpiper	<i>Actitis macularia</i>	2	2
Herring Gull	<i>Larus argentatus</i>	1	1
Ring-billed Gull	<i>Larus delawarensis</i>	4	31
Laughing Gull	<i>Larus atricilla</i>	7	215
Forster's Tern	<i>Sterna forsteri</i>	3	4
Royal Tern	<i>Sterna maxima</i>	3	9
Mourning Dove	<i>Zenaida macroura</i>	12	109
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	5	12
Chimney Swift	<i>Chaetura pelagica</i>	4	16
Belted Kingfisher	<i>Ceryle alcyon</i>	7	31
Northern Flicker	<i>Colaptes auratus</i>	2	6
Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	2
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	10	29
Downy Woodpecker	<i>Picoides pubescens</i>	7	11
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	1
Great-crested Flycatcher	<i>Myiarchus crinitus</i>	4	20
Eastern Phoebe	<i>Sayornis phoebe</i>	1	1
Barn Swallow	<i>Hirundo rustica</i>	2	20
Purple Martin	<i>Progne subis</i>	3	7
Blue Jay	<i>Cyanocitta cristata</i>	11	164

Table 2 (cont'd). Bird species recorded in 12 surveys from December 2004 through December 2005. Water related species are in bold print.

		<u>Number of Sightings</u>	<u>Total Birds</u>
American Crow	<i>Corvus brachyrhynchos</i>	1	2
Fish Crow	<i>Corvus ossifragus</i>	7	34
Carolina Chickadee	<i>Poecile carolinensis</i>	6	18
Tufted Titmouse	<i>Baeolophus bicolor</i>	11	32
Carolina Wren	<i>Thryothorus ludovicianus</i>	10	43
Northern Mockingbird	<i>Mimus polyglottos</i>	12	74
Gray Catbird	<i>Dumetella carolinensis</i>	1	2
Brown Thrasher	<i>Toxostoma rufum</i>	5	17
American Robin	<i>Turdus migratorius</i>	2	3
Eastern Bluebird	<i>Sialia sialis</i>	2	4
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	1	1
Ruby-crowned Kinglet	<i>Regulus calendula</i>	4	7
Cedar Waxwing	<i>Bombycilla cedrorum</i>	2	20
European Starling	<i>Sturnus vulgaris</i>	6	61
Red-eyed Vireo	<i>Vireo olivaceus</i>	1	2
Northern Parula Warbler	<i>Parula americana</i>	3	4
Yellow-throated Warbler	<i>Dendroica dominica</i>	1	1
Yellow-rumped Warbler	<i>Dendroica coronata</i>	5	44
House Sparrow	<i>Passer domesticus</i>	11	69
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	9	70
Orchard Oriole	<i>Icterus spurius</i>	2	4
Baltimore Oriole	<i>Icterus galbula</i>	1	1
Common Grackle	<i>Quiscalus quiscula</i>	4	42
Brown-headed Cowbird	<i>Molothrus ater</i>	1	1
Northern Cardinal	<i>Cardinalis cardinalis</i>	12	115
House Finch	<i>Carpodacus mexicanus</i>	5	11
American Goldfinch	<i>Spinus tristis</i>	4	24
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	8	17
Chipping Sparrow	<i>Spizella passerine</i>	3	16
Swamp Sparrow	<i>Melospiza georgiana</i>	1	3
	Non-water-related [43 species]		632
	Water-related [28 species]		<u>658</u>
	Total		1290

Discussion

The birds using Beatty Bayou vary by the season. Twenty-three species were only recorded in the winter months of January through March and October through December. Ten species were recorded only in the summer months of April through September. The over-wintering, water-related species were the following: common loon, wood duck, red-breasted merganser, hooded merganser, double-crested cormorant, anhinga, great egret, herring gull, ring-billed gull, royal tern, killdeer, swamp sparrow, and American white pelican.

These species depend on a functioning ecosystem in Beatty Bayou for food and undisturbed resting/loafing sites. Other than the American white pelicans, red-eyed vireos, and Baltimore oriole, not many transient, neo-tropical migrants were observed. This may be a result of doing the survey from the water and the survey dates may have missed the short window when most migrants move through the area. Most of the migrants recorded were summer nesting birds in Bay County.



White Pelicans resting on the bay during migration.

Although clapper rails have been observed by the author along the College Point side of the bayou in the past, none were recorded during this survey. Also, bald eagles have been routinely observed feeding in the bayou, however, none were recorded on the days of this survey. Brown pelicans are regular in the bayou and probably are one of the species with the greatest requirement for this type of small bayou as a source of food at certain times of the year. The sandbar at the mouth of the bayou has particular significance as a loafing area for the gulls, terns, brown pelicans, and cormorants.

Conclusions and Recommendations

The survey provides some baseline data of bird species and numbers using Beatty Bayou and the near shore area. The data are mainly for historical purposes as efforts are made to improve the condition and quality of the bayou environment, and agencies review future potential development around the bayou for impacts.

This report can be very generally extrapolated to give a qualitative idea of the value of an individual St. Andrew Bay bayou for birds. With over 50 bayous connected to St. Andrew Bay, the greater value of “bayou habitat” becomes more evident. Considering the popularity of bayous as waterfront home sites, the need for bayou stewardship and proper resource management is obvious.

A good diversity of birds use the bayou and they are present in significant numbers. The seasonal shifts of species with their different requirements are important to note and to take under consideration when reviewing potential impacts. Preservation and protection of the sandbar at the mouth of the bayou as a bird loafing area may be one of the most important considerations. Strategically placed nesting platforms for osprey are recommended for the bayou to replace prior nesting sites that have been disturbed by development. Finally, creation of bayou citizen stewardship groups should be encouraged and supported.



Anhinga in tree – Beatty Bayou



Snowy Egret – mouth of Beatty Bayou