

THE ORIOLE

A Quarterly Journal of Georgia Ornithology; Official Organ of the
Georgia Ornithological Society



VOL. 41

June-September 1976

Nos. 2 & 3

THE ORIOLE

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1975 HERONRY SURVEY OF THE GEORGIA COAST

Ron R. Odom

An aerial survey of heronries on the coast of Georgia was made during the spring and summer of 1975. Initial searches were made from light aircraft with two observers and a pilot flying at low altitude.

All heronries located from the air were visited three additional times during the nesting season with a minimum of two of these visits being on foot, when possible. Data on species composition, approximate abundance, stages of reproduction, nesting habitats, disturbance, and colony size were recorded. All colonies were mapped for future reference.

Twenty-five active heronries were located during the survey. Species observed nesting in these colonies were Great Blue Heron (*Ardea herodias*), Little blue Heron (*Florida coerulea*), Cattle Egret (*Bulbulcus ibis*), Snowy Egret (*Leucophoyx thula*), Great Egret (*Casmerodius albus*), Louisiana Heron (*Hydranassa tricolor*), Black Crowned Night Heron (*Nycticorax nycticorax*), Yellow Crowned Night Heron (*Nyctanassa violacea*), Glossy Ibis (*Plegadis falcinellus*), White Ibis (*Eudocimus albus*), Anhinga (*Anhinga anhinga*), and Green Heron (*Butorides virescens*). Wood storks (*Mycteria americana*) were present in six heronries, not nesting.

STUDY AREA

The search area consisted of the entire Georgia coast east of I-95. The coastal area consists of many secluded ponds and swamps which provide ideal nesting habitat for egrets, herons, and ibises.

METHODS

Two observers and a pilot surveyed the Georgia Coast from the air searching for wading bird nesting areas. Any signs of nesting activity were investigated thoroughly from the air and, if necessary, from the ground. Once nesting colonies were located, three visits to each colony were scheduled with at least two of these visits to be on foot.

This study was supported by Patuxent Wildlife Research Center, United States Fish and Wildlife Service, United States Department of Interior and was part of a larger study of the Atlantic Coast.

Colonies that were easily accessible by land were usually reached by truck, while a Department helicopter provided transportation to others. Slow flying at a low altitude should have contributed to a very accurate census. Visits were made to heronries during the first week of June, July, and August.

The Department helicopter was outfitted with inflatable pontoons, which enabled us to set down either on land or water. A fifteen foot canoe was secured to the pontoons in order to provide on the site transportation, particularly over deep water. In most instances it was easier to wade into heronries than to attempt to use a canoe. A canoe was a necessity, however, in certain colonies such as the one on Blackbeard Island, where wading was impossible.

Several methods were used to obtain population estimates within heronries:

- (1) Estimates were made based on observations while walking through colonies.
- (2) Estimates were made from aerial observations.
- (3) Estimates were made from aerial photographs, when practical.
- (4) Actual counts were made in small colonies.

In this report all flying individuals of a particular species were considered as adults. Where possible a combination of methods was used to obtain the most accurate information. Estimated populations represent maximum numbers present during any one of three visits to the colony.

RESULTS

Heronry data are presented and colonies described from South to North along the coast. The number following the heronry name corresponds to heronry locations on Figure 1. The data are followed by general comments and a brief description of the habitat.

CROOKED RIVER (#1)—Latitude: 30° 51' 10"; longitude: 81° 31' 10"; county: Camden; size: ½ acre; ownership: (private) Brunswick Pulp and Paper Company.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	9	15

All nests were built in the tops of 30-40 foot Long-leaf Pines (*Pinus palustris*) growing on a dry peninsula which extends out to Crooked River.

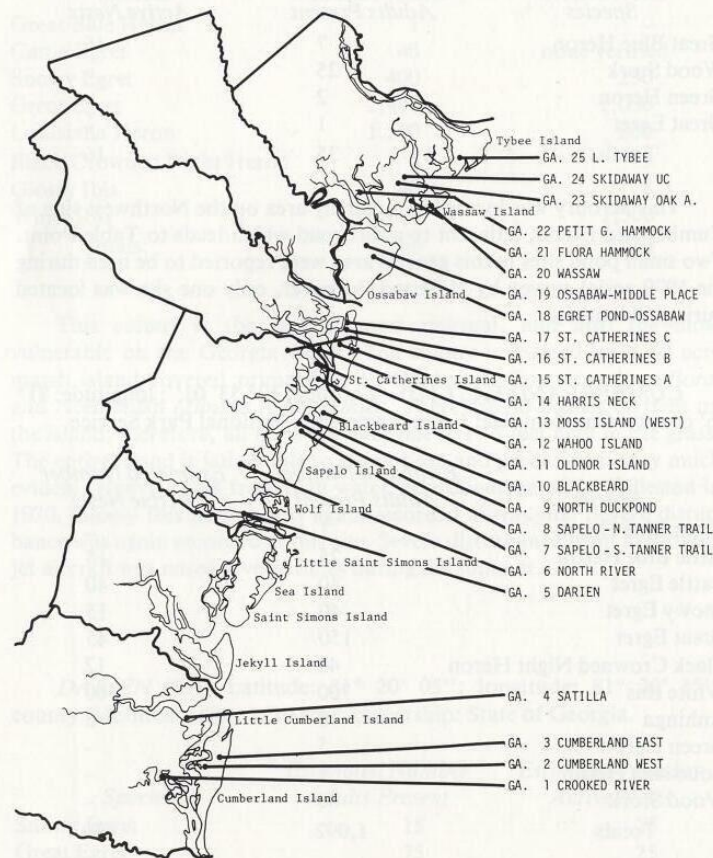


Figure 1: HERONRY LOCATIONS ON GEORGIA COAST
1975

CUMBERLAND WEST (#2)—Latitude: 30° 52' 15"; longitude: 81° 27' 30"; county: Camden; size 1/10 acre; ownership: National Park Service.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	7	16
Wood Stork	25	-
Green Heron	2	-
Great Egret	1	-
Totals:	35	16

This heronry was located in a marshy area on the Northwest side of Cumberland Island, adjacent to a dirt road which leads to Table Point. Two small pond sites in this general area were reported to be used during the 1970 aerial survey by Hillestad; however, only one site was located during this survey.

CUMBERLAND EAST (#3)—Latitude: 30° 53' 01"; longitude: 81° 26' county: Camden; size: 1 acre; ownership: National Park Service

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	1	-
Little Blue Heron	25	15
Cattle Egret	40	40
Snowy Egret	40	15
Great Egret	150	45
Black Crowned Night Heron	40	12
White Ibis	700	300
Anhinga	10	3
Green Heron	5	-
Louisiana Heron	1	-
Wood Stork	80	-
Totals	1,092	430

This heronry is located approximately 3 miles from the north end of Cumberland Island, west of the beach. This particular site is one of the most inaccessible on the coast and requires considerable effort to reach. Most nesting occurred in willows (*Salix* sp.) at the south end of a long, narrow swamp.

SATILLA RIVER (#4)—Latitude: 30° 58'; longitude: 81° 29' 30"; county: Camden; size: 60 acres; ownership: State of Georgia.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	1	-
Cattle Egret	40	none verified
Snowy Egret	400	250
Great Egret	2,400	1,000
Louisiana Heron	1,500	800
Black Crowned Night Heron	5	5
Glossy Ibis	40	8
White Ibis	3,000	1,500
Totals:	7,386	3,563

This colony is the largest, most unusual, and also the most vulnerable on the Georgia Coast. The colony is located on a 60 acre marsh island covered primarily with Cordgrass (*Spartina alterniflora*) and Needlerush (*Juncus roemerianus*). There are no bushes or trees on the island; therefore, all nests are built one to two feet high in the grass. The entire island is vulnerable to storm tides and predation is very much evident. Heavy losses from high water were documented by Hillestad in 1970. Glossy Ibis nesting was again recorded at this site. Severe disturbance was again recorded at this site. Severe disturbance from low-flying jet aircraft was noted several times during the summer.

DARIEN (#5)—Latitude: 31° 20' 05"; longitude: 81° 22' 15"; county: McIntosh; size: 1/10 acre; ownership: State of Georgia.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Snowy Egret	15	25
Great Egret	75	25
Louisiana Heron	6	5
Anhinga	3	-
Totals:	99	55

This colony is located in a solitary clump of low shrubs on the north side of a small marsh island on the edge of the Darien River. The rest of the island is covered with dense growth of tall Cordgrass and Needlerush.

The above data were obtained during the first visit to the heronry on June 2, 1975. At this time eggs were present in 90% of Snowy Egret nests and 40% of Great Egret nests. A visit on July 1, 1975, revealed that the entire colony had been abandoned. There was no sign of birds; however, there were eggshells on the ground and several nests with unhatched eggs. The nests appeared to have been washed by high water. A third visit on August 5, 1975, indicated that the colony had not been reoccupied.

NORTH RIVER (#6)—Latitude: 31° 24'; longitude: 81° 23' 30'' county: McIntosh; size 2-3 acres; ownership: private.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	7	18
Great Egret	15	40
Totals:	22	58

This small colony occurs on a small island approximately 1/4 mile from North River Marina. The nests are built over dry land in 30-40 foot high pines. Understory of myrtle (*Myrica cerifera*) and palmetto (*Serenoa repens*) is moderately dense.

SAPELO-SOUTH TANNER TRAIL (#7)—Latitude: 31° 29' 35''; longitude: 81° 15' 07''; county: McIntosh; size: 1/8 acre; ownership: State of Georgia.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	1	1
Great Egret	7	10
Black Crowned Night Heron	3	1
Anhinga	5	3
Green Heron	1	1
Totals:	17	16

This small, inconspicuous heronry occurs at the south edge of a ten acre open bay. Water depth averaged two or three feet throughout the bay. Nests were built primarily of Black Gum (*Nyssa sylvatica*), Sweet Bay (*Magnolia virginiana*) and Slash Pine (*Pinus elliottii*).

SAPELO-NORTH TANNER TRAIL (#8)—Latitude: 31° 29' 45'' longitude: 81° 15' 03''; county: McIntosh; size 1/10 acre; ownership: State of Georgia.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Little Blue Heron	35	30
Cattle Egret	5	-
Snowy Egret	4	3
Louisiana Heron	1	5
Black Crowned Night Heron	35	20
Anhinga	1	1
Green Heron	1	1
Totals:	82	60

Nesting activity at this site was restricted to a small clump of 12-15' willows occurring at the north end of a 15 acre fresh water bay, approximately 3/4 mile from the Duplin River.

SAPELO-NORTH DUCKPOND (#9)—Latitude: 31° 31' longitude: 81° 14' county: McIntosh; size: 1 acre; ownership: State of Georgia.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	10	16
Anhinga	8	4
Totals:	18	20

Great Blue Herons nested in the tops of 30-40' pines adjacent to a small, shallow bay near the north end of the island. Anhingas nested in willow trees and Buttonbush (*Cephalanthus occidentalis*) at the edge of the bay. No activity was noted at the site during visit #3 on August 6, 1975.

BLACKBEARD (#10)—Latitude: 31° 31' 10''; longitude: 81° 11' 45''; county: McIntosh; size: 4 acres; ownership: U.S. Fish & Wildlife Service.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Little Blue Heron	90	50
Cattle Egret	200	175
Snowy Egret	150	125
Great Egret	420	300
Louisiana Heron	900	600
Black Crowned Night Heron	90	40
White Ibis	1,300	900
Anhinga	30	10
Green Heron	5	-
Totals:	3,185	2,200

This large colony is situated on the east side of Flag Pond, a 400 acre fresh water lake. Nesting occurred primarily in willows and palmettos at the edge of the lake and on a small island in the lake.

Flag Pond has an extremely high alligator (*Alligator mississippiensis*) population. On one occasion a seven foot alligator was observed preying on an adult anhinga. The lake also received light pressure from fishermen.

Nests are very difficult to see and reach in the dense palmetto and willows, resulting in difficult conditions for estimating numbers. Heaviest concentrations of birds occur toward the latter part of the nesting season. This pattern has been noted for several years by refuge personnel (Hutchinson, Personal Comm.).

OLDNOR ISLAND (#11)—Latitude: 31° 34' 30"; longitude: 81° 12' 30"; county: McIntosh; size 1/2 acre; ownership: private.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	-	1
Great Egret	10	4
Wood Stork	14	-
Totals:	24	5

Nesting was restricted to the tops of 30-40' pines located on a small, dry hammock near the South Newport River. All nesting activity at this site had ceased by the third visit to the colony on August 5.

WAHOO ISLAND (#12)—Latitude: 31° 36' 21"; longitude: 81° 13' 17"; county: McIntosh; size: 1/2 acre; ownership: private.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	10	15

Nests were typically built in tops of large pines on the northwest side of the island on high ground. Understory vegetation at this site was sparse. No activity was noted during the August visit.

MOSS ISLAND (#13)—Latitude: 31° 37' 30"; longitude: 81° 12' 55"; county: Liberty; size: 1 acre; ownership: private - part of St. Catherines Island.

Biological work here must be coordinated by the American Museum of Natural History.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	2	6
Great Egret	1	-
Totals:	3	6

This very small colony nested on the south tip of East Moss Island adjacent to the South Newport River. There was no standing water under the nesting area. All nests were built high in the tops of large pines.

HARRIS NECK (#14)—Latitude: 31° 37' 20"; longitude: 81° 16' 45"; county: McIntosh; size: 5 acres; ownership: Fish & Wildlife Service.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Little Blue Heron	10	5
Cattle Egret	100	65
Snowy Egret	50	30
Great Egret	300	200
Louisiana Heron	8	4
Black Crowned Night Heron	15	10
White Ibis	200	-
Anhinga	22	6
Wood Stork	125	-
Green Heron	5	-
Totals:	835	320

This fairly large heronry is located on the Harris Neck National Wildlife Refuge. Nests are built 10-15 feet high in flooded Black Gum trees in a 10-15 acre fresh water impoundment. The water under the nests is clogged with debris and is covered with Duckweed (*Lemna* sp.). The pond is bordered on one side by pasture and on the other by pine forest.

Two instances of predation on nearly grown chicks by alligators were observed. Numerous carcasses were noted in the pasture area. These birds appeared to have been victims of hawks.

ST. CATHERINES-A (#15)—Latitude: 31° 37' 35"; longitude: 81° 10' 05"; county: Liberty; size: 1/4 acre; ownership: private (See #14).

Species	Estimated Number Adults Present	Estimated Number Active Nests
Little Blue Heron	40	25
Cattle Egret	60	50
Snowy Egret	60	40
Great Egret	70	60
Louisiana Heron	50	35
Green Heron	1	-
Totals:	281	210

Nesting occurred primarily in willow and myrtle over and around a small, fresh water pond with two small islands. The pond is located at one end of a pasture at the site of an old artesian well which no longer flows.

ST. CATHERINES-B (#16)—Latitude: 31° 40' 05"; 81° 08' 43" county: Liberty; size: 1/10 acre; ownership: private (See #14).

Species	Estimated Number Adults Present	Estimated Number Active Nests
Snowy Egret	38	12
Great Egret	50	48
Black Crowned Night Heron	1	-
Anhinga	1	-
Totals:	90	60

Each of the three censuses of this heronry was done from the air only. No visits were made on foot. Researchers on the island were con-

ducting studies on exotics penned in the vicinity of the heronry and we did not want to frighten the animals with the helicopter. Nesting appeared to be in clumps of buttonbush and willows over a small pond.

ST. CATHERINES-C (#17)—Latitude: 31° 40' 35"; longitude: 81° 08' 35"; county: Liberty; size: 1/10 acre; ownership: private (see #14).

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Egret	10	8

This very small colony probably could be considered as part of St. Catherine - B; however, it is located slightly north in another small, fresh water pond. All estimates at this rookery were made from the air for the same reason as in #17.

EGRET POND - OSSABAW (#18)—Latitude: 31° 47' 34"; longitude: 81° 07'; county: Chatham; size: 3 acres; ownership: private.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Little Blue Heron	10	6
Cattle egret	100	25
Snowy Egret	60	25
Great Egret	700	175
Louisiana Heron	8	4
Black Crowned Night Heron	50	20
Glossy Ibis	1	-
White Ibis	50	30
Anhinga	75	20
Totals:	1,054	305

Records of nesting at this site go back as far as 1915 (Erichsen, 1921). The pond is now choked with aquatic vegetation and has very little open water. Wading through this heronry was extremely difficult. Nests were built primarily in willows and myrtle bushes. High juvenile mortality reported by Hillestad in 1970 was not observed this summer.

MIDDLE PLACE - OSSABAW (#19)—Latitude: 31° 47' 35"; longitude: 81° 07'; county: Chatham; size: 1-1/2 acre; ownership: private.

<i>Species</i>	<i>Estimated Number Adults Present</i>	<i>Estimated Number Active Nests</i>
Little Blue Heron	15	10
Cattle Egret	75	75
Snowy Egret	300	150
Great Egret	300	175
Louisiana Heron	200	100
Black Crowned Night Heron	40	25
Yellow Crowned Night Heron	2	-
White Ibis	240	50
Wood Stork	75	-
Totals:	1,247	585

Nests were built primarily in willows and buttonbush surrounded by a small area of 3-4 feet deep water. Except for the open water under the rookery, the pond was choked with aquatic vegetation. Wood Storks were frequently seen feeding on the site.

WASSAW (#20)—Latitude: 31° 53' 10"; longitude: 80° 57' 50"; county: Chatham; size: 35 acres; ownership: Fish and Wildlife Service.

<i>Species</i>	<i>Estimated Number Adults Present</i>	<i>Estimated Number Active Nests</i>
Little Blue Heron	100	30
Cattle Egret	75	50
Snowy Egret	500	150
Great Egret	500	150
Louisiana Heron	800	240
Black Crowned Night Heron	100	30
Wood Stork	1	-
Totals:	2,076	650

Most nesting occurred at the south end of this very long, narrow, fresh water pond. Nests were built primarily in willow and palm. No visit was made to this colony in June.

FLORA HAMMOCK (#21)—Latitude: 31° 53' 45"; longitude: 81° 01'; county: Chatham; size: 2-3 acres; ownership: Fish and Wildlife Service.

<i>Species</i>	<i>Estimated Number Adults Present</i>	<i>Estimated Number Active Nests</i>
Great Blue Heron	35	35
Great Egret	125	100
Wood Stork	34	-
Totals:	194	135

All nesting by these species was in the tops of high pine trees (30-40'). Understory consisting of very dense palmetto and myrtle made this colony difficult to reach, though it was on dry land. All nesting activity had ceased by the August 5 visit.

PETIT GAUKE HAMMOCK (#22)—Latitude: 31° 55'; longitude: 81° 07'; county: Chatham; size: 3 acres; ownership: private.

<i>Species</i>	<i>Estimated Number Adults Present</i>	<i>Estimated Number Active Nests</i>
Great Blue Heron	15	25
Great Egret	15	25
Totals	30	50

Nests were built in the tops of high pines and were difficult to see from the ground. Understory was composed of fairly dense stands of Cabbage Palm (*Sabal palmetto*), palmetto, and myrtle.

SKIDAWAY-LEWIS PROPERTY (#23)—Latitude: 81° 03'; longitude: 31° 65'; county: Chatham; size: 1-1/2 acres; ownership: private.

<i>Species</i>	<i>Estimated Number Adults Present</i>	<i>Estimated Number Active Nests</i>
Little Blue Heron	5	3
Snowy Egret	50	50
Great Egret	100	75
Black Crowned Night Heron	15	2
Wood Stork	75	-
Green Heron	2	-
Totals:	247	130

The bulk of nesting occurred in willows and buttonbush, 8-10 feet above the water line. The site surrounding this particular heronry is currently being developed. The developer indicated that he will leave the nesting site undisturbed. Considerable human disturbance was noted at

the heronry and with the proposed increase in population in this area, additional disturbance can be expected. Wood Storks frequent the site for feeding purposes.

SKIDAWAY-UNION CAMP (#24)—Latitude: 81° 03'; longitude: 31° 75'; county: Chatham; size: 1/4 acre; ownership: private.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	1	—
Snowy Egret	10	7
Great Egret	40	40
Black Crowned Night Heron	30	15
Yellow Crowned Night Heron Anhinga	2	1
Green Heron	10	—
Wood Stork	15	—
Totals:	109	63

Nests are built primarily in willows growing in a small, fresh water pond choked with aquatic vegetation. Large pines surround the nesting site. This colony appears to be visited frequently by the public.

LITTLE TYBEE (#25)—Latitude: 31° 58' 25"; longitude: 80° 54' 45"; county: Chatham; size: 1/2 acre; ownership: Fish and Wildlife Service.

Species	Estimated Number Adults Present	Estimated Number Active Nests
Great Blue Heron	5	12
Great Egret	6	10
Totals:	11	22

Nesting habitat was typical for these large birds, consisting of large pines (no water) with an extremely dense understory. Colony is very inaccessible.

DISCUSSION

An aerial survey of heronries by Hillestad (1970) located ten heronries. Those located in 1970 and still in existence in 1975 were: Petite Gauke Hammock, Middle Place — Ossabaw, Egret Pond — Ossabaw, Blackbeard, Satilla River, Cumberland West, and Cumberland East. An additional eighteen colonies were located in 1975.

Hopkins (1975) reported eleven heronry sites along the Georgia Coast. Most of the larger heronries located on the Georgia Coast appear at this time to be undisturbed and secure. Ownership, in most cases, is by either the Federal or State Government or by private individuals determined to afford protection to them. More importantly, many of the significant colonies occur in such remote and inaccessible places that protection of the colonies is more or less built in.

The Satilla River heronry is an exception. Although located on an island, it is accessible with a reasonable effort. No real protection is offered from the public or from adverse weather conditions.

Mortality was noticed in nearly all heronries, but it was not considered to be significant. Occasional dead adults or young were not uncommon sights, particularly in the larger colonies. Heaviest predation occurred, as expected, on the Satilla heronry. All nesting here takes place 12-15 inches above ground level in *Spartina alterniflora*; therefore, birds are afforded no protection from predators or storms. Alligators were observed preying on birds on three separate occasions and probably are important as predators, particularly of young birds.

A heronry of Yellow Crowned Night Herons within the city limits of Brunswick was visited on two occasions. Birds were nesting approximately 40 feet high in mature Live Oaks (*Quercus virginiana*) located in a residential area. The birds were considered a nuisance by residents and several attempts were made by local officials, directed by Fish and Wildlife personnel, to disperse the colony by disrupting nesting. Because of the nature of this colony, data from it are not included. Approximately 20-40 birds were seen at this site.

The size of the search area and the large number of heronries made the use of a helicopter invaluable. Discrete use of a helicopter can result in decreased survey costs and a degree of thoroughness and accuracy otherwise unattainable. Although the helicopter noise created a certain amount of disturbance, it did not appear to be excessive. Landings were made only close enough to heronries to allow us reasonable access. I am convinced that this is the only feasible method to survey such a large area with a large number of heronries. The helicopter saved many man-days of our time that would otherwise have been spent en route to various heronries.

Most nesting colonies were easily spotted from the air. Colonies most easily found were those with white-plumed species present, such as White Ibis, Great Egrets, Snowy Egrets, etc. Colonies comprised of darker-plumed species, such as Great Blue Herons, and adult Little Blue Herons, were difficult to spot. Great Blue Heron colonies were particularly easy to overlook, since they commonly nested solitarily in tall pines away from standing water. Occasionally some of the smaller Great

TABLE 1. SPECIES composition of wading birds from all heronries on the GEORGIA coast in 1975.

Species	Estimated Number Number Birds Observed	Estimated Number Number Nests Observed	Estimated Number Breeding Birds (2 x Number Nests)
White Ibis	5450 (30.3%)	2780 (30.9%)	5560
Great Egret	5294 (29.2%)	2490 (27.7%)	4980
Louisiana Heron	3474 (19.2%)	1793 (19.9%)	3586
Snowy Egret	1677 (9.2%)	882 (9.8%)	1764
Cattle Egret	695 (3.8%)	480 (5.3%)	960
Black Crowned Night Heron	424 (2.3%)	180 (2.0%)	360
Wood Stork	410 (2.3%)	0 (0%)	0
Little Blue Heron	330 (1.8%)	174 (1.8%)	348
Anhinga	157 (.9%)	48 (.5%)	96
Great Blue Heron	104 (.6%)	160 (1.8%)	320
Glossy Ibis	41 (.2%)	8 (.1%)	16
Green Heron	32 (.2%)	2 (.02%)	4
Yellow Crowned Night Heron	3 (Tr.)	0 (0%)	0
Totals:	18,131 (100%)	8,997 (100%)	17,994

Blue Heron colonies were difficult to spot a second time even after a previous visit.

Future surveys of wading birds should begin at an earlier date, since nesting was well under way by May 24, 1975.

Table 1 summarizes by species the population estimates from all of the heronries investigated.

SUMMARY

This survey resulted in a total of 25 heronries being located on the Georgia coast. Based on summaries of the above estimates, a peak total of approximately 18,000 adult birds was present in the 25 heronries along the Georgia Coast. The total nesting population was composed of White Ibis (31.0%), Great Egret (29.9%), Louisiana Heron (19.6%), Snowy Egret (9.5%), Cattle Egret (3.9%), Black Crowned Night Heron (2.4%), Green Heron (0.1%), Little Blue Heron (1.9%), and Great Blue Heron (.6%). Nesting sequence varied considerably between colonies and also within individual colonies. It was common to observe several species within a colony that had young of several different age classes represented.

Other species associated with these heronries included: Osprey (*Pandion haliaetus*), Wood Stork (*Mycteria americana*), Redwing Blackbird (*Agelaius phoeniceus*), Common Grackle (*Quiscalus quiscula*), Willet (*Catoptrophorus semipalmatus*), Clapper Rail (*Rallus longirostris*), Least Tern (*Sterna albifrons*), Bittern (*Isobrychus exilis*), Gallinule (*Gallinula chloropus*), Turkey Vulture (*Cathartes aura*), Black Vulture (*Coragyps atratus*), Crow (*Corvus brachyrhynchos*), Wood Duck (*Aix sponsa*), Red-tailed Hawk (*Buteo jamaicensis*), and Broad-winged Hawk (*Buteo platypterus*).

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THE STATUS OF SOME SUMMER BIRDS IN THE UPPER PIEDMONT OF EASTERN GEORGIA

By J. Fred Denton

Very few records of the birds breeding in the Upper Piedmont of Eastern Georgia have appeared in the literature. In order to add to our knowledge of the summer birds of this region I spent May 29 to June 1, 1975, observing birds in Franklin and Hart Counties. Most all of Hart County has been either converted to permanent pastures or sown to various grains. Few woodlots or tracts forest except for a few recently planted stands of pine for pulpwood were found. Franklin County also was mostly in pastures or grain fields except along the more hilly northern edge.

Individuals of a few bird species were abundant in the grain fields and pastures. However, many expected species were extremely rare or absent from the area. Not a single hawk of any species was seen. Hundreds of "line birds" were checked, but not a single Loggerhead Shrike (*Lanius ludovicianus*) was recorded. Two tracts of fairly mature hardwood forests, one in Tugaloo State Park in Franklin County and the other in Hart State Park in Hart County, were searched, but no warblers were found except for a few Pine Warblers (*Dendroica pinus*) that inhabited areas that contained some pines. Only 53 species were recorded during the three and a half days of observation. A few of these merit further comments which follow below.

Cliff Swallow (*Petrochelidon pyrrhonota*).

This swallow was first reported breeding in Georgia on the Hartwell Dam during the summer of 1965 (Tedards, R. C. 1965. *Oriole* 30:98). When I visited the Dam on May 30 the birds were found still nesting up in the gate at the Georgia end of the dam. An estimated 10 pairs were nesting here although the actual nests could not be counted. Birds were watched as they gathered mud from the edge of the parking lot not 25 feet from the car. No additional nesting sites were found, although Gauthreaux (1974. *Chat* 38: 97) recently reported birds nesting on the I-85 bridge across Lake Hartwell.

Brown-headed Nuthatch (*Sitta pusilla*).

Although recorded breeding as far north as Toccoa (Denton and Neal 1961. *Oriole* 26: 51-52) this species is uncommon in the area. The finding of adults feeding four fledglings recently out of the nest at Tugaloo State Park on May 31 is an additional breeding record for the region.

House Wren (*Troglodytes aedon*).

Although this wren has nested intermittently at Athens since 1950 and was reported nesting near Atlanta in 1970 (Parks, R. A. *Oriole* 35:32-33), its breeding status in Northeast Georgia remains largely unknown. The location of singing males at two different localities on June 1 was significant. One was singing from a mulberry tree in the backyard of an old home near the abandoned depot in Lavonia, Franklin County. The second bird was singing from a large privet hedge in a yard in the northern section of Royston which straddles the common corner of Franklin, Hart and Madison Counties. There were no wren houses at either place, so apparently the birds are utilizing other types of nesting sites.

Common Grackle (*Quiscalus quiscula*).

This bird was apparently absent from the Upper Piedmont of Northeastern Georgia until about 25 years ago when it was first reported breeding at Athens in 1950 (Johnston, D. W. 1950. *Oriole* 15: 34-36). Now it is one of the most abundant birds throughout Hart and Franklin Counties, occurring in all of the towns, around all farm houses, in the pastures, and in the state parks.

Blue Grosbeak (*Guiraca caerulea*).

Probably because of the extensive tall-grass pastures and grain fields this species was found throughout Hart and Franklin Counties and appeared to be as common or more so than anywhere within its range in Georgia.

Grasshopper Sparrow (*Ammodramus savannarum*).

This sparrow, which is known to breed sparingly throughout the Piedmont of Georgia, was found at a number of localities in Hart and Franklin Counties. The extensive permanent pastures and grain fields appear to support a large population in this area.

Song Sparrow (*Melospiza melodia*).

This "invasion species" has been gradually extending its breeding range southward in the Appalachian Valley and Piedmont of Georgia during the last 30 years. By 1970 it had reached Atlanta (Parks, R. A. *Oriole* 35: 32-33), but the southern limit of its breeding range in Eastern Georgia was unknown. A special search for this species was rewarded by finding birds holding territory and presumably breeding in three of the towns.

In Lavonia (el. 865') on May 29 a pair of birds was located in a brushy area between the railroad track and a drainage ditch on the south side of town. On May 31 a second pair was found in the same general area. Three years previously on April 30, 1972, I saw three singing males apparently holding territory in this same area. On June 1, before leaving Lavonia, a third pair of birds was found along the railroad track just north of the abandoned depot. In Hartwell (el. 818') on May 30 two pairs were found about a block apart in yards in the northern section of town. Earlier in the day a singing male was found in the swimming area at Hart State Park. Although holding territory, this bird seemed to have been unsuccessful in attracting a mate. Finally, on June 1 a pair of birds was located along a brush-lined drainage ditch in the northern edge of Royston (el. 910'). Thus the Song Sparrow seems to be established as a breeding bird as far south as the southern edge of Hart County.

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GENERAL NOTES

CLIFF SWALLOW AND POSSIBLY WILLOW FLYCATCHER NESTING IN DAWSON COUNTY, GEORGIA—On May 19, 1973 I was visiting a favorite birding spot in Dawson County which I call "Big Bottoms". I noticed two Cliff Swallows (*Petrochelidon pyrrhonota*) feeding over the fields in the company of Barn Swallows (*Hirundo rustica*) that have a breeding colony under a bridge there. On May 28, 1973, I returned and found two active nests under the same bridge with, but not among, the Barn Swallow nests. At this time I saw four Cliff Swallows. I returned on June 30, 1973, to find the remains of three deserted Cliff Swallow nests. The birds were still in the vicinity, however. A sizable flock, about 12-15, was feeding over the fields, completely independent of the Barn Swallows. They did not return to nest in 1974 or 1975. A single bird, however, was seen feeding with the Barn Swallow colony April 21, 1975.

On May 26, 1974, and May 18, 1975, single male Willow Flycatchers (*Empidonax traillii*) were observed by me, apparently singing on territory. I did not revisit "Big Bottoms" at later dates either year.

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BARN SWALLOW NESTING EXTENDS FROM PIEDMONT REGION INTO UPPER COASTAL PLAIN — The location of two separate breeding sites of the Barn Swallow (*Hirundo rustica*) in Laurens County marks the extension of its breeding range into the Coastal Plain of Georgia.

On Saturday, May 31, 1975, Hunter Patterson and I observed a pair of Barn Swallows on the wire over the bridge at Ben Hall Lake in the northeastern section of the county, 7.2 miles NNE of the courthouse in Dublin. On the following Saturday, June 7, the birds were again noted; and a search revealed a single nest under the east side of the bridge. It was noted that, on the adjacent beams to either side of the nest, there was evidence of either the remains of destroyed nests, or of beginning efforts of nest construction which were discontinued. Observations over the next several days confirmed that incubation was in progress and, on June 29, two young were seen protruding their beaks over the side of the nest. Breeding was confirmed.

On June 26, 1975, another nest was located under a bridge in the westbound lane of I-16, about three miles east of the Oconee River, and

just out of its flood plain. No evidence of other nests was found under the bridges in either of the lanes. A check of this breeding site on July 1 revealed at least two young in the nest. This second breeding site is twelve miles due south of the Ben Hall Lake nest.

The Ben Hall Lake bird bred a second time in the summer of 1975. On Saturday, July 27, the bird appeared to be again incubating, and in the same nest. A check of the nest on August 2 confirmed this; and on Saturday, August 9, young were again visible in the nest.

Burleigh (1958) reports that, with the disappearance of the Barn Swallow colony from Wassaw Island in 1904, breeding of the bird in Georgia apparently ceased. He noted however, that the summer presence of the bird near Rome in the mid 50's suggested the possibility of limited breeding in the northwestern corner of the state.

Peake and Baker (1967), reporting some of their own observations, summarized the breeding records subsequent to Burleigh, indicating the expansion of the breeding range to the east and south. They projected the probability of the ultimate range extension into the Coastal Plain and on to the coast.

Breeding reports by Denton (1976) and Peake (1967) point toward the consolidation of the breeding range within the Piedmont Region. Dopson (1969), who observed the incubating Ben Hall Lake bird with me on June 21, 1975, reported to me the location of a colony of breeding birds under the Little River Bridge of U. S. 441 at Lake Sinclair on the Baldwin-Putnam County line. This record, further confirming breeding near the Fall Line, has not previously been reported.

Wells and Matheny (1972), with a breeding record in Columbus, recorded the southerly extension of the range on the western side of the state.

Thus, in two decades, the Barn Swallow has re-entered Georgia as a nesting bird, and has extended its breeding range from the mountains through the Piedmont Region, and now into the Coastal Plain.

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PAINTED BUNTINGS in Americus in Late June — Along an east-west railroad (Seaboard Coast Line) in Americus, Sumter County, Georgia, I noted singing Painted Buntings or Nonpareils (*Passerina ciris*) at three locations, all within the city limit, in late June 1975. On the 24th, in company with my nephew Tommy Ireland, I heard a singing bird in trees above a red-clay bank near Barlow Street. Two days later, about a half mile westward, we came upon another singer, and this time I had a fleeting glimpse of a full-plumaged male. Several hundred yards farther west, another song was heard, but this bird kept out of sight. On June 30, I returned to the spot where the male was seen and this time had excellent views of it (probably the same individual), not only in trees, whence it sang, but also on a railroad tie and on open ground nearby. This site, several acres in extent, was mostly shrubby and weedy with scattered trees. Not far away a row of small frame houses faced the tracks. Singing Indigo Buntings and Blue Grosbeaks were also in evidence. While I did not see a female Painted Bunting or find a nest, I feel there were at least three males in the general vicinity, and I strongly suspect this species was breeding. Other areas around Americus, including Muckalee Creek, were visited, but it was only at the railroad locations that Nonpareils were seen or heard. Whether they had used major rivers and tributaries as guides to their "invasion" of Americus is a matter of conjecture. Tommy and I made a trip, with intermittent stops, westward almost to the Chattahoochee River and another eastward to Lake Blackshear, on the Flint River, but these yielded no records. Undoubtedly this species has colonized Americus only in relatively recent years, for Dr. J. Fred Denton lived here from September 1, 1941, to June 30, 1942, and was well aware of the local birds at that time. Although a male Painted Bunting was collected at Fitzgerald April 29, 1940, and a male visited a feeder in Columbus April 14-15, 1968 (*Audubon Field Notes*, 22: 516), there has been no suggestion of this species' breeding in the western part of the Upper Coastal Plain. Thus, with respect to Georgia distribution, the small, apparently isolated colony in Americus is roughly 85 miles southwest of the recently discovered colony in Dublin (Patterson, T. K. 1975. *Oriole*, 40(4):44-46.) Robert A. Norris, 427 Eureka Street, San Francisco, California 94114.

FALL INTERIOR RECORD OF RED-THROATED LOON — On the afternoon of November 2, 1975, as Bill Trollinger and I were observing the area ponds and lakes for new fall migrants, we sighted a bird swimming and diving on Thundering Springs Lake in the northeastern section of Laurens County. Viewing from a distance of some 500 yards, we assumed the bird to be a Common Loon (*Gavia immer*).

However, after approaching to another point on the shore where the bird could be observed from a distance of only about 75 yards through a 20-power scope, the slender, light-colored bill, which was slightly upturned, and the dark but white-flecked back revealed that the bird was a Red-Throated Loon (*Gavia stellata*) in winter plumage.

Burleigh (1958) reports that the Red-Throated Loon is a rare visitant to coastal Georgia and of casual occurrence in the interior of the state during migration. However, he reports only a single record in the interior: that of a specimen taken on December 19, 1930, on the Savannah River in Screven County. A search of *The Oriole* records since Burleigh reveals only 3 reported interior observations: a spring observation by L. A. and Roberta Wells (1966), and two fall records by L. A. Wells (1970) at Lake Oliver near Columbus. All other records in *The Oriole* are in the Coastal Region.

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THE SONG SPARROW NESTING AT ATHENS, GEORGIA — The breeding range of the Song Sparrow (*Melospiza melodia*) was extended to Athens with the discovery of a nesting pair in 1976. Previously published extreme dates of occurrences for this species at Athens were October 2, 1921 - May 4, 1963 (Tramer, 1968).

Song Sparrows were heard at certain locations in the city successively later in May, 1976, than Tramer's latest spring date. On June 10 a Song Sparrow was heard at yet another location, near the Foley Baseball Field on the University of Georgia campus. On June 24 a pair of Song Sparrows was observed at the same place, and on June 26 a pair and one readily distinguishable bob-tailed young bird were flushed from a dense hedge of Pfitzer juniper some sixty feet from the backstop located behind home plate. A search of the hedge revealed a nest containing one unhatched egg. The hedge was about four to five feet high, twelve feet wide, and fifty feet in length. By July 10 the young bird no longer appeared bob-tailed. The young bird was seen searching for food in the nesting area with one or both parents until July 18.

The main cover for the birds was provided by the juniper hedge, five small American holly trees spaced at regular intervals in the hedge, and a hedge of Burford holly located nearer the baseball field backstop. The

surrounding area was maintained mostly as mowed lawn. A small stream was located about two hundred feet from the nest.

On July 5 a second nest containing two eggs was found in the same juniper hedge, about fifteen feet from the first nest. Both nests were located about 10 inches from the top of the hedge and hidden by overhanging branches. On July 6 a third egg was present in the second nest. Two of these eggs hatched July 18, but the third egg remained unhatched. The two young birds were banded in the nest July 24, at which time the third egg was missing. When the nest was revisited July 26, both banded young birds were missing as well, and were not subsequently seen. The parental birds were seen occasionally thereafter in the nesting area until August 19.

The breeding range of the Song Sparrow has been gradually extended southward in Georgia since the species was first found breeding in four of the northern tier of counties in 1922 (Burleigh, 1925). Song Sparrows were subsequently reported breeding in the northern edge of the Piedmont (Odum and Burleigh, 1946); Dalton (Hamilton and Hamilton, 1946); Habersham County (Neal and Denton, 1950); Milledgeville (Dorris, Tait, and Weaver, 1951); Toccoa (Denton and Neal, 1961); Atlanta (Parks, 1970); Gainesville (Paget, 1975); and Lavonia, Hartwell, and Royston (Denton, 1976). As noted by Denton and Neal (1961), this southward extension has involved primarily urban habitats.

We thank Mr. Joseph M. Meyers for banding the two nestlings for us. Olin Allen is a recipient of the Stoddard-Sutton-Burleigh Award.

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 Olin S. Allen, III, and H. Branch Howe, Jr., University of Georgia, Athens, Georgia 30602.

FROM THE FIELD — SOUTH GEORGIA

From the Columbus area, L. W. Wells saw a Fish Crow at Lake Oliver 21 Feb 1976 and reported 450 Tree Swallows together on 21 Jan. Grace Whitman saw a Common Loon at Lake West Point 16 Jan and had 100+ Ring-billed and Herring Gulls there 31 Dec 1975. A Bald Eagle was seen at Lake Oliver by Mrs. Thurston Crawford on 5 Jan. Whistling Swans (10-12 individuals) were reported by several observers to be wintering at the Savannah River NWR and 16 Fulvous Tree Ducks were there on 16 Jan. Grace Boddiford saw 6 Whistling Swans near Sylvania on 24 Nov 1975. A white phase Snow Goose was found dead in Thomasville on 23 Dec 1975 by Dale Hintze and J. A. Bracey saw 2 Greater Yellowlegs near a Thomas County pond on 21 Dec 1975. The Evening Grosbeak's incursion into the Coastal Plain this winter even reached the southern tier of counties where Betty Komarek reported one from her Grady County feeder on 4-5 Jan.

(Compiled by Robert L. Crawford, Tall Timbers Research Station, Route 1, Box 160, Tallahassee, Florida 32303).

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