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RANGE EXPANSION OF THE WHIP-POOR-WILL IN GEORGIA

Robert J. Cooper

In recent years there has been much interest in the southward range expansion of the Whip-poor-will (*Caprimulgis vociferus*). Baker and Peake (1966) made several listening counts for Whip-poor-wills and Chuck-will's-widows (*Caprimulgis carolinensis*) around Athens, Georgia, and determined that the Whip-poor-will was extending its summer range southward to include the lower Piedmont of Georgia. Their searches located Whip-poor-wills in Clarke, Jackson, Madison, Oconee, Oglethorpe and Greene counties. Denton (1956) also found Whip-poor-wills in Lincoln County. Allen (1979) found the Whip-poor-will to be fairly abundant in suburban areas of Clarke County although it was greatly outnumbered by the Chuck-will's-widow. He reported substantial clustering in the local distribution of the Whip-poor-will, so that in some places it had actually replaced the Chuck-will's-widow. Prior to this, the Whip-poor-will had been described as "an uncommon transient south of the mountain counties" (Burleigh 1958). Odum (1943) reported the Whip-poor-will as not having substantially changed its distribution in the previous 35 years. By 1968, however, the Whip-poor-will was listed as a locally common summer resident around Athens (Tramer 1968). The Chuck-will's-widow has historically been a common summer resident in this area.

The southward range expansion of the Whip-poor-will appears to be related to a general southward invasion of northern species as discussed by Odum and Burleigh (1946), and is likely to be the result of habitat selection. Suitable habitat, previously unavailable or present in too small a quantity due to extensive agricultural land use, was suddenly made available in a large enough area to enable the species to establish a foothold and maintain a breeding population.

The literature concerning the habitat preferences of the Chuck-will's-widow and the Whip-poor-will is inconclusive although it is accepted that both species seem to require wooded areas with openings over which to forage for insects (Bent 1940, Harper 1938, Imhof 1976). It is likely that habitat preferences of these species are different enough that the Whip-poor-will could expand into areas previously occupied exclusively by the Chuck-will's-widow. Quantitative information concerning habitat preferences is lack-

ing due to their highly secretive nature and the associated difficulty involved in estimating their density. The objectives of this study were to determine the relative abundance of Chuck-will's-widows and Whip-poor-wills in Clarke County, Georgia, by means of aural estimation (call counts), to attempt to relate their relative abundances to differences in occupied habitat, and to determine the southernmost limit of the Whip-poor-will's summer range in Georgia.

METHODS

Athens is located in the geographic center of Clarke County, which is characterized by gently rolling hills of red clay subsoils with an average elevation of 700 feet (msl). During the last 50 years the county has experienced much urbanization with numerous suburban developments.

In the southeast portion of the county, twenty roadside listening counts were made by the author from 13 April - 23 July 1975, along main, secondary, and dirt roads. Twenty permanent stations were established at approximately $\frac{1}{2}$ mi. intervals. Barnett Shoals Road, a main road in a partially suburban area, contained the first seven stations. The next seven stations were on Belmont Road, a paved road running through farm land largely maintained as improved pasture. The final six stations were along a dirt road extending into pine-hardwood forest. Due to the extremely homogeneous nature of these areas, it was possible to categorize the counts by land use type; either suburban, agricultural, or forest. Within these three extremely homogeneous areas, land use cover types were mapped using topographic maps, aerial photographs, and field observations (Fig. 1). Acreages were determined by planimeter in an area $\frac{1}{2}$ mi. on either side of the transect. Forest cover types were defined as follows:

Pine - forest stands comprised of at least 50% pine

Mixed - forest stands comprised of at least 50% hardwood, but also containing at least 25% pine

Hardwood - forest stands virtually 100% hardwood, usually restricted to creek bottoms

The suburban area was characterized by intermittent residential areas among agricultural and forested land. Smaller open areas (21% of the suburban area) were characterized by fallow fields, improved pasture, or soybean (*Glycine max*) fields. Larger open areas were usually residential in nature (22% of the suburban area). Forested land (57% of the suburban area) contained many residential areas and was frequently without dense understory. Although similar in proportion of open and forested land to portions of the other two areas, the suburban character of this area made it unique. Elevations in this area varied from 600 ft. to 720 ft.

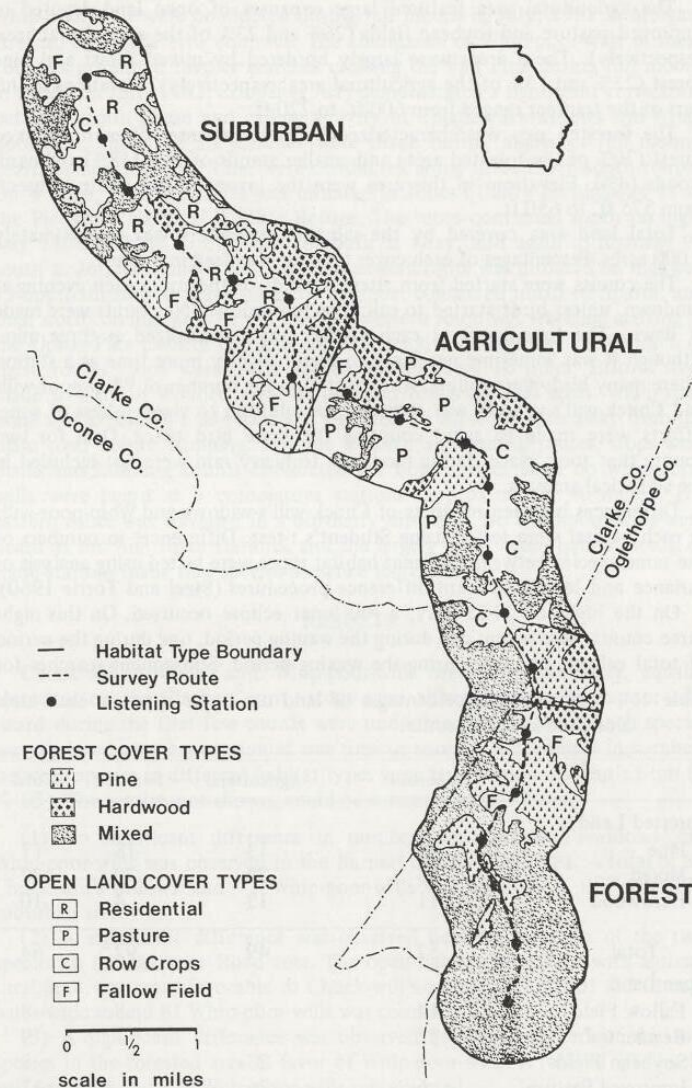


Fig. 1. - Map of the Clarke County study area showing cover types in the three divisions of the transect.

The agricultural area featured large expanses of open land devoted to improved pasture and soybean fields (26% and 23% of the agricultural area, respectively). These areas were largely bordered by mixed forest and pine forest (23% and 13% of the agricultural area, respectively). Elevations in this part of the transect ranged from 600 ft. to 720 ft.

The forested area was characterized by large expanses of mature mixed forest (70% of the forested area) and smaller stands of pine (18%) and hardwoods (4%). Elevations in this area were the lowest of the entire transect, from 575 ft. to 650 ft.

Total land area covered by the sampling procedure was approximately 6,000 acres. Percentages of each cover type are itemized in Table 1.

The counts were started from alternate ends of the route each evening at sundown, unless birds started to call prior to sundown. No counts were made at dawn. The time spent at each station was standardized at three min., although it was sometime necessary to spend slightly more time at a station where many birds were calling. At each station the number of Whip-poor-wills and Chuck-will's-widows was recorded, in addition to vigorousness of song. Efforts were made to avoid counting the same bird twice. Data for two counts that took place during moderate to heavy rain were not included in the statistical analysis.

Differences between numbers of Chuck-will's-widows and Whip-poor-wills in each habitat were tested using Student's *t*-test. Differences in numbers of the same species between different habitat types were tested using analysis of variance and least significant difference procedures (Steel and Torrie 1960).

On the night of 24-25 May, a full lunar eclipse occurred. On this night three counts were taken; one during the waning period, one during the period of total eclipse, and one during the waxing period. Subsequent searches for

Table 1. — Approximate percentages of land use cover types in each area along the sampling route.

	Suburban	Agricultural	Forested	Total
Forested Land				
Pine	21	13	18	17
Mixed	25	23	70	37
Hardwood	11	13	4	10
Total	57	49	92	64
Open Land				
Fallow Field	14	2	8	8
Residential	22	—	—	9
Soybean Fields	1	23	—	8
Improved Pasture	6	26	—	11
Total	43	51	8	36

Whip-poor-wills were conducted during full moons in July, 1981 in Morgan, Greene, and Taliaferro counties. The abundance of Whip-poor-wills in these counties prompted further searches crossing the Fall Line during full moons in June and July, 1982. Cooper (1981) demonstrated a significant correlation between moon phase and calling activity of Chuck-will's-widows and Whip-poor-wills, therefore all searches were made during nights of full moons. Searches near the Fall Line were conducted along three north-south routes. On 4 June, a central route was initiated in Jones County on highway 11 at the Piedmont National Wildlife Refuge. The route continued south on highway 11, switching to highway 18 south at Gray, and again to highway 96 south at Jeffersonville. On 5 June, an eastern route was initiated on highway 15 approximately 5 miles south of Tennille, continued north to Sparta, and then north on highway 22. On 6 July a western route was travelled starting at the Upson-Pike County line and continued south on highway 19. On each of these routes stops were made approximately every 10 miles. Efforts were made to stop in wooded areas as opposed to agricultural areas. When road noise was excessive, a side road was travelled for some distance away from the main road before stopping. For the western and central routes, stops were made and listening counts conducted for both species until no Whip-poor-wills were heard at 5 consecutive stations (approximately 40 miles). The eastern route was travelled in a northerly direction. No Whip-poor-wills were heard at the first three stations, and the largely agricultural habitat south of these stations made that species presence there unlikely.

RESULTS

Chuck-will's-widows and Whip-poor-wills were approximately equally abundant on the Clarke County study area, although many Whip-poor-wills heard during the first few counts were undoubtedly transients. Each species was observed at every station at one time or another. Differences in numbers between species in different habitat types were tested using Student's *t*-test ($p \leq .05$). The results, not shown, could be summarized as follows:

(1) No significant difference in numbers of Chuck-will's-widows and Whip-poor-wills was observed in the Barnett Shoals Road area. A total of 86 Chuck-will's-widows and 71 Whip-poor-wills was counted in this primarily suburban area.

(2) A significant difference was observed between numbers of the two species in the Belmont Road area. The open habitat associated with agricultural land was more favorable to Chuck-will's-widows. A total of 113 Chuck-will's-widows and 81 Whip-poor-wills was counted.

(3) A significant difference was observed between numbers of the two species in the forested area in favor of Whip-poor-wills. A total of 70 Chuck-will's-widows and 129 Whip-poor-wills was counted.

Differences in numbers of the same species between habitat types were tested using analysis of variance and least significant difference procedures ($p \leq .05$). The results could be summarized as follows:

(1) There was no significant difference between numbers of Chuck-will's-widows observed in the three habitat types.

(2) Whip-poor-wills were significantly more numerous in the forested area than in the other two habitat types. There was no significant difference between numbers of Whip-poor-wills observed in agricultural and suburban areas.

Fig. 2 consists of three graphs, comparing number of Chuck-will's-widows and Whip-poor-wills in each habitat type. Fig. 3 consists of two graphs, each comparing numbers of one species in the three habitat types.

Goatsucker surveys in the southernmost Piedmont counties further confirmed the findings of this study regarding habitat associations. On routes surveyed during July, 1981 in Morgan, Oconee, Walton, Greene and Taliaferro counties, Whip-poor-wills and Chuck-will's-widows were found to be approximately equally abundant, but with Chuck-will's-widows usually more common in agricultural areas and Whip-poor-wills more common in forested areas.

The abundance of Whip-poor-wills in these counties prompted additional surveys along the previously described routes running south to the Fall Line. On all three routes, Whip-poor-wills were shown to exist to the Fall Line or beyond, although they were usually outnumbered by the Chuck-will's-widow. Survey summaries are as follows:

Western Route (6 July 1982): Started at the Upson-Pike County line, and travelled south on U.S. Route 19. The last station surveyed was located approximately 10 miles south of Butler, in Taylor County. The southernmost station where Whip-poor-wills were heard was located approximately 10 miles south of Thomaston, near the Upson-Taylor County line. A total of 15 Chuck-will's-widows and 4 Whip-poor-wills was heard at 8 stations.

Central Route (4 June 1982): Started at Piedmont National Wildlife Refuge in Jones County and travelled south on Georgia Route 11, switching to Georgia Route 18 at Gray, and then to Georgia Route 96 at Jeffersonville. The last station surveyed was located approximately 3 miles south of Interstate Highway 16 in Twiggs County. The southernmost station where Whip-poor-wills were heard was located approximately 6 miles south of Gordon in Wilkinson County. A total of 16 Chuck-will's-widows and 5 Whip-poor-wills was heard at 8 stations.

Eastern Route (5 June 1982): Started approximately 1 mile south of Tennille in Washington County and travelled north on Georgia Route 15, switching to Georgia Route 22 north of Sparta. The southernmost station where Whip-poor-wills were heard was located at the Washington-Hancock County line. A total of 19 Chuck-will's-widows and 12 Whip-poor-wills was heard at 8 stations.

DISCUSSION

The literature concerning habitat preference of Whip-poor-wills and Chuck-will's-widows is inconclusive. In this study Chuck-will's-widows

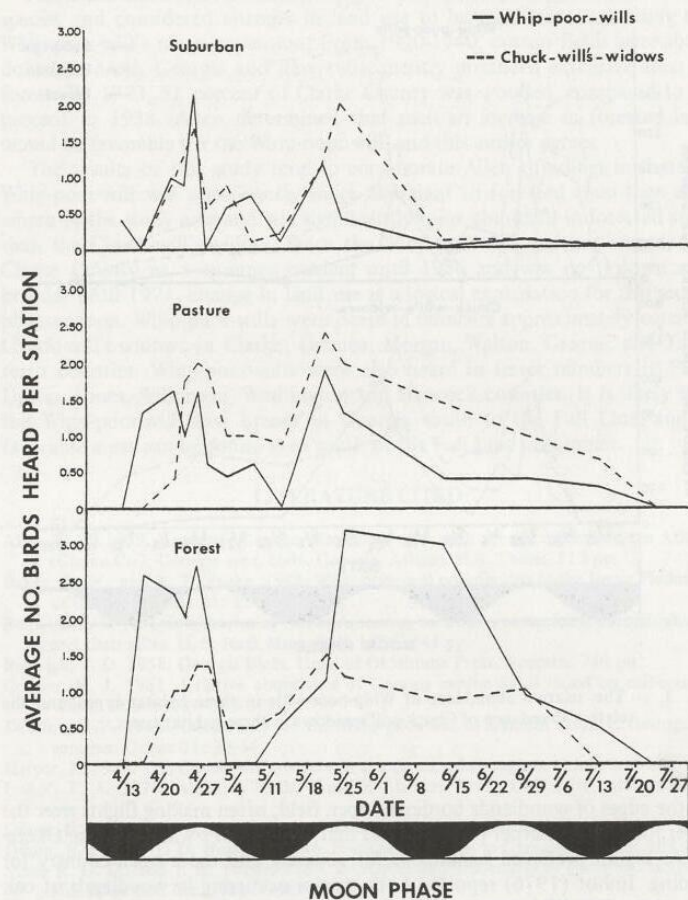


Fig. 2. — The relative abundance of Whip-poor-wills and Chuck-will's-widows in suburban, agricultural, and forested areas.

showed a relative affinity for open habitat and Whip-poor-wills showed a preference for wooded habitat, although the distinction here is subtle. The agricultural area on the Clarke County route was still approximately 50% wooded. The proper distinction here would be that a species preferred either predominantly wooded areas with periodic small openings or wooded areas bordering large open fields. Bent (1940) reported Chuck-will's-widows active

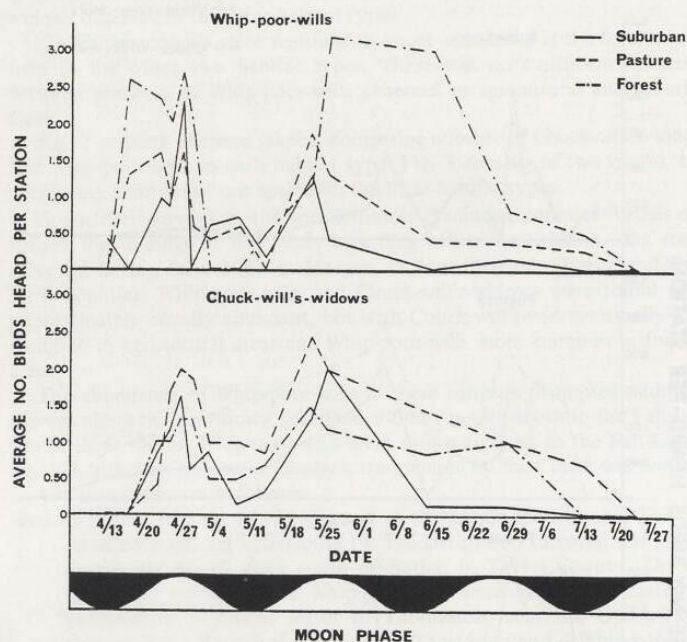


Fig. 3. — The relative abundance of Whip-poor-wills in three habitat types, and the relative abundance of Chuck-will's-widows in three habitat types.

on the edges of woodlands bordering open field, often making flights over the latter for insects. Harper (1938) found that Chuck-will's-widows in the Okefenokee region preferred hammocks for roosting and more open country for feeding. Imhof (1976) reported both species occurring in woodlands of oak and pine. The Whip-poor-will was considered by Bent to be a woodland species that utilized small open areas for feeding. Allen (1979) found Whip-poor-wills in the Athens area to be restricted to a few areas, suburban in nature, characterized by a mixture of pasture and pine woods, with hardwoods restricted to creek bottoms. Baker and Peake (1966) found that the Whip-poor-will seemed limited to higher ground. Allen could not confirm or refute this observation. On the Clarke County route Whip-poor-wills were most abundant in the areas with the lowest elevation (< 600 ft.), so that elevation can probably be eliminated as a factor in range expansion of this species.

Allen discussed factors contributing to the southward expansion of many species and considered changes in land use to be significant in causing the Whip-poor-will's range expansion. From 1920-1940, cotton fields were abandoned in north Georgia and have subsequently produced extensive areas of forest. By 1973, 51 percent of Clarke County was wooded, compared to 38 percent in 1938. Allen determined that such an increase in forested land would be favorable for the Whip-poor-will, and this author agrees.

The results of this study tend to corroborate Allen's findings in that the Whip-poor-will was significantly more abundant in forested areas than elsewhere in the study area and was significantly more abundant in forested areas than the Chuck-will's-widow. Since the Whip-poor-will was not recorded in Clarke County as a summer resident until 1956 and was not known as a breeder until 1971, change in land use is a logical explanation for this recent phenomenon. Whip-poor-wills were heard in numbers approximately equal to Chuck-will's-widows in Clarke, Oconee, Morgan, Walton, Greene, and Taliaferro counties. Whip-poor-wills were also heard in lesser numbers in Pike, Upson, Jones, Wilkinson, Washington and Hancock counties. It is likely that the Whip-poor-will now breeds in Georgia south to the Fall Line, and in favorable areas can be found even south of the Fall Line in summer.

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GEORGIA'S SECOND RECORD OF ARCTIC TERN

J. Christopher Haney

On 16 May 1982 I was participating in a fish community sampling cruise with Dr. Gene Helfman of the Department of Zoology, University of Georgia. We were using the Marine Extension Service's (MAREX) "Bulldog" about 20 km east of Brunswick, Glynn County.

While under way I observed three terns flying across the boat's wake and noted their white cheeks contrasting with a black cap and gray breast, deep red bills, and wings with a "translucent" effect set off by a narrow black border on the trailing edge. Shortly afterwards, I noted three different terns sitting on a large piece of plywood approximately 15 meters from the boat. In these birds the red bill without any trace of black, gray breast and white cheeks, and tail extending to folded wing tips were readily discernible. I identified the birds as Arctic Terns (*Sterna paradisaea*). During the next hour, three additional Arctic Terns flew by and settled at a distance on the water with ten *Sterna* terns whose identity could not be established. A total of at least nine Arctic Terns were present and all were observed with 7 x 35 Bushnell binoculars under sunny skies at distances of 30 meters or less. Winds were light and the sea was very calm at the time of observation.

A substantial amount of marine life was encountered in the same area. Several large schools of Atlantic menhaden (*Brevoortia tyrannus*) were present accompanied by eight to ten Atlantic bottlenose dolphins (*Tursiops truncatus*). Ten to twelve Laughing Gulls (*Larus atricilla*) were attracted to the menhaden and our trawling. Six Northern Phalaropes (*Phalaropus lobatus*) and 23 unidentified phalaropes were also present.

The Arctic Tern is a rarely seen migrant in the Atlantic at latitudes south of New England. Potter *et al.* (1980) state that the species migrates well offshore in North Carolina, the only records being in May and September. There are at least two records for South Carolina; one bird 5 May 1979 and one 3 May 1980 (LeGrand 1979, 1981). Arctic Terns have been seen off Florida between 27 April and 21 May, these records involving sightings of one to six individuals (Kale 1977, 1979, 1980).

There is only one previous record for the state of Georgia. Francis Harper took an adult female at Suwannee Creek near the Okefenokee Swamp on 21 May 1921 (Burleigh 1958). The specimen is now at Cornell University in Ithaca, New York.

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TUFTED TITMICE STORE ACORNS

Douglas B. McNair

This note describes incidental observations of acorn storage by Tufted Titmice (*Parus bicolor*) in trees and on the ground.

I observed a Tufted Titmouse storing acorns of the water oak (*Quercus nigra*) at 1300 hr on 30 November 1980 at Noxubee National Wildlife Refuge, Mississippi, in a mixed forest dominated by loblolly pine (*Pinus taeda*), oaks (*Quercus* spp.) and hickories (*Carya* spp.). I first observed a titmouse, with an acorn in its beak, in a 9 m water oak. The titmouse flew to the base (1 m) of a 30 m loblolly pine. The titmouse peered at several sites on the vertical trunk of the pine, where it spent about 5 sec each investigating several sites. It finally selected a crevice within pine bark on the vertical trunk at 1 m where it deposited its single acorn, with cup attached. I removed the acorn from the crevice; the acorn was observable from above and was not especially well hidden. The same titmouse repeated this behavior twice. It obtained single acorns from limbs of the same water oak, either pulling the acorns off by grasping them in its bill or by delivering one or two blows at the stem of the cup and then pulling the acorns off. The titmouse then wedged these acorns in crevices in the bark of the same loblolly pine at heights of 4 m and 5 m. The same titmouse then obtained three more acorns from the water oak, and on three successive trips, flew across a dirt road to a low perch in saplings, from where the titmouse dropped to the ground behind a thicket and deposited each acorn on the ground in the same place.

I observed another Tufted Titmouse at the same locality in similar forest a few miles away from the aforementioned observation, at 1100 hr on 7 December 1980. This titmouse was carrying an acorn in its bill, without an attached cup. The titmouse flew from a 4 m perch in a sapling to an 11 m perch on a snag of the southern red oak (*Quercus falcata*). This snag had many cavities though most of the bark was still adherent. The titmouse then flew to 6.5 m on this snag and deposited its acorn in an incomplete cavity.

I have additional observations of Tufted Titmouse storing acorns in Mississippi and North Carolina in the fall, especially at Pee Dee National Wildlife Refuge, N.C., and these incidental and unrecorded observations are similar to the observations cited above. The acorn crop was good to excellent at all localities at the time of observation, either in Mississippi or North Carolina.

Acorns may be a major food for Tufted Titmice in fall, and titmice may procure acorns from the ground or trees (Bent 1946; pers. obsv.). Titmice may open the shell by hammering it to obtain fresh seed or they may pick and probe on rotting acorns. My limited observations of titmice procuring acorns for storage did not indicate that titmice hammer at these acorns to obtain their seed, nor did titmice obtain acorns from the ground, where the acorns were abundant. I observed titmice only obtaining fresh acorns from trees for the purpose of food storage.

There are surprisingly few references to food (or acorn) storage of Tufted Titmice in the literature. The only reference in Bent (1946) states, "... [tit-

mice] are so thrifty that they may empty a food box and store all the surplus food before the more backward chickadees, wrens, and nuthatches arrive." Owen and Owen (1956) recorded titmice hiding sunflower seeds in the general area of a feeder, Franklin County, Kentucky, on 12 October 1956; not all seeds were hidden in one place. Kilham (1958) recorded titmice storing acorns in the ground in the fall at Montgomery County, Maryland. Haftorn (1974) was unable to locate any references to food storage behavior in the Tufted Titmouse other than the observation cited in Bent (1946). I have talked to several naturalists in several states who have observed the Tufted Titmouse storing acorns. I strongly suspect that this behavior is much more widespread than reported in the literature. The significance of this behavior is speculative without more detailed study.

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GENERAL NOTES

ANHINGA SIGHTING NEAR CARTERSVILLE — While conducting a breeding bird survey route outside Cartersville, Georgia on 20 June 1982, I observed an Anhinga (*Anhinga anhinga*). The bird was spotted through binoculars as it was flying about 0.75 miles away. An estimate places the bird about 3.0 miles directly south of Cartersville, 1.5 miles southwest of Emerson and 3.0 miles directly west of Lake Allatoona.

I was standing on a dirt road next to a farm field observing a Grasshopper Sparrow (*Ammodramus savannarum*) sitting on a tall weed silhouetted against the sky. A large dark soaring object came into my view. I abandoned the sparrow and fixed my attention on the distant bird. Its long neck was fully extended about 12 inches and its tail appeared nearly as long as its neck, with its wings approximately in the middle. It flapped rather rapidly five or six times, then began soaring in a thermal. I was able to watch the bird for one or two minutes before it soared out of sight. The long neck, tail, dark color and flight pattern all pointed to the identification of the bird as an Anhinga.

The Annotated Checklist of Georgia Birds (Georgia Ornithological Society, Occasional Publication No. 6, 1977) lists the species as accidental north of the Fall Line with one record from Athens on 25 March 1935.

Georgann Schmalz, Fernbank Science Center, 156 Heaton Park Drive, NE, Atlanta, GA 30307.

GREAT BLUE HERONS (WHITE MORPHS) SPEND THE SUMMER IN AUGUSTA — On 5 June 1982, at 2050, my husband Vernon and I were leaving an area of Merry Brick and Tile Company known as Merry Ponds. We had just completed a census of the heron roost that's located in one of the larger ponds here and were on our way out when we spotted a large white wader standing quietly on the edge of a small pond. He seemed large for a Great Egret (*Casmerodius albus*) but the light wasn't very good. As we approached, he flew across the road directly in front of us displaying huge white wings. It was then we could see that he was trailing an orange wing tag. We wondered if this could possibly be a white morph of the Great Blue Heron (*Ardea herodias*). Although he was just across a clay road from the roost, he flew instead over toward other ponds behind it. This behavior, added to the large size, increased our suspicions that this was not a Great Egret. Since we left Augusta the next day and were gone a week, we were unable to check the ponds again for the tagged heron until 13 June. We were unable to find him at that time.

On 14 June, Clarence Belger called about 2000 to report a possible "Great White" Heron in Merry Ponds. Vernon and I joined him and studied the bird for approximately 20 minutes using a 20X scope and 7X binoculars from 35-40 m away as he perched on one side of the same pond where we had seen the tagged heron. This heron seemed tired and reluctant to move, stretching first one wing and then another during which we noted no wing tags. Leg color was yellow up the back of the legs with gray on the front. His bill was

yellow on the lower mandible and basically gray with a yellow border on the upper. When he flew he did not go into the roost which was only 150 m away but flew toward other ponds beyond it.

Early 15 June my husband and I searched for the heron in all of the Merry Ponds, finally locating him on a private pond along Foster's Lane. We set up the 30X scope and camera on the bank where we studied and photographed him for approximately 30 minutes. At first he was stationary but then he began to fish actively. He also raised the feathers on top of his head a few times and scratched his chin with his yellowish foot. He flapped his wings and turned all the way around several times as if dancing. We could see no tag on either wing. In behavior he reminded me very much of a Great Blue Heron. I have watched them "dance" like that and also scratch their chins with those raised head feathers that gives them a rather comical look. Also Great Blue Herons fly over the Merry Ponds Roost but never have been observed in the roost with the other waders. This white morph, as is characteristic of Great Blue Herons, preferred a solitary roost.

We left Augusta the next day for an extended vacation, so were unable to monitor the ponds. Clarence Belger checked the area all summer from time to time and observed both the tagged and non-tagged "Great White" Herons, although never together. The heron without the tag was seen 29 June, 13 July and 10 August. The tagged bird was seen on 7 August in good enough light that Clarence could read the number 149 on the orange wing tag. This information was forwarded to the persons responsible for tagging the bird in Florida. From this it was later learned that the heron was tagged as a nestling on 28 February on Buchanan Key in the northeastern part of Florida Bay, South Florida. There were 200 nestlings tagged in this way and virtually all of them left the area. Thus far 25 sightings of tagged birds have been reported from around Florida and as far away as Georgia and Texas.

Although the "Great White" Heron has been seen a number of times in recent years along the Georgia coast, this appears to be the third and fourth inland records for this morph. Previous inland records are from Laurens County, 3-31 January 1978 (Oriole 43: 39-40) and Morgan County 21 June 1981 (Oriole 46: 15).

Anne R. Waters, 1621 Apple Valley Dr., Augusta, Georgia, 30906.

REPRODUCTIVE POTENCY OF AN AGED MALE WOOD DUCK — There is little or no published information concerning the retention of reproductive potency in aged birds, with the exception of some limited information concerning a few selected species of galliforms (e.g., Daniels, Poul. Sci. 47: 1875-1878, 1968; Vandepopuliere, Greene, Kifer, and Williamson, Poul. Sci. 46: 1331, 1967; Woodward, Snyder, and Abplanalp, Poul. Sci. 60: 2006-2009, 1981). This report documents the retention of reproductive potency by a captive male Wood Duck (*Aix sponsa*) of at least 11 years of age. Although waterfowl are generally known to be long-lived, particularly in captivity (Johnsgard, Waterfowl: Their Biology and Natural History, Univ. Nebraska Press, Lincoln, 1968), there are no published reports describing the

reproductive capacity of such aged birds.

This male was of unknown age, but showed full breeding plumage and thus was at least one year old, at the time it was obtained from a private waterfowl collection in late April, 1971. Its exact racial origin was unknown. In March, 1981, this male was used in a research program concerning the captive propagation and cross-fostering of Wood Ducks and Hooded Mergansers (*Lophodytes cucullatus*). The drake was paired with a female Wood Duck which had been hatched in captivity in the spring of 1980 from eggs laid by a wild hen in Barnwell County, South Carolina. Although raised with both male and female siblings as a juvenile, this female had not been in the presence of any other Wood Duck, except the aged male, since late July, 1980. On 25 March 1981 this female was found to be incubating 13 eggs, which were subsequently placed under a broody Hooded Merganser on 13 April. The eggs in this clutch began pipping on 24 April, and by 30 April, 7 of the 13 eggs had hatched. Two of the remaining eggs were fertile but had died during early incubation, while the other 4 were infertile. The 7 ducklings which hatched were vigorous and were all raised successfully to fledging by the female Hooded Merganser.

It is extremely unlikely that the Wood Duck in this pairing was bred by one of her male siblings and then retained such sperm during the 8 months of her isolation with the aged male (Elder and Weller, J. Wildl. Mgt. 18: 495-502, 1954). The unlikelihood of such an occurrence is further strengthened by the fact that the female's male siblings, at the time she was last with them, were less than 6 months old and had not yet acquired their first adult plumage and were undoubtedly still sexually immature.

A 5-6 year-old Red-legged Partridge (*Alectoris gracea*) showed an average fertility of 19.7% when mated to 1.5 year-old females of the same species (Woodard, Snyder and Abplanalp 1981). Control mating of 1.5 year-old male to 1.5 year-old female partridge showed an average fertility of 60.1%. The present report dealing with the aged male Wood Duck indicates that under captive conditions, males of this species can show a fertility of nearly 70%, at nearly twice the age of the oldest partridge studied by the former authors. While captive birds, which are assured an adequate year-round food supply, might show a higher degree of fertility at older ages than their free-living counterparts, this report suggests that free-living male Wood Ducks can probably be considered to retain their full reproductive potential throughout their normal ecological life-span.

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SPRING SIGHTING OF WHITE-WINGED SCOTER IN HALL COUNTY — A young male White-winged Scoter (*Melanitta fusca*) was observed on 21 March 1982 around 1630 approximately 20 m from the shore near PineIsle Hotel Resort on Lake Lanier Island, Hall County. A look at my field guide (R. T. Peterson, A Field Guide to the Birds East of the Rockies, Houghton Mifflin Co., 1980) left me no doubt about the identification because of the shape of the duck and very prominent wing patch. I ran to tell my wife about the observation and to bring a telescope. While the duck sat on the water, still 20-30 m away, we observed it for a few minutes through a 15-60X zoom telescope. The bird displayed no fear of us. It was a dark brown color with some orange showing in the bill, and two almost obscure light patches on the face. The white wing patch was bigger than in any illustration of the bird I had seen. Because of the orange in the bill and the patches in the face, I believe the bird was a year old male.

The Annotated Checklist of Georgia Birds (Georgia Ornithological Society, Occasional Publication No. 6, 1977) lists the White-winged Scoter as a rare winter visitor inland at Augusta from 23 January 1954 to 25 February 1958, Columbus from 29 October 1969 to 8 February 1980 and at Dalton on 12-13 February 1967. At least one more sighting of the species took place inland when a female was found by Bob Gilbert and Jack Carusos on 25 November 1979 and was seen through 27 November by many observers near Kennesaw in Cobb County (pers. comm.).

Patrick Brisse, 634 ½ Wilson Road, Atlanta, GA 30318.

POPULATION OF A SEA ISLAND BY WILD TURKEYS — Continuing observations have been made on the Wild Turkey (*Meleagris gallopavo*) population of Little Cumberland Island since the publication of the original article (Oriole 45: 49-51).

Wild Turkeys, both adults and immature birds, were seen in large numbers in the fall of 1980, but began to be seen much less frequently in the winter of 1981. By the spring of 1981, sightings had declined precipitously in frequency. Not a single young bird was observed in 1981.

Sciple sighted no Turkeys at all between the early spring of 1981 and the late spring of 1982. Newman observed one pair of adults and three young in the spring and summer of 1982. Sciple observed in the spring of 1982 a single young Turkey, estimated age of six to eight weeks. He also saw tracks of an adult bird accompanied by three young.

We are impressed by the quite sudden and wide change in frequency and numbers of sightings of Turkeys at Little Cumberland Island between the fall of 1980 and the spring, summer and later months of 1981. This change was dramatic.

There has been no known major change in the macro-environment at Little Cumberland Island. A single bobcat (*Lynx rufus*) was observed on the island in 1981. It may well have been present prior to this time. No evidence of mammal predation on Turkeys has been found. Alligators (*Alligator mississippiensis*) are believed to have continued to increase in numbers during the

1980-1982 period. No definitive evidence of predation by these reptiles on Turkeys has been observed. No hunting of Turkeys by humans is believed to have taken place on Little Cumberland Island.

In summary, Wild Turkeys were seen in exceptionally rapidly increasing numbers in 1980 and immediately preceding years. Within a few months, in the winter, spring and summer of 1981, there was a sudden, dramatic decrease in sightings. Evidence of a few young and at least one pair of adults was found in 1982.

These sightings are believed to represent, at least in a general way, a reflection of the numbers of Turkeys actually present on Little Cumberland Island.

G. W. Sciple, 2601 Parkwood Drive, Brunswick, GA 31520 and Gerry Newman, P. O. Box 3127, Jekyll Island, GA 31520.

SOME SHOREBIRD OCCURRENCE RECORDS FOR GEORGIA — While reading The Annotated Checklist of Georgia Birds (Georgia Ornithological Society, Occasional Publication No. 6, 1977), I noticed that several of the occurrence extremes listed for shorebirds seemed to be less extreme than some of my recent observations. After checking my notes I found the following differences between them and the dates listed in the Checklist.

Semipalmated Plover (*Charadrius semipalmatus*) — No dates are given in the Checklist for the interior, it is noted as being an uncommon spring and fall transient in the interior. My records in the spring range from 24 April 1983 at Pendergrass to 25 May 1977 also at Pendergrass. My fall records are from 13 August 1977 at Pendergrass to 18 September 1981 near Lake Lanier (Wahoo Creek) in Hall Co.

Willet (*Catoptrophorus semipalmatus*) — This species is listed as a rare spring transient at Atlanta on 25 April 1971. My record is on 21 April 1971 at Atlanta (possibly the same bird as above).

Whimbrel (*Numenius phaeopus*) — Only two records are listed for the interior of the state with a record at Okefenokee NWR on 18 April 1947 and another record at Athens on 15 September 1976. My record is for a bird at Pendergrass on 29 May 1983.

Ruddy Turnstone (*Arenaria interpres*) — The status of this species is listed as rare in the interior with four records cited at Atlanta, Augusta, Clark Hill Lake and Dalton. My records are a bird at Atlanta on 31 July 1971 (probably the same bird as the Atlanta record mentioned above) and a bird at the Gainesville airport from 1-12 October 1980.

Semipalmated Sandpiper (*Calidris pusilla*) — The Checklist cites the latest spring record for the coast as 4 June 1967. My records are 6 June 1976 and 7 June 1982 both at Pendergrass.

Least Sandpiper (*Calidris minutilla*) — The Checklist gives the early fall arrival date as 11 July 1925. My record is a bird at Pendergrass on 5 July 1979.

White-rumped Sandpiper (*Calidris fuscicollis*) — The early spring arrival date given in the Checklist is 7 May 1945. My records (all at Pendergrass) are

25 April 1980, 5 May 1982 and 6 May 1978.

Pectoral Sandpiper (*Calidris melanotos*) — The Checklist has the extreme spring arrival and departure dates as 15 March 1931 and 12 May 1945. My extreme dates are 13 March 1977 and 17 May 1981. The Checklist's fall dates are 20 July 1959 and 1 November 1942. My extreme dates are 17 July 1975 (and 1976) and 20 November 1976. All my records were from Pendergrass.

Stilt Sandpiper (*Calidris himantopus*) — The earliest fall arrival date in the Checklist is 26 July 1975. My dates are 22 July 1980 at Four Mile Creek near Lake Lanier in Forsyth Co. and 23 July 1982 also in Forsyth Co.

Long-billed Dowitcher (*Limnodromus scolopaceus*) — The Checklist indicates this species is accidental in the interior with only one record in Baker County on 17 April 1951. My record is one at the Gainesville airport on 1 October 1980.

Northern Phalarope (*Phalaropus lobatus*) — This species is recorded as being accidental in the interior with three records in the Checklist. My record is from 14-16 September 1981 at Gainesville.

John M. Paget, 1530 Vine Street NE., Gainesville, GA 30501.

WESTERN KINGBIRD IN WASHINGTON COUNTY — On 28 June 1982 a Western Kingbird (*Tyrannus verticalis*) was seen near Sandersville in Washington County. The bird was first noted from a moving automobile and it was immediately apparent that it was a flycatcher but not of a species ordinarily seen here. As it perched on a low fence beside the road, the most striking features were the yellow belly and the gray head. I moved the car onto the road shoulder and examined the bird at 15 m with binoculars. Field marks noted were a clear lemon-yellow wash on the belly, a soft gray color over all the head with a broad and dark, but indistinct area extending from the bill to behind the eye, a black tail and no wingbars.

After half a minute of this close observation, the bird flew upward to catch an insect, revealing white edging to the black tail feathers. The bird then flew across the open field over low grass to a perch about 0.5 m from the ground but some distance from the fence.

I referred to my field guide (R. T. Peterson, A Field Guide to the Birds East of the Rockies, Houghton Mifflin Co., 1980) immediately to check on field marks. I then climbed up into the field to observe the bird again at about 35 m. All features of the flycatcher were seen to be in agreement with the illustration in the field guide.

All details of the observation were confirmed by Ann Wyand who was watching the bird through her binoculars for the entire time we could see it.

The location of the observation was on the Sun Hill-Harrison Road, 0.7 mile north of SR 242, southeast of Sandersville, 4.8 miles along SR 242 from its junction with SR 15.

The Annotated Checklist of Georgia Birds (Georgia Ornithological Society, Occasional Publication No. 6, 1977) lists the species as an occasional winter

visitor throughout the state. As far as is known this is the first June record for Georgia.

Franklin McCamey, 4676 Andover Court, Atlanta, GA 30360.

FINANCIAL STATEMENT

The following income and expense information for Fiscal Year 1981 has been provided by the Treasurer:

Beginning balance 1 October 1980	\$7,558.00
Income	
Dues	3,019.00
Life Members	700.00
Interest	965.96
Contributions	647.00
Other	1,723.66
Total	7,055.62
Expenses	
Oriole (2 issues)	2,115.93
Goshawk (4 issues)	523.76
Other	823.72
Total	3,463.41

Ending balance 30 September 1981 \$11,150.21

EDITOR'S COMMENTS

Authors are reminded to check any manuscripts being submitted to the Oriole against the newly published 6th edition of the AOU Checklist. Many Latin names have been changed along with the order of families and species within families. Authors who do not have access to this information are urged to contact the editor before manuscript submission.

CORRIGENDUM

In the article titled "Red Phalarope Sighted in Southeast Atlanta" (Oriole 46: 45) the date of the initial observation of the Red Phalarope should be 11 September 1981 and not 18 September 1981.

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