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NESTING OF EURASIAN COLLARED-DOVES (STREPTOPELIA DECAOCTO) IN BARBOUR COUNTY, ALABAMA

Daniel J. Drennen

INTRODUCTION

Since 1982, the Eurasian Collared-Dove (abbreviated ECD) has been consistently noted throughout Florida. Hengeveld (1993) summarized the species' rapid migration, colonization and nesting within the state. In the panhandle, Robertson and Woolfenden (1992) discovered a colony in Walton County on 6 December 1987 and McMillan (Duncan, pers. commun., 1996) confirmed nests and young on Santa Rosa Island (Escambia County). In 1993, Menart (pers. commun., 1995) reported nesting in his yard at Baypoint (Bay County).

The dispersal from Florida into Alabama was first documented in April 1991 by Holmes (1992). He speculated that the dove probably occurred in Alabama before 1991, since records for Florida documented their presence in the panhandle.

Even though numerous sightings of the ECD throughout Alabama have been documented (Moske and Moske 1996; Gardella 1992 and Holmes 1992), no nesting data has been published. Time intervals (in days) of nest building, incubation and fledging are well known throughout their natural old-world range (Cramp 1985 and Combs et al. 1985). However initial dates for nesting in Alabama are not available. In this article I document their earliest nesting dates

in Eufaula, Barbour County, Alabama.

METHODS

Eufaula is a small town with oak-lined streets. Peanut (Arachis hypogaea) and corn (Zea mays) production is extensive throughout the county. There are many agricultural fields and the Eufaula National Wildlife Refuge within the city limits.

ECD nests were observed in the live oak (*Quercus virginiana*) -lined median of East Broad Street: from the intersection with State Highway 431 (Eufaula Avenue), east to Reeves Peanut Warehouse. Most of the trees were approximately 20-25ft (6.1-7.6 m) high. Total length of the study area was 0.3 mile (0.48 km). East Broad Street is the major commerce area for the town. Businesses, some in two-story buildings, line both sides of the street. Vehicle traffic is heavy during daylight.

Notes about nesting of ECD's in Eufaula were made between March 1994 and November 1996. Nest initiation and fledging dates were estimated by back dating (Cramp, 1985): nest building, 3-4 days; incubation of eggs, 14-18 days; and fledging period, 15-19 days. Using these constants the dates for nesting were determined. For example, if a nest had new hatchlings on 30 March, then by counting backwards 18 days to 12 March, an estimated date for egg laying was found.

A total of 41 days from nest building to fledging was used (back dated using Cramp, 1985). A nest was not considered fledged until the young birds had left the nest tree. The same date was used when calculating the date

when egg incubation stopped and hatching began. When the nest was found disturbed, the time intervals were back dated from the last notation.

RESULTS AND DISCUSSION

Nesting data based on actual observations and back dating are listed in Table 1. The earliest date noted for nest building was 3 February 1994. February was assumed to be the initial nesting month for each year since no nests were found earlier in January 1995 or January 1996. Adults with nesting material in their bills were noted throughout February and March of 1994-1996. Fledging dates were earliest in 1994. Earliest nest incubation interval was 7 February 1994, while the earliest hatching date was 24 February 1994. On 9 March 1995, a broken egg was collected under a nest tree. It contained a 13 day-old (Muller et al. 1994) embryonic ECD that was back dated to have an incubation interval from about 20 February 1995 to 4 March 1995. Unfortunately the nest was found destroyed on 8 March 1995.

Cramp (1985) found the breeding season to be "prolonged" throughout its natural range in Northwest Europe (mid-February to November). He also reported that eggs were laid from March to September in Iraq.

Table 1

NESTING DATA BASED ON ACTUAL OBSERVATIONS AND BACK DATING

YEAR	1994	1995	1996
Number nests	6	6	4
Earliest nest building date	02/3	02/15	02/16
Earliest incubation date	02/7	02/20	02/21
Earliest hatching date	02/24	03/9*	03/14
Earliest fledged date	03/14	03/21	Not determined

^{*} Earlier nest destroyed before hatching

Of the 17 nests noted between 1994-1996, 3 were found to be successful, 4 were unsuccessful and 9 undetermined due to the weather, manmade disturbances or the author missing the fledging time.

Nest Characteristics

The ECD's in this study built flimsy stick nests on overhanging limbs or within the crotch of the tree. Only one nest per tree was noted. The nest height ranged from approximately 12-25 ft (3.7-7.6 m). When the nest was constructed on a limb, it was 7-10 ft (2.1-3.0 m) from the tree's center. Nests with eggs contained 1 or 2.

Cramp (1985) found an average nesting height in Germany and Czechoslovakia from 6.2-72.2 ft (1.9-22.0 m), with the majority of nests between 11.5-41.0 ft (3.5-12.5 m).

Distribution in Town

During 1994 the ECD's were noted only along East Broad Street, especially while feeding on spilled peanuts at Reeves Peanut Warehouse. They commonly perched on power lines, poles and buildings along the study site. However by 1995 and 1996, sightings of ECD's within the suburban neighborhoods around the town were common.

Mourning Dove (*Zenaida macroura*) hunting is very popular locally; however, no harvested or observed ECD's have been reported in agricultural fields or at the Eufaula National Wildlife Refuge (5 miles (8.1 km) north of the study area). Smith (1985) summarized the preference of ECD's for suburbs, small towns and agricultural settlements and their avoidance of urban centers, open countryside and forested areas. However, there are several reports of hunters harvesting ECD's: Sewell (1995) in Bulloch County, Georgia; Crawford (1995) in Grady County, Georgia; Holliman (1996 pers. commun.) in Jefferson County, Alabama, and Shelby County, Tennessee.

Other birds observed feeding with the ECD's were Rock Doves (Columba livia), Mourning Doves, and House Sparrows (Passer domesticus). Bird species that nested within the same tree or adjacent trees along East Broad Street with the ECD's included House Sparrow, Loggerhead Shrike (Lanius ludovicianus) and House Finch (Carpodacus mexicanus). Birds that utilized the trees but did not nest there were Northern Mockingbird (Mimus polyglottos), Eastern Bluebird (Sialia sialis), Red-bellied Woodpecker (Centurus carolinus) and Yellow-bellied Sapsucker (Sphyrapicus varius).

CONCLUSION

Nesting of ECD's was documented in Eufaula between 1994-1996. Earliest dates for nest building, incubation and fledging were established by direct observation and back dating. Nest height and lateral limb distance from the tree's center were found. All values were within the range of data from Europe and the Middle East summarized by Cramp (1985). Between 1994-1996 ECD's were expanding into residential areas of the town, but none were reported in rural areas or agricultural fields even though they were commonly seen at a local peanut warehouse. **Daniel J. Drennen**, 323 Cherry Street, Eufaula, Al., 36027.

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EASTERN BLUEBIRD (SIALIA SIALIS) STUDIES DURING THE CONSTRUCTION OF A GOLFING COMMUNITY IN NORTH SHELBY COUNTY, ALABAMA

Dan C. Holliman

ABSTRACT

This eight year study traces the history of an Eastern Bluebird population on lands that were being developed for a golfing community in north Shelby County, Alabama. The results of a nest box and banding program are discussed. One thousand three hundred and sixty birds were fledged and 736 banded during the construction period from 1991-1996. The effects of human disturbance associated with PGA tournaments during five nesting seasons are analyzed. A strategy for the establishment of an Eastern Bluebird population in a newly created and planned urban development is given.

Little information is available concerning the establishment of an Eastern Bluebird population during the construction of a golfing community, particularly where PGA tournaments attract 100-130 thousand visitors during the nesting season. Usually, Eastern Bluebird trails are installed after a development has been completed, not while one is under construction. This research is only one topic of a 34-year study to determine the long term effects of a planned urban development upon a natural environment. The purpose of this research is to trace the history of an Eastern Bluebird population through the various construction phases of Greystone, a planned 2000 acre (809.4 hectare) urban development in north Shelby County, Alabama. Information concerning Eastern Bluebird habitat, banding and ecology is given. Precautions are listed that could mitigate golfing disturbance during the nesting season. A

strategy for the establishment of an Eastern Bluebird population in a newly created golfing community is described.

A BRIEF HISTORY OF THE STUDY AREA

The study area is located near the intersection of US 280 and AL 119 on Hugh Daniels Drive (T18S, R1W, Sections 32, 33, 34, 28, 27, 22 Cahaba Heights, Alabama; and T118SR1W, Sections 28, 26 Vandiver, Alabama, 7-1/2 minute topographic maps). Geologically, these lands are situated on Ordovician limestone and dolomite in the Cahaba Valley. Oak Ridge and Oak Mountain areas are underlain with beds of Mississippian and Pennsylvanian shale, sandstone and chert. The thin soil is a residium of these rocks.

I began taking biology students on field trips in 1962 to the 60 acre (24.3 h) dairy farm located along the southwestern edge of what is now the 5th and 6th golf links of Greystone. Here they were involved in research projects on DDT, Mourning Doves (Zenaida macroura), and the restoration of Eastern Bluebird habitat. The Birmingham Audubon Society still includes this area in their Christmas Bird Counts (Imhof et al 1947 to 1995). Fifty years ago these pasture lands had consisted of woodlands, hay production and croplands. Turkey (Meleagris gallopauo), whitetailed deer (Odocoileus virginianus), and small game hunting and trapping was productive along Lee's Branch. Three families lived on the dairy farm. There was a small garden, orchard, barn, and a modernized milking facility. Dominant tree species were loblolly pine (Pinus taeda), post oak (Quercus stellata), southern red oak (Quercus falcata), mockernut hickory (Carya tomentosa) and sweetgum (Liquidambar styraciflua). With the exception of the dairy farm, these 2000 acres (809.4 h) that are now

Greystone were heavily forested by a contiguous stand of timber. Fragments of the original mixed pine-hardwood remain in the 2 acre (0.81 h) Cove Hardwood Preserved on Pine Ridge, the 300 acre (12.4 h) Nature Preserve along the crest of Oak Mountain, and at the 2.7 acre (1.1 h) Greystone Educational Wetland on Hugh Daniel Drive. The remainder of the original 2000 acres (809.4 h) consists of single family residences, patio homes, streets, trails, pocket parks, green belts and 1.71 mile (2.75 k), 130 acre (52.6 h) golf course in a woodland setting.

THE NEST BOX PROGRAM

In the late fall of 1967 eight boxes were installed in likely places around the periphery of the dairy farm to compensate for the loss of natural cavities when the dairy farm was created. Since cows were present the boxes were placed outside the fence approximately 150 yards (137.2 m) apart facing the open pasture. In 1989, I learned of plans for the Greystone development and immediately began to saturate the old dairy farm area with nest boxes in hopes of building a "reservoir" population that could possibly "pioneer" new habitat once the golf course lands were opened. As expected, field surveys in 1990 showed a dramatic increase in Eastern Bluebird numbers around the dairy farm presumably due to the increase in nest boxes. With the event of opening up 130 acres (52.6 h) for the golf course the existing habitat at the dairy farm was increased more than 100%. Fifty boxes were installed in 1991 while site preparation was underway. In many cases this necessitated relocating some boxes the next year to make way for roads, utilities, heavy equipment and

house construction. An increase in nest box use in 1992 suggested that birds were quickly exploiting newly found nest sites on the fairways as soon as boxes were in place. Dump nests were common as new breeding pairs moved into the new habitat looking for nest sites. The snow blizzard on 12 March 1993 resulted in the death of 10 birds found in 4 different nest boxes. This weather event probably accounted for the late start-up date for nesting that year. By 1994, numbers began to climb in spite of an increase in raccoon (Procyon lotor) numbers. These mammals were so common they could often be seen during the day. Massive construction in outlying areas probably pushed these animals into Greystone. Aluminum, cone-predator guards were installed on the post of each box in late 1995, thus significantly reducing egg and clutch loss in 1996. Other predators recorded throughout the study included: flying squirrels (Glaucomys volans), house cats (Felis silvestris), and rat snakes (Elaphe obsoleta). Competition with Carolina Chickadees (Parus carolinensis), Tufted Titmouse (Parus bicolor), House Finches (Carpodacus mexicanus), and Great-crested Flycatchers (Myiarchus crinitus) was noticed. By 1996, 51 boxes were finally in place around the fairways. Where possible, boxes were erected outside of the tree line to reduce occupancy by titmice and chickadees. The boxes were spaced approximately 54.9 feet (150 m) apart. I later learned that some golfers fortuitously used them in calculating the distance of their drives. No boxes were erected in spots that could possibly divert the golfers' attention, such as placement on horizons and close to putting greens. The predator guards were painted brown to blend into the surrounding

woodland and to prevent glare that would distract golfers. Care was taken not to locate the openings of nest boxes within range of automated sprinklers.

Table 1 shows the relation of construction activities to nest box productivity.

THE BANDING PROGRAM

The objective of the banding program was to determine the dispersal of Eastern Bluebirds as a result of the nest box program. The numbers in parentheses indicate birds that were banded out of the total successfully fledged for that year. The nesting dates indicate date of first egg and date of last fledgling out of nest for that particular year. The 1967-68 data was selected because of completeness and comparability with 1991-96 information (Table 1).

Table 1

RELATION OF CONSTRUCTION ACTIVITY TO NEST BOX PRODUCTIVITY

YEAR	TOTAL FLEDGED (BANDED)	NUMBER BOXES	% OCCUPANCY	NESTING DATES
Pre-constr	uction Years	- Note 1.		
1967	86 (49)	8	100	* Mar30-Aug20
1968	79 (6)	7	100	* Mar15-Aug24
Site Prep	Years - Note	2.		
1991	261 (177)	50	90	Mar30-Jul30
1992	293 (191)	50	90	Mar23-Aug20
1993	148 (60)	50	70	Apr2-Aug15
1994	179 (100)	50	90	Mar20-Aug18
Early Post-construction Years - Note 3.				
1995	206 (118)	50	90	Mar26-Aug20
1996	273 (90)	51	92	Mar25-Aug20
TOTALS 1525 (791)				

NOTES:

- 1 Pre-construction = no land disturbance in the heavily wooded 2000 acres surrounding the dairy farm
- 2 Site preparation = timber removal, road construction, utility installation, house construction, golf course in various stages of completion, significant disturbance to the bluebirds.
- 3 Early Post-construction = Most roads complete, most housing construction complete, no major changes in golf course design other than landscaping, minimal disturbance to bluebirds.

^{*} After Creel (1970)

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^{*} After Creel (1970)

Fledglings were banded between 7-12 days of age and only when flight feathers were fully sheathed in the periderm. There was always a chance that younger birds could be injured in handling. Older fully feathered birds were not banded because of the likelihood that they might leave the nest prematurely because of bander disturbance. No nests were deserted due to banding procedures. There was always an attempt to reduce disturbance by spending a minimum amount of time at nest boxes. No parasites, diseases or health problems were noticed during this study.

Band recoveries indicate that most birds either remain in the Greystone area or radiate out into surrounding communities no more than 3 miles (1.9 k) from their home nest box.

It is interesting to note that of the 10 birds killed by the blizzard of 1993, two were banded by Mr. John Findlay, III, under the permit of Dr. T.A. Imhof. Findlay banded one bird at Dr. Lee's Tree Nursery on AL 199, 1/4 mile (0.16 k) from Greystone, and the other near the Meadowbrook Post Office, also on AL 119, 2 miles (1.24 k) from Greystone. Several bands were collected from birds that were window casualties of Greystone residents.

PGA TOURNAMENTS

Early in the project problems were anticipated with spectator disturbance associated with major golf tournaments. Starting in 1992, five tournaments drew crowds of 100-130 thousand people annually who were at one time or another on the golf course during the nesting seasons. An attempt was made to place nest boxes out of the way of planned parking areas,

bleachers, tents, and the PGA Village. Patterns of foot traffic within the spectator area were difficult to determine for the first three tournament years because of slight structural adjustment being made to roads, parking areas, fairways, and putting greens. In 1995, after studying spectator movement along the fairways, some nest boxes were repositioned. Volunteers from the Greystone community were recruited to study crowd behavior and possible effects on feeding and incubating birds. These high risk areas were closely monitored in an attempt to reduce human disturbance. Signs were placed on active nest boxes asking spectators not to disturb them. There were only two cases of crowd vandalism in the last five tournaments. Both instances caused nest desertion because of litter placed in the boxes of incubating birds in spite of the fact that ample trash bins had been placed throughout the spectator area. In 1992, a vendor in the PGA Village voluntarily roped off a nesting box so that it would not be disturbed. This "adopted" box produced 5 fledglings during the tournament. During the 1996 tournament a pair of bluebirds successfully fledged 5 young at the 18th hole in spite of a bleacher full of noisy spectators and imposing TV cameras.

Table 2 relates the tournament dates to the dates of nesting for each year. Mortality of eggs and nestlings in high risk boxes are indicated. It should be made clear that the mortality could be due to causes other than crowd disturbance, although not likely. Observations of crowd behavior suggests that spectator disturbance could be implicated in the desertion of several nests in 1992 and 1993.

Eight years of nesting data for Greystone bluebirds indicates that the first clutch occurred between March 15-May 30, the second May 21-July 18, and the third July 10-Aug 24. This varied according to weather conditions and the availability of food.

Table 2

GOLF TOURNAMENT AND BLUEBIRD NESTING DATES AND MORTALITY

1ST CLUTCH (MARCH 15-MAY 30)	
YEAR AND DATE OF TOURNAMENT	MORTALITY EGGS-NESTLINGS
1996 May 28 - June 2	0 - 0
1995 May 31 - June 5	0 - 0
3RD CLUTCH (JULY 10-AUG 24)	
YEAR AND DATE OF TOURNAMENT	MORTALITY EGGS-NESTLINGS
1994 July 29 - Aug 7	2 - 0
1993 July 30 - Aug 8	4 - 1
1992 July 31 - Aug 9	5 - 3

Note: The nesting population was not impacted during 1995 and 1996 since the tournament occurred toward the end of the first clutch, and before the second clutch got under way. The 1992-94 tournaments fell within the dates of the 3rd clutch, thus possibly producing some mortality as the nesting season wound down.

The results of this study indicate that an Eastern Bluebird trail and major PGA tournaments are compatible with proper planning. Ideally, it would be best for Greystone bluebirds if this tournament were either scheduled before the beginning of the first clutch or toward the end of the third. Advanced

planning could possibly reduce mortality by following these recommendations:

- Determine the location of planned parking areas, bleachers, tents, PGA
 Village, and pattern of spectator foot traffic before erecting nest boxes.
- Relocated all nesting boxes out of the spectator areas and foot traffic routes along the golf course.
- Place warning signs on active boxes that are at risk so that visitors can be alerted and disturbance kept at a minimum.
- Alert tournament marshals at each fairway about the location of active boxes.
- Place adequate litter containers close to active boxes so that some will
 not be tempted to deposit litter in nest boxes.
- Residents with homes on the fairway should be asked to help monitor the boxes closest to their yard.
- 7. During the early stages of tournament planning make available Eastern Bluebird trail information to the press and members of other media. This would go a long way in helping the public to understand the plight of nesting bluebirds.

A STRATEGY FOR THE ESTABLISHMENT OF AN EASTERN BLUEBIRD POPULATION IN A NEWLY CREATED GOLFING COMMUNITY

Site preparation for a new development can drastically alter the ecological integrity of any mixed pine-hardwood forest. Some changes are

obvious while others are subtle but long-lasting. The practice of fragmentation reduces the size of forest patches, changes the types and quality of food and cover, alters temperature and moisture regimens and potentially exposes animals to increased predation, competition, parasitism, and exploitation by humans (Morrison et al. 1992). Because of these changes, small and isolated patches of forest generally support fewer animal species than do large forest tracts (Whitcomb et al. 1981). Habitat for many bird species is either lost or altered while new habitat is created for others. Some are benefitted by the creation of open areas. This is particularly true for birds that prefer "edge" habitat and golf courses.

Cooperative planning by the biologist and land architect is absolutely essential. A detailed biological study that has already located ecologically sensitive areas in the proposed development is helpful in creasing a master plan. With this information in hand wildlife management objectives can be set that could aid in restitutive measures to partially compensate for most forest destruction and/or alterations.

Taylor (1986) identifies four approaches that would allow people and wildlife to coexist in an urban situation:

1. Permanent Habitat Allocation. This method involves setting aside certain land and water areas to be "forever wild". Land that may not be suitable for development because of topography and/or geology are ideal candidates for permanent habitat allocation. The Cove Hardwood Preserve, the Nature Preserve, and the Greystone Educational Wetland provide such areas. It was

possible to leave many small pieces of wildlife habitat between asymmetrical lots and around the edges of sedimentation ponds. The productivity of vegetated plots depends upon undisturbed over-story, mid-story, and natural ground cover. The periphery of these woodlands should be "feathered". This involves leaving shrubs and small trees of graduated heights along the edge of the cut thus increasing biological diversity. Premium Eastern Bluebird habitat can be established along these feather edges.

- 2. Common Conservation The method of common conservation is the sharing of resources while they are being used by both humans and wildlife. Planting 30 foot (27.3 m) buffer zones of natural vegetation along the banks of small streams and sedimentary ponds provides a water and food source for bluebirds. Natural ground cover should be left where possible to provide habitat for insects.
- 3. Environmental Integration. This is the deliberate attempt to fit human construction into natural surroundings in a way that attempts to preserve the ecological integrity of a community as a whole. Green belts, or corridors, should either be left or created to interconnect food patches and larger blocks of forest. Clearing project lands for the golf course increased the amount of "edge" and consequently increased optimum Eastern Bluebird habitat. During site preparation most candidate nest cavity trees (stumps, snags, etc.) were removed either for cosmetic purposes or for safety reasons. Reparation for lost habitat can occur in the following two ways: "In-Kind" replacement in replacing native berry-producing shrubs with like kind; "Out-of-Kind"

replacement is replacing a natural nest cavity with a nest box, or a native, berry-producing shrub with a different species of native berry-producing species. Earlier surveys (Holliman 1990, 1994) provide a list of "In-Kind" and "Out-of-Kind" berry producing shrubs for Greystone.

4. Rotation. This perhaps is the most difficult approach in "fitting" an Eastern Bluebird population into a development. This is the method of rotation or "taking turns". It might be thought of as a "time allocation" for a given place in contrast to "permanent habitat allocation". There were appropriate places during the construction phases of Greystone where nest boxes could be erected so that birds could nest if only for one nesting season. As construction occurred these nest boxes were relocated. The master development plan predicted construction schedules and where pieces of habitat would lie fallow for several nesting seasons. This advance notice made it possible to anticipate likely places for short term nest box installation. Even after construction was completed, service roads and construction material storage areas were reseeded and were returned to productive bluebird habitat.

Taylor's prescription (1986) bodes well not only for Eastern Bluebird but for other wildlife and plants in Greystone that can adapt to an urban habitat.

ACKNOWLEDGMENTS

Future years will bring difficult challenges to the urban biologist. A sensible balance between our natural world and development must be found.

This calls for the cooperation of people from all walks of life. As in the case of

all common environmental endeavors there are many to thank for this team effort. Special appreciation is given to the Daniel Corporation and particularly Mr. Charlie Tickle, CEO, of Daniel Corporation; and Mr. Hap Gwaltney, Vice President of Daniel/Greystone and his staff. Under their leadership they relied on the advice of an Environmental Committee composed of professionals and residents to make decisions about the environment. Daniel Corporation had the foresight to have a biological study accomplished before construction began not only to determine the presence of any sensitive species, but also to gather information so that maximum use could be made of natural features in a planned urban development. Ms. Donna Bonds and Ms. Michel Gwin, administrative assistants, worked closely with the residents of Greystone giving them information concerning the mission of the program. The Greystone Golf Club under the management of Mr. Gary Kamenicky and the Grounds Department under the supervision of Mr. Scott Urbantke cooperated fully, making available golf carts for the countless surveys. Special recognition should be given to Scott Urbantke and his staff who have maintained a golf course that is ecologically sensitive. Ms. Bonita Crowe, a former Greystone resident, helped check nesting boxes and provided assistance in leading a community volunteer bluebird program.

Lastly, I give heartfelt thanks to the cadre of Birmingham-Southern College students who faithfully assisted me in many ways in all types of weather throughout the field work. **Dan C. Holliman**, Professor of Biology, Birmingham-Southern College, Aradelphia Road, Birmingham, AL 35254

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FEMALE HOODED MERGANSER (LOPHODYTES CUCULLATUS) SUCCESSFULLY HATCHES TWO WOOD DUCK (AIX SPONSA) EGGS

Chad A. Manlove

The Hooded Merganser is unique among North American mergansers in that it breeds exclusively on this continent (Dugger et al. 1994). Throughout much of the eastern United States, populations of breeding Hooded Mergansers are widely dispersed in forested habitats consisting primarily of second growth

timber. Few natural cavities occur for nesting waterfowl, and therefore, Hooded Mergansers commonly nest in artificial boxes. In areas where Wood Ducks are abundant and nest boxes occur in high densities, nest parasitism occurs at high levels (Semel et al. 1988). Consequently, female Hooded Mergansers have been observed incubating Wood Duck eggs (Zicus 1990), but no information exists relative to hatching success of parasitic eggs.

Most information regarding the breeding biology of Hooded Mergansers has been collected from studies of Wood Ducks in managed areas (Morse et al. 1969, Doty et al. 1984, Kennamer et al. 1988, and Zicus 1990). Kennamer et al. (1988) reported that Hooded Mergansers began nesting as early as 24 February in South Carolina. On 29 February 1996, a single Hooded Merganser egg was observed in box #217 on the Bradley Unit of Eufaula National Wildlife Refuge. The egg was uncovered and cold. One week later on 7 March, the nest contained 5 Hooded Merganser eggs and 2 Wood Duck eggs. The eggs were again uncovered and cold. However, both Wood Duck eggs were situated on the nest periphery. Mallory and Weatherhead (1993) suggested that Hooded Mergansers can identify parasitic eggs and move them to the nest periphery to incubate their own eggs more efficiently.

On 13 March, the nest contained 9 Hooded Merganser eggs and 2 Wood Duck eggs. A layer of down lined the nest, but the eggs remained mostly uncovered and cold. I noted that both Wood Duck eggs were in the same position as in the previous week, further supporting Mallory and Weatherhead's (1993) suggestion that Hooded Mergansers can presumably detect parasitic

eggs. One week later on 21 March, a female Hooded Merganser was observed incubating the clutch. The female was again observed incubating on 11 April, and remained on the nest after being disturbed. On 18 April, egg shell fragments from both Hooded Merganser and Wood Duck eggs were present in the nest indicating a successful hatch. No unhatched eggs remained.

This observation represents only a single instance of successful interspecific nest parasitism by Wood Ducks on Hooded Mergansers. Future research involving Hooded Mergansers should focus on their ability to detect parasitic eggs and how this behavior might affect Hooded Merganser clutch size, as well as, hatching success of parasitic eggs.

Gary Hepp, Keith McKnight, and Joe Benedict made helpful comments on the manuscript. **Chad A. Manlove**, Department Zoology and Wildlife Science, Auburn University, AL 36849-5414.

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AN ANNOTATED BIRD LIST FOR HORSESHOE BEND NATIONAL MILITARY PARK

Julian L. Dusi and Rosemary D. Dusi

Horseshoe Bend National Military Park is located about 14 miles (22.5 k) north of Dadeville, Tallapoosa County, Alabama, on Alabama Highway 49 and the Tallapoosa River. Elevation in the park varies from about 540 feet (164.6 m) above sea level to over 600 feet (182.9 m) on the river hills. Vegetation is mostly mixed forest, with much beetle damage in the pine trees (*Pinus sps*). Many trees lie on the forest floor, partly from beetle damage and windfall from Hurricane Opal (October 1995). In the visitor's portion of the park, the "Battlefield Area", there are large open areas of well-mowed grasses with patches of mixed forest interspersed. There is a paved road through the visitors area leading to the various observation posts. There is also a Battlefield Hiking Trail and a Nature Hiking Trail. In the non-visitors area there is a network of several miles of service roads.

Our bird studies started in 1992, with ornithology class field trips from Auburn University, in the spring and summer. In 1994 to 1996, additional trips

were added throughout the year. Below is a listing of species noted during these times followed by a field check list. Abbreviations and explanation of notes are noted on page 34.

ANNOTATED LIST OF BIRDS SEEN IN THE PARK

Great Blue Heron (*Ardea herodias*). Uncommon most of the year, but a small group (six nests) breeds in a wet-weather swamp on the road near the New Youka Town Site.

Green Heron (*Butroides virescens*). Occasional. One seen 16 May 1996 in the swamp. They breed throughout Alabama.

Little Blue Heron (*Egretta caerulea*). Occasional. Two seen 16 May 1996 in the swamp. A colonial summer resident in Alabama. There are no colonies in the park.

Wood Duck (Aix sponsa). Uncommonly seen throughout the year, flying by or in the swamp. They nest in tree cavities common in the park.

Turkey Vulture (*Cathartes aura*). Common to uncommon. Seen most days of the year soaring overhead.

Black Vulture (*Coragyps atratus*). Occasionally seen soaring overhead during much of the year.

Red-tailed Hawk (*Buteo jamaicensis*). Uncommon throughout the year. They are permanent residents in Alabama.

Red-shouldered Hawk (*Buteo lineatus*). Nests in the park. Common in spring and summer.

Broad-winged Hawk (*Buteo platypterus*). Occasional. Seen once 22 April 1993.

Northern Harrier (*Circus cyaneus*). Occasional in winter. Migrates north in spring.

Wild Turkey (*Mealeagris gallopavo*). Most common spring and summer, in flocks or solitarily. Permanent residents.

Spotted Sandpiper (*Actitis macularia*). Rare. Seen once 7 May 1992. No suitable habitat is present. Migrants.

Mourning Dove (Zenaida macroura). Uncommon permanent residents.

Yellow-billed Cuckoo (Coccyzus americanus). Common breeding birds spring and summer.

Eastern Screech Owl (Otus asio). Nocturnal. Reported to be uncommon throughout the year. Nests in tree cavities.

Great Horned Owl (*Bubo virginianus*). Nocturnal. Uncommon throughout the year.

Barred Owl (Strix varia). Mostly nocturnal. Reported uncommon throughout the year.

Chuck-will's-widow (*Caprimulgus carolinensis*). Reported to be a spring and summer resident. Uncommon.

Chimney Swift (Chaetura pelagica). Spring and summer residents. Uncommon.

Ruby-throated Hummingbird (Archilochus colubris). Uncommon in spring and summer.

Belted Kingfisher (Ceryle alcyon). Uncommon permanent resident.

Northern Flicker (Colaptes auratus). The Yellow-shafted Flicker is an uncommon permanent resident.

Pileated Woodpecker (Dryocopus pileatus). Common permanent resident.

Red-bellied Woodpecker (*Melanerpes carolinus*). Common to abundant permanent resident.

Yellow-bellied Sapsucker (Sphyrapicus varius). Uncommon fall and winter resident.

Hairy Woodpecker (Picoides villosus). Occasional permanent resident.

Downy Woodpecker (Picoides pubescens). Uncommon permanent resident

Eastern Kingbird (Tyrannus tyrannus). Uncommon spring and summer.

Great Crested Flycatcher (Myiarchus crinitus). Common spring and summer.

Eastern Phoebe (Sayornis phoebe). Uncommon to common throughout the year. Often nests on the park buildings.

Acadian Flycatcher (Empidonax virescens). Uncommon spring and summer resident.

Eastern Wood-Pewee (Contopus virens). Common spring and summer resident.

Northern Rough-winged Swallow (Stelgidopteryx serripennis). Uncommon spring and summer resident.

Barn Swallow (*Hirundo rustica*). Abundant spring and summer residents. Nest under the Tallapoosa River Bridge.

Purple Martin (*Progne subis*). Uncommon spring and summer visitor. Nest near the park.

Blue Jay (Cyanocitta cristata). Common permanent resident.

American Crow (Corvus brachyrhynchos) abundant permanent resident.

Carolina Chickadee (Parus carolinensis). Uncommon permanent resident.

Tufted Titmouse (*Parus bicolor*). Common permanent resident.

Brown-headed Nuthatch (Sitta pusilla). Uncommon permanent resident.

Carolina Wren (Thyrothorus Iudovicianus). Common permanent resident.

Northern Mockingbird (Mimus polyglottos). Uncommon permanent resident.

Brown Thrasher (Toxostoma rufum). Uncommon permanent resident.

American Robin (*Turdus migratorius*). Uncommon permanent resident. Migrant flocks in winter and spring are often abundant.

Wood Thrush (Hylocichla mustelina). Uncommon spring and summer resident.

Hermit Thrush (Catharus guttatus). Common winter and spring resident.

Eastern Bluebird (Sialia sialis). Uncommon throughout the year.

Blue-gray Gnatcatcher (Polioptila carulea). Common in spring and summer.

Ruby-crowned Kinglet (*Regulus calendula*). Uncommon to common winter and early spring resident.

White-eyed Vireo (Vireo griseus). Uncommon resident in spring and summer.

Yellow-throated Vireo (Vireo flavifrons). Uncommon spring and summer resident.

Red-eyed Vireo (*Vireo olivaceus*). Common to abundant spring and summer resident.

Black and White Warbler (Mniotilta varia). Common spring and summer resident.

Nashville Warbler (Vermivora ruficapilla). Rare spring migrant.

Prothonotary Warbler (*Prothonotaria citrea*). Common spring and summer resident.

Northern Parula (Parula americana). Uncommon spring and summer resident.

Yellow-rumped Warbler (*Dendroica coronota*). Uncommon to common winter and spring resident.

Yellow-throated Warbler (Dendroica dominica). Uncommon summer resident.

Pine Warbler (Dendroica pinus). Common permanent resident.

Prairie Warbler (Dendroica discolor). Uncommon spring and summer resident.

Palm Warbler (Dendroica palmarum). Uncommon spring migrant.

Kentucky Warbler (*Oporornis formosus*). Uncommon spring and summer resident.

Yellow-breasted Chat (Icteria virens). Common resident spring and summer.

Hooded Warbler (Wilsonia citrina). Uncommon spring and summer resident.

Red-winged Blackbird (Agelaius phoeniceus). Common spring visitor.

Orchard Oriole (Icterus spurius). Uncommon spring and summer resident.

Scarlet Tanager (Piranga olivacea). Uncommon spring and summer resident.

Summer Tanager (Piranga rubra). Common spring and summer resident.

Northern Cardinal (Cardinalis cardinalis). Common permanent resident.

Blue Grosbeak (Guiraca caerulea). Uncommon spring and summer resident.

Indigo Bunting (Passerina cyanea). Uncommon spring and summer resident.

Evening Grosbeak (Coccothraustes vespertinus). Uncommon winter and early spring resident.

American Goldfinch (Carduelis tristis). Common spring and uncommon summer resident.

Eastern Towhee (Papilo erythrophthalmus). Uncommon permanent resident.

Dark-eyed Junco (Junco hyemalis). Uncommon winter and spring resident.

Chipping Sparrow (Spizella passerina). Uncommon to common throughout the year.

White-throated Sparrow (Zonotrichia albicollis). Common fall, winter and spring resident.

OTHER ALABAMA BIRDS NOT PRESENT

There are many species of birds in Alabama that do not exist in the limited habitats present in Horseshoe Bend National Military Park. This is due to the lack of diverse habitat and food sources. Examples are:

Loons. Present in winter in large lakes and rivers and the Gulf of Mexico.

Grebes. Present in lakes and ponds.

Oceanic Birds. Shearwaters, storm-petrels, pelicans, boobies, gannets and frigate-birds are seldom found inland.

Marsh birds. Anhingas (Anhinga anhinga), egrets, most herons and bitterns, ibises, Wood Stork (Mycteria americana), cranes and rails are not present.

Most waterfowl. Some, like the Mallard (*Anas platyrhynchos*), teal, Bufflehead (*Bucephala albeola*) and Hooded Merganser (*Lophodytes cucuilatus*) may migrate along the Tallapoosa River.

Most shorebirds. No mud flats, or sandy shorelines are present.

Many Neotropical Migrants. Some flycatchers, thrushes, vireos and warblers possibly pass through but do not stop.

Field Check-list of Birds

Horseshoe Bend National Military Park

	S	Su	F	W
Great Blue Heron-B	U	U	0	0
Green Heron	0			
Little Blue Heron	0			
Wood Duck-B	U	U	0	0
Turkey Vulture	С	C	U	U
Black Vulture	U	U	U	U
Red-tailed Hawk	U	U	U	U
Red-shouldered Hawk-B	C	C	U	U
Broad-winged Hawk	0			
Northern Harrier	0			
Turkey-B	C	C	U	U
Spotted Sandpiper	R			
Mourning Dove-B	U	U	U	U
Yellow-billed Cuckoo-B	C	C		
Screech Owl-B	U	U	U	U
Great Horned Owl-B	U	U	U	U
Barred Owl-B	U	U	U	U
Chuck-will's-widow-B	U	U		
Chimney Swift-B	U	U		
Ruby-throated Hummingbird-B	U	U		
Belted Kingfisher-B	0	0	0	0
Northern Flicker-B	U	U	U	U
Pileated Woodpecker-B	С	C	C	C
Red-bellied Woodpecker-B	A	Α	Α	Α
Yellow-bellied Sapsucker		U	U	
Hairy Woodpecker-B	0	0	0	0
Downy Woodpecker-B	U	U	U	U
Eastern Kingbird-B	C	C		
Great Crested Flycatcher-B	C	C		
Eastern Phoebe-B	U	C	U	U
Acadian Flycatcher-B	U	U		
Eastern Wood-Pewee-B	C	C		

	S	Su	F	W
Northern Rough-winged Swallow	U	U		
Barn Swallow-B	Α	A		
Purple Martin	U	U		
Blue Jay-B	C	C	C	C
American Crow-B	A	A	A	A
Carolina Chickadee-B	U	U	U	U
Tufted Titmouse-B	C	C	С	C
Brown-headed Nuthatch-B	U	U	U	U
Carolina Wren-B	C	C	C	C
Northern Mockingbird-B	U	U	U	U
Brown Thrasher-B	U	U	U	U
American Robin-B	A	U	U	A
Wood Thrush-B	U	U		
Hermit Thrush	C		U	C
Eastern Bluebird-B	U	U	U	U
Blue-gray Gnatcatcher-B	C	C	U	
Ruby-crowned Kinglet	C			U
White-eyed Vireo-B	U	U		
Yellow-throated Vireo-B	U	U		
Red-eyed Vireo-B	C	A		
Black and White Warbler-B	C	C		
Nashville Warbler	R			
Prothonotary Warbler-B	C	C		
Northern Parula-B	U	U		
Yellow-rumped Warbler	U			C
Yellow-throated Warbler-B		U		
Pine Warbler-B	C	C	C	C
Prairie Warbler-B	U	U		
Palm Warbler	U			
Kentucky Warbler-B	U	U		
Yellow-breasted Chat-B	C	C		
Hooded Warbler-B	U	U		
Red-winged Blackbird	С			
Orchard Oriole-B	U	U		
Scarlet Tanager-B	U	U		

	S	Su	F	W
Summer Tanager-B	С	С		
Northern Cardinal-B	С	C	С	C
Blue Grosbeak-B	U	U		
Indigo Bunting-B	U	U		
Evening Grosbeak				U
American Goldfinch	C	U		
Eastern Towhee-B	U	U	U	U
Dark-eyed Junco	U			U
Chipping Sparrow-B	C	C	U	U
White-throated Sparrow	C		C	C

Abbreviations and Explanation of Notes:

R = Rare. Seen only once or twice.

O = Occasional. Not seen every field trip.

U = Uncommon. Seen most times.

C = Common. Seen in proper habitat.

A = Abundant. Usually several seen.

B = Breeding species.

S = SpringSU = Summer F = Fall

W = Winter

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HOG WALLOW PONDS HERON COLONY

Julian L. Dusi

Introduction

The two Hog Wallow Ponds are located about two miles (3.33 km) south of Tuskegee, Macon Co., Alabama, just east of U.S. 29, at T 16 N, R 24 E, Sec. 9, on the Tuskegee Quadrangle. I first visited a Little Blue Heron (Egretta caerulea) colony on one of the ponds in 1952. At the time they were surrounded by pasture. Presently, they are surrounded by loblolly pine (Pinus taeda) plantations and with patches of tag alder (Alnus serrulata) at the inlet ends.

Procedure

The Little Blue Heron colony was present from 1952-1957. I flew over these ponds at least once each year after 1957, during the nesting season, to record new colonies if present. I was surprised on 21 September 1991, when a Cattle Egret (*Bubulcus ibis*) colony was seen on the upper pond. The colony was unique in that it was established in rows of dead loblolly pine trees that had been planted in the pond-site, which had been drained and then flooded after the trees had grown for about 10 years.

My first ground visit was on 13 June 1992. Nests were counted in a short segment of the colony, then multiplied by the number of times that segment was contained in the colony, resulting in an estimate of 3,000 Cattle Egret nests. Also seen were seven adult Little Blue Herons, two White Ibis

(Eudocima albus) and six Double-crested Cormorants (Phalacrocorax auritus).

It was raining lightly and the Cattle Egrets were on their nests incubating.

On 17 July 1992, I took my advanced ornithology class to the site and we set up two measured plots and counted nests in them. We returned on 31 July and counted active nests again. We went to the Bradley Unit, Eufaula National Wildlife Refuge (Stewart Co., Georgia) on 24 July and counted nests on two plots in the heron colony there in order to make comparisons with the Hog Wallow colony.

On 23 June 1993, my count was about 100 Cattle Egret nests and 20 Little Blue Heron nests.

On 26 May 1994, there were only 40 nests present and they were in the alders at the head of the pond. On 8 August, 120 Cattle Egret nests were present and one Anhinga (*Anhinga anhinga*) nest.

On 1 May 1995 and 8 June 1996, no nests or Cattle Egrets were present.

Results

The plot areas used for nest counts were as uniform as possible for nest distribution and therefore differed in size. For the Hog Wallow Pond site, Plot $1 = 460 \text{ m}^2$ and Plot $2 = 1150\text{m}^2$. The plots at the Bradley Unit were: Plot $1 - 50\text{m} \times 10\text{m} = 500\text{m}^2$ and Plot $2 - 22\text{m} \times 10\text{m} = 220\text{m}^2$. Table 1 shows the results of the individual counts, mean and standard deviation and the density of nests per individual, mean and standard deviation, for the counts on 17 and 31 July, for the Hog Wallow Ponds site. Table 2 shows the similar data

for the Bradley Unit counts on 24 July and 7 August 1992.

Table 1

NEST DENSITY IN PLOTS AT HOG WALLOW PONDS 1992

Counter	Plot 1	Nests/m ²	Plot	Nests/m ²
1	230	0.5	860	0.75
2	233	0.5	650	0.56
3	221	0.48	870	0.75
4	220	0.48	840	0.73
5	272	0.59	904	0.79
6	218	0.47	879	0.76
7	247	0.54	934	0.81
	x = 234.4	x = 0.51	x = 848.14	x = 0.74
	<u>+</u> 19.4	<u>+</u> 0.04	<u>+</u> 92.5	<u>+</u> 0.08
	N	lest Counts 31 July	y 1992	
Counter	Plot 1	Nests/m ²	Plot 2	Nests/m ²
1	68	0.3	295	0.34
2	70	0.3	250	0.29
3	57	0.25	246	0.28
4	67	0.29	228	0.26
5	52	0.23	216	0.24
6	78	0.34	277	0.32
7	55	0.24	265	0.31
	x = 63.9	x = 0.28	x = 253	x = 0.29
	<u>+</u> 9.4	+ 0.04	<u>+</u> 28.4	+ 0.03

Table 2

NEST DENSITY IN PLOTS AT THE BRADLEY UNIT COLONY SITE, EUFAULA
NATIONAL WILDLIFE REFUGE, 24 JULY 1992

Counter	Plot 1	Nests/m ²	Counter	Plot 2	Nests/m ²
1	102	0.20	1	55	0.25
2	102	0.20	2	46	0.21
3	90	0.18	3	-	
4	104	0.21	4	56	0.26
5	112	0.22	5	50	0.22
6	99	0.20	6	48	0.22
7	98	0.20	7	50	0.22
8	101	0.20	8	44	0.20
9	114	0.23	9	40	0.18
Sel .	x = 102.3	x = 0.20	161 1	x = 48.6	x = 0.20
	<u>+</u> 7.19	<u>+</u> 0.02		<u>+</u> 0.20	<u>+</u> 0.04

Discussion

In 1992, the nests of Plot 1 of the Hog Wallow Ponds colony were about twice as dense as the nests of Plot 1 of the Bradley Unit colony and nests of Plot 2 of the Hog Wallow Ponds colony were about three times as dense as the nests of Plot 2 of the Bradley Unit colony.

The estimated number of nests at the Hog Wallow Ponds colony was about 3,000 in 1992, 120 in 1993, 40 in 1994 and none in 1995. By 1995, practically all of the pine trees used for nesting in 1992 and 1993 had rotted to pond level and offered no nesting substrate. The 1994 nests were all in the

alders at the head of the pond. The alders were not sufficient to attract nesting in 1995. Loss of the pine trees caused the colony's decline.

Most other colonies studied over a period of years have not shown this dramatic effect of loss of nesting substrate (Dindo 1991, Parsons 1995, Weise 1976). However, in Alabama, Dusi (1977, 1979 and 1983) has shown damage to pines in upland colonies. No other swamp colonies have had a pine nesting substrate. The unusual circumstances of planting pines and later flooding them made possible the predictable demise of the Hog Wallow Pond colony site through the rapid determination and death of its pine trees. Julian L. Dusi, Dept. of Zoology and Wildlife Science, Auburn University, Auburn University, AL 36849-5414.

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HERRING GULL (*LARUS ARGENTATUS*) TRENDS IN COASTAL NORTHWEST FLORIDA - ALABAMA BASED ON CHRISTMAS BIRD COUNT DATA

Robert A. Duncan

Several observers, including the author, have noted an apparent decline in gull numbers in the coastal area in recent years. In order to test this "impression," I examined data published in the *National Audubon Society Field Notes*, (formerly *American Birds*) Christmas Bird Counts, published by the National Audubon Society, New York, for the five year period 1980-1984 and compared the results with the latest five year period, 1990-1994. Five Christmas Bird Counts (abbreviated CBC) were chosen: Gulf Shores, Al., Ft. Morgan, Al., Perdido Bay, Al.-Fl., Pensacola, Fl., and Choctawhatchee Bay, Fl. The results are contained in Table 1. Numbers represent the actual numbers of gulls counted with the birds per party hour in parentheses. The average birds per party hour (B/PH) for each five year period is also given. A count was not conducted for the Choctawhatchee CBC in 1980 and 1981.

All five counts showed diminishing numbers with substantial declines in Gulf Shores (49%), Ft. Morgan (20%), Pensacola (36%) and Choctawhatchee (94%) when the average for the two-five year periods are compared. The drastic drop in Choctawhatchee numbers can be explained partly by the fact that the Ft. Walton Beach, Fl. dump, which was inside the CBC circle, was closed in 1990. It had been a magnet for attracting gulls.

Lower Herring Gull numbers along the Gulf Coast may also reflect a

seventeen year effort by the US Fish and Wildlife Service to reduce populations of this aggressive species in tern colonies along the Atlantic coast (*Pensacola News-Journal*, AP release, May 1996). Since 1980, Herring Gull pairs at Monomoy National Wildlife Refuge, Mass., fell from 15,300 pairs to 5,200 in 1995. Also involved in the eradication effort, Great Black-backed Gulls (*Larus marinus*) declined from 8,000 to 7,350.

Also analyzed were Ring-billed Gulls (*Larus delawarensis*) which showed declines in four of the five counts: Gulf Shores (40%), Ft. Morgan (36%), Pensacola (10%) and Choctawhatchee (82%). Once again, the precipitous drop on the Choctawhatchee count can be attributed partly to the dump closing. Perdido Bay experienced the only increase, a jump of 61%. This may be explained by the fact that the circle is being suburbanized rapidly, resulting in increasing foraging opportunities for this "garbage" gull.

The 1996-97 CBC's again revealed low numbers for Herring Gulls. Birds per party hour were: Gulf Shores, 0.77; Perdido Bay, 0.80; Pensacola, 2.01; and Choctawhatchee, 0.48. Data for Ft. Morgan were not available. It is apparent that Herring Gull numbers have decreased significantly in this part of the Gulf Coast since the early 1980's. **Robert A. Duncan**, 614 Fairpoint Dr., Gulf Breeze, FL 32561.

Table 1
HERRING GULLS ON CBC'S

	1980	1981	1982	1983	1984	Ave B/PH
GULF SHORES	282 (3.18)	226 (2.15)	77 (0.66)	192 (1.21)	269 (1.72)	1.78
FORT MORGAN	142 (4.18)	59 (1.32)	119 (3.28)	28 (0.77)	131 (2.75)	2.46
PERDIDO BAY	250 (4.50)	303 (4.80)	135 (1.44)	155 (1.60)	194 (1.98)	2.86
PENSACOLA	300 (3.23)	302 (4.03)	146 (1.76)	303 (2.78)	177 (1.99)	2.76
CHOCTAWHATCHEE			303 (5.05)	660 (12.45)	764 (12.22)	9.91
		errin uga	pas desc	ates 1	0.630	Trade
	1990	1991	1992	1993	1994	Ave B/PH
GULF SHORES	1990 212 (1.17)	1991 168 (1.04)	1992 148 (0.92)	1993 131 (0.84)	1994 94 (0.59)	Ave B/PH 0.91
GULF SHORES FORT MORGAN						
FORT MORGAN	212 (1.17)	168 (1.04)	148 (0.92)	131 (0.84)	94 (0.59)	0.91
	212 (1.17)	168 (1.04) 447 (4.79)	148 (0.92) 85 (0.85)	131 (0.84) 160 (1.63)	94 (0.59)	0.91

Note: Birds per Party Hour (B/PH) in parenthesis.

NOTES ON AN UNUSUALLY SITUATED SCISSOR-TAILED FLYCATCHERS'(TYRANNUS FORFICATUS) NEST

Larry Gardella and Carolyn Snow

Imhof (1976) declared Scissor-tailed Flycatchers uncommon on the Alabama coast during migration, particularly in fall, but rare at any time inland. One of the earliest inland records was a specimen taken in Autauga County in the spring of 1889 or 1890 (Golson and Holt 1914). On the basis of several summer records of Scissor-tailed Flycatchers, Imhof (1976) stated "It is not known to nest in the state, but summer records indicate that nesting may eventually occur". The first occurrence came during the summer of 1990, when a pair of Scissor-tailed Flycatchers fledged four young, west of Florence (Lauderdale Co.), Al. (Jackson 1991). Since then, there have been nesting records from Florence, Decatur (Morgan Co.) and Birmingham (Jefferson Co.) (Jackson, pers. commun.), and an unconfirmed report from southern Montgomery County (Meadows, pers. commun.).

Before 1996, each of the nests in Alabama had been in a traditional site: five-thirty feet (1.5-9.1 m) high in a tree or, less commonly, on the ledge of a man-made structure (Harrison 1978 and Fitch 1980). In 1996, the pattern was broken.

On 19 June 1996, Phil Snow noted a male Scissor-tailed Flycatcher flying up from a fence that runs along Butler Mill Road in Snowden, Montgomery County, Alabama. He and Carolyn observed it again on 20 June.

That afternoon, we were attempting to spot it again, when I noticed a Great Blue Heron (*Ardea herodias*) on the cross-bar of a high metal tower supporting high-tension wires. The tower was 130 feet (40 m) high and the cross-bar was 120 feet (37 m) above the ground (Gaines, pers. commun.). We saw a male Scissor-tailed Flycatcher diving at the heron repeatedly.

On 22 June, I set up a scope on the road approximately three hundred yards (273 m) NNE of the tower and examined the cross-bar. There were grasses and dry weeds hanging approximately one foot (0.3 m) down from a plate on the cross-bar. This suggested to us that there was a nest hidden from view. The male scissortail flew up to the site of the presumed nest and all but its tail disappeared from sight.

Over the next three weeks, the behavior of the Scissor-tailed Flycatchers served to confirm the location of the nest. The male scissortail engaged in an aggressive interaction with a Loggerhead Shrike (*Lanius ludovicianus*) several feet below the nest, while the female spent much time on the nest.

On 12 July, we knew that at least one egg had hatched when we noted both parents flying to the nest. We observed the female carrying an insect to the nest. Both birds continued bringing food to the nest through 24 July. On 24 July, we spotted the first fledged bird flying weakly at the base of the tower. By the next day, there were three fledglings all near the ground. Neither of us ever saw any of the fledglings return to the nest, although they

were flying well enough to fly to telephone wires and tops of 30-foot (9.1 m) trees by 27 July.

The nest site offered perfect protection from snakes and mammalian predators, but it appeared vulnerable to other birds. Many birds used the tower. The scissortails seem to have tolerated Purple Martins (*Progne subis*), Eastern Bluebirds (*Sialia sialis*), Northern Mockingbirds (*Mimus polyglottos*), European Starlings (*Sturnus vulgaris*), Northern Cardinals (*Cardinalis cardinalis*) and Eastern Meadowlarks (*Sturnella magna*). The male drove off an Eastern Kingbird (*Tyrannus tyrannus*) when the young Scissor-tailed Flycatchers were still in the nest. It drove off a Fish Crow (*Corvus ossifragus*) and a Cooper's Hawk (*Accipiter cooperii*) after the young had fledged. Although these scissortails nested unusually far east and unusually far from the ground, they were successful in their efforts.

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RED-BELLIED WOODPECKER (MELANERPES CAROLINUS) USURPING NEST OF DOWNY WOODPECKER (PICOIDES PUBESCENS)

Larry Gardella

Woodpeckers frequently interact with other birds wanting to use the holes they have excavated, including other woodpecker species. Bent (1964) noted that Red-headed Woodpeckers (*Melanerpes erythrocephalus*) are particularly prone to engage in such interactions. However, Red-bellied woodpeckers appear to be somewhat less aggressive. Jackson (1976) observed a Red-headed Woodpecker chase away a Red-bellied Woodpecker one-hundred feet (30.5 m) from its nest, whereas a male Red-bellied took no action when a Red-headed came within a few feet from its nest. In interactions with either Red-headed Woodpeckers or European Starlings (*Sturnus vulgaris*), Ingold (1989) found Red-bellied Woodpeckers to be inferior competitors; starlings frequently take over the nest cavities.

Despite their comparatively submissive nature, Red-bellied Woodpeckers have demonstrated aggression toward and even preyed upon other hole-nesting birds. Baker and Payne (1993) watched a Red-bellied Woodpecker remove two nestling European Starlings from a nest hole, drop them from the top of a tree, and then commandeer the nest. Red-bellied Woodpeckers have also preyed upon nestlings of White-breasted Nuthatches (Sitta carolinensis) (Dunn 1984), Carolina Chickadees (Parus carolinensis)

(Conner 1974), House Wrens (*Troglodytes aedon*) (Neill and Harper 1990), House Sparrows (*Passer domesticus*) (Brackbill 1969), American Redstarts (*Setophaga ruticilla*) (Watt 1980) and, perhaps, Brown-headed Nuthatches (*Sitta pusilla*) (Dunn 1984).

In early April 1996, a pair of Red-bellied Woodpeckers spent several days excavating nest and roosting holes in a 25-foot (7.6 m) maple (Acer sp.) tree in my backyard (Montgomery Co.). A pair of Downy Woodpeckers was nesting in an 85-foot (26 m) hackberry (Celtis laevigata) tree in the front yard, approximately 250 feet (76 m) away from the maple. The nest hole was approximately 24 feet (7.5 m) from the ground, half way up a 40-inch (1 m) branch approximately 45 degrees horizontal. The branch was approximately 18 inches (0.5 m) in circumference at the base and 14 inches (0.3 m) in circumference at the nest hole. By late April, the Downy Woodpeckers were feeding young in their nest cavity, and the Red-bellied Woodpeckers were looking for a new nest site, as their holes had been usurped by European Starlings. On 5 May, I heard the female Downy Woodpecker calling loudly and looked to see her dive-bombing a Red-bellied Woodpecker, which was at the base of the branch in which the downies were nesting. After approximately three minutes, the male Downy Woodpecker joined his mate, and the two spent two minutes harassing one of the Red-bellied Woodpeckers. The Red-bellied Woodpecker would fly off, but then return.

When I returned approximately two hours later, both of the Downy Woodpeckers were calling loudly, and they flew at a Red-bellied Woodpecker for approximately five minutes.

On 8 May, I did not see the Downy Woodpeckers, but I heard their young begging for food. I noted that the Red-bellied Woodpeckers had begun excavation in the tree at the base of the branch in which the Downy Woodpeckers had their nest. In July, when I climbed the tree to take various measurements, the unfinished nest was 2.25 inches (5.7 cm) in diameter and 4 inches (10.16 cm) deep.

On 12 May, there was no sign of any of the Downy Woodpeckers in the hackberry, and the Red-bellied Woodpecker was in the Downies' nest. Between 12 May and 14 May, the Red-bellied Woodpeckers expanded the size of the nest. On 14 May, I heard pecking from inside the branch, then saw the female Red-bellied Woodpecker's head jutting out the nest hole. On the morning of 18 May, the pair copulated near the nest. In July, the nest cavity was approximately 12 inches (0.3 m) high and 3.75 inches (9.5 cm) wide at the level of the nest hole.

By early June, the Red-bellied Woodpeckers were feeding young. On 28 June, I observed two young Red-bellied Woodpeckers that were able to fly.

Downy Woodpeckers typically nest 3-50 feet (0.9-15.2 m) above ground in either a live or a dead tree. The nest hole is a perfect circle approximately 1.25 inches (3.2 cm) in diameter, and the cavity is from 8-10 inches (20.3-25.4 cm) in height and up to 3 inches (7.6 cm) across (Harrison

1975). Red-bellied Woodpeckers nest from 5-70 feet (1.5-21.3 m) high and their cavities are approximately 12 inches (30.5 cm) deep and 5 inches (12.8 cm) wide at the widest point with an entrance hole between 1.75 and 2.25 inches (4.4 to 5.7 cm) in diameter (Harrison 1975 and Harrison 1978).

Although the height of the Downy Woodpecker nest was appropriate for Red-bellied Woodpeckers, the site was too small to allow them to make a nest cavity of the regular size. Even to make the nest cavity 3.75 inches (9.6 cm) wide, they had to leave nest cavity walls no more than 0.5 inch (1.3 cm) thick. Short (1979) speculated that small woodpeckers excavate holes in small stubs and other sites that are barely large enough for them precisely to minimize the likelihood of a larger woodpecker expropriating the nest. Obviously, the tactic is not completely effective.

Ingold (1989) found that Red-bellied Woodpeckers that vied for nest sites with starlings raised fewer young than those that did not have to compete. By taking over an existing nest cavity and expanding it, the Red-bellied Woodpeckers I observed may have overcome the deleterious effects of their competition with starlings. They saved the time it would have taken to excavate a new cavity, so they were able to start nesting early enough to maximize their chance of breeding and to raise two young.

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PILEATED WOODPECKERS (DRYOCOPUS PILEATUS) STORE ACORNS BEHIND SCREEN DOOR

Julian L. Dusi

The Acorn Woodpecker (*Picus formicivorus*) is known to store acorns in holes excavated in dead trees. It is not often reported that other woodpeckers exhibit storage behavior.

Mel and Bob Schultz, of Auburn, Lee County, Alabama, told me of woodpeckers storing acorns at their home. On 25 October 1990, Bob opened their door and found a small pile of water oak (*Quercus nigra*) acorns on the threshold. Later that morning as Bob started to drive away, a Pileated Woodpecker landed on the stoop and thrust an acorn through a crack in the loose-fitting screen door. This was immediately followed by a second Pileated with another acorn. The woodpeckers made numerous trips during that day leaving a total of 61 acorns. The next day only one acorn appeared on the threshold.

Pileated Woodpeckers have been in that area for a number of years, but have never exhibited acorn storage behavior. There is always a good supply of water oak acorns available in the fall and the door has continued to be slightly ajar but the birds have never repeated this storage behavior. **Julian L. Dusi**, Department of Zoology and Wildlife Science, Auburn University, Auburn University, AL 36849-5414.

ALABAMA CHRISTMAS BIRD COUNTS, 1996-1997

Gerald Moske and Sue Moske

AUBURN: 28 December, 14 observers, 32.5 party-hours, 125.0 party-miles: Pied-b Grebe, 42; Gt Blue Heron, 22; Wood Duck, 5; Mallard, 48; Blue-w Teal, 6; Ring-nk Duck,147; L Scaup,46; Com Goldeneye,2; Bufflehead,2; Hooded Merganser,6; Ruddy Duck,4; Black Vulture,62; Turkey Vulture,57; N Harrier,1; Red-shird Hawk,6; Broad-w Hawk,1; Red-t Hawk,8; Am Kestrel,7; Turkey,20; Killdeer, 22; Com Snipe, 2; Am Woodcock, 1; Ring-b Gull, 1; Rock Dove, 238; Mourning Dove, 184; E Screech Owl, 1; Barred Owl, 2; B Kingfisher, 6; Red-b Wdpkr,31; Y-b Sapsucker,11; Downy Wdpkr,18; Hairy Wdpkr,5; N(Yshft)Flicker,28; Pileated Wdpkr,10; E Phoebe,9; Blue Jay,41; Am Crow,180; Fish Crow, 1; Caro Chickadee, 102; Tufted Titmouse, 122; Brn-hd Nuthatch, 67; Caro Wren,45; Winter Wren,3; Sedge Wren,1; G-c Kinglet,4; R-c Kinglet,17; Bl-gr Knatcatcher, 1; E Bluebird, 110; Hermit Thrush, 2; Am Robin, 604; Mockingbird, 25; Brn Thrasher, 6; Am Pipit, 10; Cedar Waxwing, 55; L Shrike, 2; Starling,72; Solitary Vireo,1; Yel-rp Warbler,239; Pine Warbler,56; Palm Warbler, 1; Com Yellowthroat, 3; Cardinal, 51; E Towhee, 28; Chipping Sp, 252; Field Sp,3; Vesper Sp,2; Savannah Sp,67; Fox Sp,3; Song Sp,191; Swamp Sp,60; White-thr Sp,60; D-e(SI-col)Junco,36; Red-wg Blackbird,176; E Meadowlark, 66; Brewer's Blackbird, 3; Boat-t Grackle, 3; Com Grackle, 3095; Brn-h Cowbird,5; Purple Finch,14; House Finch,42; Am Goldfinch,97; House Sp, 13.

Total species:85; Total individuals:7,095.

Count Week: Sharp-shinned Hawk; Cooper's Hawk; Am. Coot; Rusty Black-bird (Count numbers not provided).

Compiler: Julian L. Dusi, Dept. of Zoology & Wildlife Science, Auburn University, Auburn, AL 36849.

BIRMINGHAM: 28 December, 30 observers, 102.0 party-hours, 427.0 party-miles:

Com Loon,4; Pied-b Grebe,31; Gt Blue Heron,30; **Bl-cr N-Heron,1(N)**; **Tundra Swan,1(N)**; Canada Goose,115; Wood Duck,67; Mallard,100; Pintail,1; Gadwall,19; Am Widgeon,8; Canvasback,19; Ring-nk Duck,172; L Scaup,8; Ruddy Duck,6; Turkey Vulture,1; Sharp-shin Hawk,2; Cooper's Hawk,5; accipter,1; Red-shlrd Hawk,20; Red-t Hawk,35; Am Kestrel,8; Merlin,1; Peregrin Falcon,2; Turkey,1; N Bobwhite,1; Am Coot,26; Killdeer,66; Com Snipe,4; Am Woodcock,1; Ring-b Gull,3; Rock Dove,1210; Mourning Dove,795; E Screech Owl,2; Gt Horned Owl,1; Barred Owl,8; Belted Kingfisher,24; Red-hd Wdpkr,72; Red-b Wdpkr,128; Y-b Sapsucker,50; Downy Wdpkr,54; Hairy Wdpkr,9; N(Y-shft)Flicker,63; Pileated Wdpkr,1; E Phoebe,23; Blue Jay,423; Am Crow,716; Caro Chickadee,292; Tufted Titmouse,230; Red-b Nuthatch,1; White-br Nuthatch,51; Brn-hd Nuthatch,92; Brn Creeper,4; Caro Wren,133; Winter Wren,2; G-c Kinglet,39; R-c

Kinglet, 104; **Bl-gr Knatcatcher, 1(N)**; E Bluebird, 76; Hermit Thrush, 24; Am Robin, 290; Catbird, 2; Mockingbird, 156; Brn Thrasher, 24; Cedar Waxwing, 156; L Shrike, 9; Starling, 2667; Orange-cr Warbler, 2; Yel-rp Warbler, 210; Pine Warbler, 69; Palm Warbler, 1; Com Yellowthroat, 1; Cardinal, 344; E Towhee, 124; Chipping Sp, 97; Field Sp, 32; Savannah Sp, 7; **Henslow's Sp, 1(N)**; Fox Sp, 1; Song Sp, 286; Swamp Sp, 191; White-thr Sp, 415; D-e(Sl-col) Junco, 44; Red-wg Blackbird, 2002; E Meadowlark, 64; Rusty Blackbird, 25; Com Grackle, 8949; Brn-h Cowbird, 1079; Purple Finch, 18; House Finch, 127; Pine Siskin, 2; Am Goldfinch, 149; House Sp, 121.

Total species: 92; Total individuals: 23,066.

Count week: Rough-legged Hawk, 1.

Compiler: James V. Peavy Jr., 7 Environs Park, Helena, AL 35080.

DAUPHIN ISLAND: 02 January, 21 observers, 81.0 party-hours, 238.75 party-miles:

Com Loon, 12: Pied-b Grebe, 38: Horned Grebe, 17: Eared Grebe, 1: Wh Pelican,5; Brn Pelican,331; D-cr Cormorant,225; Gt Blue Heron,32; Gt Egret, 25; Snowy Egret, 18; Little Blue Heron, 1; Tricolored Heron, 12; Reddish Egret,4; Cattle Egret,3; Bl-cr N-Heron,2; Wh Ibis,6; Ful Whistling Duck,2; Snow Goose,5; Canada Goose,21; Wood Duck,8; Mottled Duck,7; Mallard,54; N Shoveler,1; Gt Scaup,6; L Scaup,128; scaup,1; Com Goldeneye, 3; Bufflehead, 26; Hooded Merganser, 14; Red-br Merganser, 71; duck,2; Black Vulture,15; Osprey,2; Cooper's Hawk,1; Red-shird Hawk,1; Red-t Hawk,3; Am Kestrel,20; Merlin,1; Peregrin Falcon,1; hawk,1; N Bobwhite,2; Clapper Rail,10; Virginia Rail,1; Am Coot,60; Black-b Plover,12; Semipalm Plover,5; Piping Plover,1; Killdeer,48; Am Oystercatcher,44; G Yellowlegs,1; Willet,39; Spotted Sandpiper,1; Ruddy Turnstone,35; Sandpiper, 7; Sanderling, 53; W Sandpiper, 3; Least Dunlin, 39: Dowitcher, 7; Com Snipe, 1; Laughing Gull, 1412; Bonaparte's Gull, 1; Ring-b Gull, 329; Herring Gull, 78; gull, 4; Caspian Tern, 6; Royal Tern, 139; Forster's Tern,52; tern,3; Black Skimmer,45; Rock Dove,34; Eur Col Dove,77; Wh-wg Dove,1: Mourning Dove,536; Grn-Dove,20; E Screech Owl,1; Gt Horned Owl,5; B Kingfisher,20; Red-hd Wdpkr,1; Red-b Wdpkr,40; Y-b Sapsucker,9; Downy Wdpkr,3; N(Y-shft)Flicker,3; Pileated Wdpkr,5; E Phoebe,14; Pur Martin,3; Tree Swallow,52; Blue Jay,161; Am Crow,6; Fish Crow,8; Caro Chickadee,9; Tufted Titmouse,3; Brn-hd Nuthatch,19; Caro Wren,33; House Wren,4; Winter Wren,1; Sedge Wren,9; Marsh Wren,1; R-c Kinglet,11; Bl-gr Knatcatcher, 3; E Bluebird, 40; Hermit Thrush, 1; Am Robin, 3227; Catbird, 12; Mockingbird, 115; Brn Thrasher, 10; Cedar Waxwing, 224; L Shrike, 23; Starling, 562; Solitary Vireo, 6; Orange-cr Warbler, 6; Yel-rp Warbler, 805; Pine Warbler, 16; Palm Warbler, 18; Com Yellowthroat, 5; Cardinal, 67; E Towhee, 21; Chipping Sp, 1; Field Sp, 20; Savannah Sp, 18; (Nel's) Sharp-t Sp, 1; Seaside Sp,7; Song Sp,9; Swamp Sp,9; White-thr Sp,45; D-e(Sl-col)Junco,2; Red-wg Blackbird, 1733; E Meadowlark, 7; Boat-t Grackle, 73; Com Grackle, 24; Brn-h Cowbird,6: House Finch,24: Am Goldfinch,27: House Sp.50.

Total species:128; Total individuals:11,876.

Count week: Barn Owl,1; N Harrier,1; Sora Rail,1; Sharp-shin Hawk,1. Compiler: John Porter, Post Office Box 848, Dauphin Island, AL 36528.

EUFAULA NWR: 05 January, 11 observers, 41.5 party-hours, 186.0 party-miles:

Com Loon, 1; Pied-b Grebe, 21; D-cr Cormorant, 112; Anhinga, 17 (Hi); Am Bittern,1; Gt Blue Heron,93; Gt Egret,72; Bl-cr N-Heron,13; Tundra Swan,2(New); Gt Wh-frt Goose,19; Snow Goose,1; Canada Goose,606; Wood Duck, 140; Green-w Teal, 180; Am Black Duck, 1; Mallard, 635; Pintail,72; Blue-w Teal,2; Shoveler,60; Gadwall,43; Am Widgeon,141; Canvasback,2; Ring-nk Duck,300; L Scaup,23; Bufflehead,46; Hooded Merganser,6; Red-br Merganser,1; duck,1000; Black Vulture,6; Turkey Vulture, 29; Osprey, 2; Bald Eagle, 1; N Harrier, 5; Sharp-shin Hawk, 3; Cooper's Hawk,1; Red-shird Hawk,4; Red-t Hawk,29; Am Kestrel,5; Turkey,6; N Bobwhite,1; Com Moorhen,7; Am Coot,195; Sandhill Crane,65(Hi); Killdeer,42; G Yellowlegs,1; Least Sandpiper,12; Com Snipe,55; Am Woodcock,1; Bonaparte's Gull, 28; Ring-b Gull, 485; Herring Gull, 2; Forster's Tern, 41; Rock Dove,83; Eur Col Dove,1(New); Mourning Dove,345; Grn-Dove,2; Bn Owl,2; E Screech Owl,4; Gt Horned Owl,2; Barred Owl,2; B Kingfisher,21; Red-hd Wdpkr,1; Red-b Wdpkr,13; Y-b Sapsucker,7; Downy Wdpkr,16; Hairy Wdpkr,1; N(Y-shft)Flicker,26; Pileated Wdpkr,5; E Phoebe,26(Hi); Blue Jay, 56; Am Crow, 196; Fish Crow, 18; Caro Chickadee, 41; Titmouse, 37; Brn-hd Nuthatch, 14; Brn Creeper, 1; Caro Wren, 38; House Wren,3; Winter Wren,2; Marsh Wren,1; G-c Kinglet,3; R-c Kinglet,29; Bl-gr Knatcatcher,1; E Bluebird,43; Hermit Thrush,7; Am Robin,34; Catbird,2; Mockingbird,22; Brn Thrasher,5; Am Pipit,120; Cedar Waxwing,21; L Shrike,9; Starling, 27; Solitary Vireo, 1; Orange-cr Warbler, 2; Yel-rp Warbler,490; Pine Warbler,32; Palm Warbler,3; Com Yellowthroat,23; Cardinal,47; E Towhee,48; Chipping Sp,32; Field Sp,26; Vesper Sp,27; Savannah Sp,33; Fox Sp,3; Song Sp,168; Swamp Sp,239; White-thr Sp,84; White-cr Sp,1; sparrow,200; D-e(SI-CoI)Junco,9; Red-wg Blackbird,1850; E Meadowlark, 165; Rusty Blackbird, 4; Brewer's Blackbird, 20; Grackle, 5100; Brn-h Cowbird, 26; blackbird, 800; House Finch, 2; Am Goldfinch, 64; House Sp, 18.

Total species: 119; Total individuals: 15,440;

Count week: Nothing reported.

Compiler: Sam Pate, Box 157, Fortson, GA 31808.

FORT MORGAN: 30 December, 27 observers, 88.25 party-hours, 216.6 party-miles:

Com Loon,32; Pied-b Grebe,15; Horned Grebe,122; Gannet,86; Brn Pelican,357; D-cr Cormorant,19,826; Gt Blue Heron,37; Gt Egret,5; Snowy Egret,7; Gadwall,1; L Scaup,708; scaup,3; **Black Scoter,19**; Bufflehead,406; Hooded Merganser,12; Red-br Merganser,120; Ruddy Duck,71; Osprey,3; N Harrier,5; Sharp-shin Hawk,1; Cooper's Hawk,4; Red-t Hawk,4; buteo,1; Am Kestrel,17; Merlin,1; Peregrin Falcon,1; N Bobwhite,10; Clapper Rail,16; Sora

Rail,2; Com Moorhen,1; Am Coot,196; Black-b Plover,29; Killdeer,31; G Yellowlegs, 1; Willet, 40; Ruddy Turnstone, 22; Sanderling, 178; Dunlin, 13; Com Snipe,2; Laughing Gull,764; Bonaparte's Gull,9; Ring-b Gull,214; Herring Gull, 127; gull, 102; Caspian Tern, 2; Royal Tern, 341; Forster's Tern, 498; Black Skimmer, 152; Eur Col Dove, 17; Mourning Dove, 85; Grn-Dove, 24; E Screech Owl,13; Gt Horned Owl,4; Ruf Hummingbird,1(no details); B Kingfisher,25; Red-b Wdpkr,47; Downy Wdpkr,4; N(Y-shft)Flicker,27; E Phoebe,35; Tree Swallow,91; Barn Swallow,1; Blue Jay,91; Caro Chickadee,19; Tufted Titmouse,4; Red-b Nuthatch,1; Brn-hd Nuthatch,26; Caro Wren,66; House Wren,19; Sedge Wren,4; Marsh Wren,16; R-c Kinglet,15; Bl-gr Knatcatcher,28; E Bluebird,16; Hermit Thrush,7; Am Robin,1005; Catbird,63; Mockingbird,145; Brn Thrasher,17; Cedar Waxwing,161; L Shrike,22; Starling, 170; Solitary Vireo, 5; Yel-rp Warbler, 1423; Pine Warbler, 13; Palm Warbler, 20; Com Yellowthroat, 10; Cardinal, 81; E Towhee, 78; Chipping Sp,54; Vesper Sp,2; Savannah Sp,123; sharp-t sp,3; Seaside Sp,2; Song Sp,36; Swamp Sp,35; White-thr Sp,157; sparrow,23; Red-wg Blackbird,366; E Meadowlark, 37; Boat-t Grackle, 1; Com Grackle, 9; Brn-h Cowbird, 96; House Finch,3; Am Goldfinch,8; House Sp,30.

Total species: 104; Total individuals: 29,496.

Count week: Nothing reported.

Compiler: Laurie Bailey, 27 Kingsway Drive, Mobile, AL 36608.

GULF SHORES: 04 January, 44 observers, 152.0 party-hours, 570.0 party-miles:

Red-thr Loon,1(good details); Pacific Loon,1(good details); Com Loon,116; Pied-b Grebe, 63; Horned Grebe, 31; Gannet, 77; Brn Pelican, 556; D-cr Cormorant, 526; Am Bittern, 1; Gt Blue Heron, 175; Gt Egret, 22; Snowy Egret,7; Gn Heron,2; Bl-cr N-Heron,1; Gt Wh-frt Goose,1(good details); Wood Duck,8; Mallard,74; Blue-w Teal,1; Gadwall,2; Am Widgeon,2; Redhead,3; Ring-nk Duck,5; Gt Scaup,24; L Scaup,626; scoter,21; Com Goldeneye,19; Bufflehead, 100; Hooded Merganser, 13; Red-br Merganser, 164; Ruddy Duck,9; Black Vulture,2; Turkey Vulture,49; Osprev,16(Hi); Bald Eagle,1; N Harrier, 22; Sharp-shin Hawk, 2; Cooper's Hawk, 5; Red-shlrd Hawk, 4; Red-t Hawk,26; buteo,1; Am Kestrel,52; Merlin,3; Peregrin Falcon,1; N Bobwhite,34; Clapper Rail,18; Virginia Rail,4; Sora Rail,10; Com Moorhen,2; Am Coot, 35; Sandhill Crane, 9; Black-b Plover, 49; Snowy Plover, 6; Killdeer, 1390; G Yellowlegs, 3; Willet, 16; Spotted Sandpiper, 1; Ruddy Turnstone, 10; Sanderling, 97; Com Snipe, 10; Am Woodcock, 2; Laughing Gull, 1355; Bonaparte's Gull,1159; Ring-b Gull,746; Herring Gull,101; gull,20; Caspian Tern,10; Royal Tern,115; Forster's Tern,394; Black Skimmer,3; Rock Dove, 52; Eur Col Dove, 86(Hi); Wht-wng Dove, 1(good details); Mourning Dove,894; Grn-Dove,32; Bn Owl,1; E Screech Owl,24; Gt Horned Owl,10; Barred Owl,1; B Kingfisher,37; Red-hd Wdpkr,5; Red-b Wdpkr,141; Y-b Sapsucker, 13; Downy Wdpkr, 28; Rec-c Wdpkr, 2; N. Flicker, 64; Pileated Wdpkr, 10; E Phoebe, 62; Tree Swallow, 475; Blue Jay, 329; Am Crow, 27; Fish Crow, 571; Caro Chickadee, 61; Tufted Titmouse, 33; Brn-hd Nuthatch, 44;

Caro Wren,132; House Wren,52; Sedge Wren,11; Marsh Wren,44; G-c Kinglet,1; R-c Kinglet,62; Bl-gr Knatcatcher,32; E Bluebird,153; Hermit Thrush,17; Am Robin,102000; Catbird,31; Mockingbird,323; Brn Thrasher,32; Am Pipit,125; Cedar Waxwing,959; L Shrike,116; Starling,802; White-e Vireo,4; Solitary Vireo,18; Orange-cr Warbler,13; Yel-rp Warbler,5975; Yel-rp(Audu's)Warbler,1(good details); Yel-thr Warbler,2; Pine Warbler,135; Palm Warbler,42; Black-and-wh Warbler,1; Com Yellowthroat,20; Cardinal,222; Indigo Bunting,2(good details); E Towhee,119; Chipping Sp,378; Field Sp,38; Vesper Sp,42; Savannah Sp,572; Grasshopper Sp,6; (Nel's)Sharp-t Sp,7; Seaside Sp,5; Song Sp,126; Lincoln's Sp,1; Swamp Sp,197; White-thr Sp,191; White-cr Sp,1; Red-wg Blackbird,13800; E Meadowlark,324; Brewer's Blackbird,3; Boat-t Grackle,74; Com Grackle,4266; Brn-h Cowbird,2533; blackbird,700; House Finch,54; Am Goldfinch,55; House Sp,25.

Total species: 142; Total individuals: 146,286.

Count Week: King Rail, 1.

Compiler: Greg D. Jackson, 2220 Baneberry Drive, Birmingham, AL 35244.

GUNTERSVILLE: 26 December, 24 observers, 72.0 party-hours, 314.5 party-miles:

Com Loon, 347; Pied-b Grebe, 1092; Horned Grebe, 257; D-cr Cormorant, 3635; Gt Blue Heron, 156; Bl-cr N-Heron, 5; Canada Goose, 121; Wood Duck, 5; Green-w Teal,1; Am Black Duck,3; Mallard,196; Pintail,2; Shoveler,71; Gadwall,12816; Am Widgeon,19; Canvasback,2; Redhead,1; Ring-nk Duck, 200; Gt Scaup, 42; L Scaup, 1135; Oldsquaw, 1; Com Goldeneye, 238; Bufflehead, 94; Hooded Merganser, 36; Red-br Merganser, 43; Ruddy Duck,149; Black Vulture,2; Bald Eagle,24; N Harrier,9; Sharp-shin Hawk,4; Cooper's Hawk,2; Red-shird Hawk,3; Red-t Hawk,38; Rough-lg Hawk,1(no details); Am Kestrel, 20; Merlin, 1; Prairie Falcon, 1 (no details); Coot, 28717; Killdeer, 89; Bonaparte's Gull, 87; Ring-b Gull, 1469; Herring Gull,30; Forster's Tern,1; Rock Dove,726; Mourning Dove,142; E Screech Owl,1; Gt Horned Owl,2; Barred Owl,2; B Kingfisher,34; Red-hd Wdpkr,10; Red-b Wdpkr,53; Y-b Sapsucker,45; Downy Wdpkr,28; Hairy Wdpkr,7; N(Yshft)Flicker,48; Pileated Wdpkr,11; E Phoebe,7; Horned Lark,15; Blue Jay,341; Am Crow,305; Caro Chickadee,108; Tufted Titmouse,128; White-br Nuthatch, 22; Brn-hd Nuthatch, 113; Brn Creeper, 9; Caro Wren, 45; Winter Wren, 12; G-c Kinglet, 58; R-c Kinglet, 115; Bl-gr Knatcatcher, 2; Bluebird,217; Hermit Thrush,17; Am Robin,236; Mockingbird,58; Thrasher, 18; Cedar Waxwing, 348; L Shrike, 12; Starling, 2434; Solitary Vireo,1; Yel-rp Warbler,311; Pine Warbler,38; Palm Warbler,1; Com Yellowthroat,1; Cardinal,181; E Towhee,59; Chipping Sp,194; Field Sp,298; Savannah Sp,20; Fox Sp,2; Song Sp,151; Swamp Sp,55; White-thr Sp,602; D-e(SI-col)Junco,88; Red-wg Blackbird,1082; E Meadowlark,231; Rusty Blackbird, 16; Brewer's Blackbird, 10; Com Grackle, 47; Brn-h Cowbird, 15; Purple Finch,1; House Finch,129; Am Goldfinch,179; House Sp,215.

Total Species: 104; Total individuals: 60,821.

Count week: Nothing reported.

Compiler: Linda B. Reynolds, 3909 Morrow Street, Guntersville, AL 35976.

MOBILE-TENSAW DELTA: 21 December, 19 observers, 74.75 party-hours, 257.8 party-miles:

Pied-b Grebe,91; Horned Grebe,1; Wh Pelican,436; Brn Pelican,105; D-cr Cormorant, 222; Anhinga, 1; Gt Blue Heron, 75; Gt Egret, 201; Snowy Egret, 59; Little Blue Heron, 14; Tricolored Heron, 19; Bl-cr N-Heron, 18; Yl-cr N-Heron, 3; nt-heron,1; Wh Ibis,126; Glsy Ibis,6; Wood Duck,13; Green-w Teal,21; Am Black Duck, 10; Mottled Duck, 2; Mallard, 57; Pintail, 3; Blue-w Teal, 38; Shoveler, 265; Gadwall, 200; Am Widgeon, 8; Canvasback, 17; Duck, 105; L Scaup, 184; scaup, 450; Bufflehead, 6; Hooded Merganser, 6; Ruddy Duck,42; duck,449; Black Vulture,45; Turkey Vulture,62; Osprey,9; Bald Eagle, 1; N Harrier, 13; Red-shlrd Hawk, 6; Red-t Hawk, 34; buteo, 1; Am Kestrel, 12; hawk, 6; Com Moorhen, 5; Am Coot, 17167; Black-b Plover, 41; Killdeer,312; Bl-neck Stilt,30; Avocet,73; G Yellowlegs,3; yellowlegs,5; Willet, 12; L-billed Curlew, 1; W Sandpiper, 245; Dunlin, 267; peep, 1670; S-b Dowitcher, 33; dowitcher, 10; Com Snipe, 7; Am Woodcock, 1; Laughing Gull,128; Ring-b Gull,193; Herring Gull,63; gull,49; Caspian Tern,2; Royal Tern,6; Forster's Tern,108; Rock Dove,14; Eur Col Dove,2; Mourning Dove, 159; E Screech Owl, 1; Barred Owl, 2; B Kingfisher, 17; Red-hd Wdpkr, 1; Red-b Wdpkr,42; Y-b Sapsucker,11; Downy Wdpkr,5; N(Y-shft)Flicker,8; Pileated Wdpkr,5; wdpecker,1; E Phoebe,26; Tree Swallow,104; Blue Jay,59; Am Crow,73; Caro Chickadee,16; Tufted Titmouse,10; Brn-hd Nuthatch,1; Caro Wren,22; House Wren,4; Marsh Wren,1; R-c Kinglet,33; Bl-gr Knatcatcher,5; E Bluebird,99; Hermit Thrush,15; Am Robin,930; Catbird,5; Mockingbird, 55; Brn Thrasher, 3; Cedar Waxwing, 135; L Shrike, 8; Starling, 707; Solitary Vireo, 9; Orange-cr Warbler, 4; Yel-rp Warbler, 1206; Yelthr Warbler,1; Pine Warbler,81; Palm Warbler,2; Com Yellowthroat,1; Cardinal,42; E Towhee,6; Chipping Sp,250; Field Sp,21; Savannah Sp,13; Swamp Sp,28; White-thr Sp,22; sparrow,17; Red-wg Song Blackbird, 199; E Meadowlark, 20; Boat-t Grackle, 345; Com Grackle, 10; Brn-h Cowbird,2; blackbird,216; House Finch,3; Am Goldfinch,4; House Sp,26.

Total species: 115; Total individuals: 28,991.

Count week: wren,sp.,1.

Compiler: Roger Clay, Post Office Box 7245, Spanish Fort, AL,36577.

MONTGOMERY: 04 January, 18 observers, 51.5 party-hours, 346.0 party miles:

Com Loon,1; Pied-b Grebe,55; Horned Grebe,1; D-cr Cormorant,1073; Gt Blue Heron,54; Gt Egret,66; Gn Heron,1; Snow Goose,6; Canada Goose,139; Wood Duck,28; Green-w Teal,25; Mallard,73; Blue-w Teal,12; Shoveler,35; Gadwall,39; Am Widgeon,72; Canvasback,1; Redhead,1; Ring-nk Duck,174; L Scaup,75; Hooded Merganser,4; duck,2000; Black Vulture,26; Turkey Vulture,80; N Harrier,9; Sharp-shin Hawk,4; Cooper's Hawk,1; Red-shlrd Hawk,9; Red-t Hawk,59; Am Kestrel,19; hawk,1; Turkey,10; Am Coot,398;

Killdeer, 447; G Yellowlegs, 2; yellowlegs, 2; Least Sandpiper, 18; Com Snipe, 8; Ring-b Gull, 1083; Herring Gull, 8; gull, 2000; Forster's Tern, 1; Rock Dove, 278; Eur Col Dove, 146; Mourning Dove, 480; Bn Owl, 4; Gt Horned Owl, 5; Barred Owl,5; B Kingfisher,18; Red-hd Wdpkr,37; Red-b Wdpkr,51; Y-b Sapsucker,23; Downy Wdpkr,28; Hairy Wdpkr,4; N(Y-shft)Flicker,30; E Phoebe, 18; Blue Jay, 159; Am Crow, 155; Fish Crow, 57; Caro Chickadee, 72; Tufted Titmouse, 43; Brown-hd Nuthatch, 9; Caro Wren, 110; House Wren, 3; Winter Wren,2; Sedge Wren,1; R-c Kinglet,22; E Bluebird,146; Am Robin, 16835; Catbird, 1; Mockingbird, 151; Brn Thrasher, 12; Am Pipit, 162; Cedar Waxwing, 1142; L Shrike, 27; Starling, 3016; Solitary Vireo, 2; Yel-rp Warbler, 566; Pine Warbler, 25; Palm Warbler, 32; Com Yellowthroat, 5; Cardinal, 259; E Towhee, 97; Chipping Sp, 97; Field Sp, 7; Vesper Sp, 149; Savannah Sp,2186; Grasshopper Sp,5; Fox Sp,1; Song Sp,358; Swamp Sp.58; White-thr Sp,310; sparrow,2036; D-e(SI-col)Junco,19; Blackbird, 30655; E Meadowlark, 166; Rusty Blackbird, 132; Brewer's Blackbird, 202; Com Grackle, 1478; Brn-h Cowbird, 1122; blackbird, 80400; Baltimore Oriole, 1; Purple Finch, 9; House Finch, 66; Am Goldfinch, 69; House Sp, 264.

Total species: 100; Total individuals: 152,148.

Count week: Nothing reported.

Compiler: Lawrence Gardella, 3549 Audubon Road, Montgomery, AL 36111.

TUSCALOOSA: 27 December, 13 observers, 36.0 party-miles, 188.0 party miles:

Pied-b Grebe, 16; D-cr Cormorant, 25; Gt Blue Heron, 22; Wood Duck, 5; Mallard,8; Gadwall,25; Canvasback,2; Ring-nk Duck,99; Gt Scaup,69; Bufflehead, 55; Hooded Merganser, 9; Black Vulture, 37; Turkey Vulture, 9; Bald Eagle,1; N Harrier,6; Sharp-shin Hawk,4; Cooper's Hawk,3; Red-shird Hawk,12; Red-t Hawk,21; Am Kestrel,10; Turkey,3; Am Coot,21; Killdeer, 191; Com Snipe, 6; Ring-b Gull, 6; Rock Dove, 125; Mourning Dove, 439; Barred Owl, 1; B Kingfisher, 15; Red-hd Wdpkr, 17; Red-b Wdpkr, 55; Y-b Sapsucker,24; Downy Wdpkr,29; Hairy Wdpkr,2; N(Y-shft)Flicker,37; Pileated Wdpkr, 18; E Phoebe, 8; Horned Lark, 50; Blue Jay, 98; Am Crow, 208; Caro Chickadee, 62; Tufted Titmouse, 40; White-br Nuthatch, 10; Brn-hd Nuthatch, 24; Brn Creeper, 1; Caro Wren, 29; House Wren, 3; G-c Kinglet, 24; Rc Kinglet, 18; E Bluebird, 88; Hermit Thrush, 3; Am Robin, 45; Mockingbird, 45; Brn Thrasher, 8; Am Pipit, 40; Cedar Waxwing, 120; L Shrike, 10; Starling, 673; Solitary Vireo, 3; Orange-cr Warbler, 2; Yel-rp Warbler, 160; Pine Warbler, 26; Palm Warbler,3; Cardinal,87; E Towhee,26; Chipping Sp,76; Field Sp,30; Vesper Sp,8; Savannah Sp,168; Fox Sp,2; Song Sp,102; Swamp Sp,26; Sp,105; D-e(Slt-col)Junco,124; Red-wg Blackbird, 1917; E Meadowlark, 211; Rusty Blackbird, 115; Brewer's Blackbird, 61; Com Grackle, 1235; Brn-h Cowbird, 105; Purple Finch, 7; House Finch, 33; Am Goldfinch, 84; House Sp.1.

Total species: 84; Total individuals: 7,751.

Count week: N. Bobwhite, 8; C. Yellowthroat, 1; G. Horned Owl, 1.

Special Note: Red-wg Blackbird,1 (with white tail) during count. Compiler: John C. Hall, 6 Cherokee Hills, Tuscaloosa, AL 35404.

WATERLOO: 21 December, 18 observers, 78.5 party-hours, 311.75 party-miles:

Com Loon, 5; Pied-b Grebe, 50; Horned Grebe, 22; D-cr Cormorant, 68; Gt Blue Heron, 180; Canada Goose, 204; Am Black Duck, 22; Mallard, 393; Shoveler, 16; Gadwall, 306; Am Widgeon, 16; Canvasback, 1; Ring-nk Duck, 3; L Scaup, 110; Com Goldeneye, 74; Bufflehead, 68; Hooded Merganser, 198; Com Merganser,2; Red-br Merganser,39; Ruddy Duck,5; duck,6; Turkey Vulture, 10; Bald Eagle, 40; N Harrier, 6; Sharp-shin Hawk, 2; Cooper's Hawk, 1; Red-shird Hawk,1(Lo); Red-t Hawk,31; Am Kestrel,6; Merlin,1(New); Turkey,5; N Bobwhite,10; Am Coot,385; Killdeer,224; Com Snipe,23; Franklin's Gull, 1; Bonaparte's Gull, 677; Ring-b Gull, 1760; Herring Gull, 14; Forster's Tern,2; Rock Dove,78; Mourning Dove,151; E Screech Owl,11; Gt Horned Owl,8; Barred Owl,4; B Kingfisher,17(Lo); Red-hd Wdpkr,25; Red-b Wdpkr,67; Y-b Sapsucker, 46; Downy Wdpkr, 29(Lo); Hairy Wdpkr, 9; N Flicker, 53; Pileated Wdpkr,18; E Phoebe,2(Lo); Horned Lark,37; Blue Jay,330; Am Crow, 455(Hi); Caro Chickadee, 166(Lo); Tufted Titmouse, 104; White-br Nuthatch, 26; Brn Creeper, 16; Caro Wren, 53; House Wren, 2; Winter Wren,3(Lo); Sedge Wren,1; G-c Kinglet,8(Lo); R-c Kinglet,108; E Bluebird, 190; Hermit Thrush, 42; Am Robin, 150(Lo); Mockingbird, 50; Thrasher,14; Cedar Waxwing,513; L Shrike,7; Starling,388; Yel-rp Warbler, 292; Pine Warbler, 36; Cardinal, 221; E Towhee, 62; Chipping Sp. 41; Field Sp,272; Savannah Sp,62; Fox Sp,10; Song Sp,176(Lo); Swamp Sp,76; White-thr Sp,465; White-cr Sp,10; D-e(SI-col)Junco,230(Lo); Blackbird, 202; E Meadowlark, 203; Com Grackle, 4(Lo); blackbird, 110; Purple Finch, 2; House Finch, 25; Am Goldfinch, 120; House Sp, 11(Lo).

Total species: 94; Total individuals: 10,798.

Count week: Nothing reported.

Compiler: Paul D. Kittle, Box 5048, Un'v'sity of N. Alabama, Florence, AL 35632.

WHEELER NWR: 18 December, (observers, party-hours, party-miles - not provided):

Com Loon,2; Pied-b Grebe,916; Horned Grebe,36; Wh Pelican,3(Hi); D-cr Cormorant,56; Gt Blue Heron,390; Gt Egret,72; Tundra Swan,1; Gt Wh-frt Goose,16(Ti); Snow Goose,1525; Ross' Goose,1; Canada Goose,3407; Wood Duck,169; Green-w Teal,348; Am Black Duck,794; Mallard,16500; Pintail,1306; Shoveler,154; Gadwall,2200; Am Widgeon,3600; Canvasback,108; Redhead,3; Ring-nk Duck,250; L Scaup,458; Com Goldeneye,73; Bufflehead,405(Hi); Hooded Merganser,730; Com Merganser,1; Red-br Merganser,81; Ruddy Duck,32; Turkey Vulture,44(Hi); Bald Eagle,1; N Harrier,23; Sharp-shin Hawk,8; Cooper's Hawk,10(Hi); Red-shlrd Hawk,3; Red-t Hawk,98; Am Kestrel,56; Peregrin Falcon,1; Am Coot,2718; Sandhill Crane,11(Hi); Killdeer,951; G Yellowlegs,39; L

Yellowlegs,6; Least Sandpiper,196; Dunlin,76; Com Snipe,168; Bonaparte's Gull, 162; Ring-b Gull, 3565; Herring Gull, 7; Forster's Tern, 27(Hi); Rock Dove, 764; Eur Col Dove, 23(New); Mourning Dove, 788; E Screech Owl, 11; Gt Horned Owl,4; Ruby-t Hummingbird,1(good details); B Kingfisher,23; Red-hd Wdpkr,36; Red-b Wdpkr,116; Y-b Sapsucker,45; Downy Wdpkr,72; Hairy Wdpkr, 19; N Flicker, 100; Pileated Wdpkr, 7; E Phoebe, 9; Horned Lark, 303; Barn Swallow, 1(New); Blue Jay, 404; Am Crow, 388; Caro Chickadee, 227; Tufted Titmouse, 160; White-br Nuthatch, 17(Hi); Brn Creeper, 9; Caro Wren,80; House Wren,5; Winter Wren,21; Sedge Wren,1(New); Marsh Wren, 1(Ti); G-c Kinglet, 58; R-c Kinglet, 117; E Bluebird, 165(Hi); Hermit Thrush, 29; Am Robin, 400; Mockingbird, 113; Brn Thrasher, 83; Am Pipit, 277; Cedar Waxwing,462; L Shrike,6; Starling,2918; Orange-cr Warbler,2; Yel-rp Warbler,700(Hi); Pine Warbler,14; Palm Warbler,5; Com Yellowthroat,1; Cardinal,443; E Towhee,118; Chipping Sp,13; Field Sp,129; Savannah Sp, 122; Fox Sp, 10; Song Sp, 373; Swamp Sp, 323; White-thr Sp, 1155; Whitecr Sp,6; D-e(Sl-col)Junco,37; Lap Longspur,4; Red-wg Blackbird,3404; E Meadowlark, 293; Rusty Blackbird, 610; Brewer's Blackbird, 60; Com Grackle,395; Brn-h Cowbird,368; Purple Finch,1; House Finch,57; Pine Siskin,2; Am Goldfinch, 141; House Sp, 109.

Total species: 118; Total individuals: 58,965;

Count week: Nothing reported.

Compiler: J. Milton Harris, 3119 Highland Plaza, Huntsville, AL 35801.

LIST OF OBSERVERS with initials of count: Sherry Alexander, B; Richard Alfierro, G, Wh; Bob Andrews, M-T; Gussie Arnett, B; David Arnold, T; Laurie Bailey, FtM, M-T; Russell Bailey, B; Fred Bassett, Mg; Leon Bates, Wa; Raymond Bates,B; Barbara Beals,Au; Donna Berger,GS; Duane Berger,GS; Bill Birkhead, Eu; Roger Birkhead, Eu; Paul Blakeburn, FtM; Harry Blewitt, T; Laura Bounds, FtM, M-T; Bill Bremser, GS; Greta Bremser, GS; Roberta Bonwit, FtM; Lela Anne Brewer, GS; Tom Brindley, G, Wh; Robert Brooks, B; Patty Brooks, B; Cosh Bryan, Eu; Maxie Bryant, T; Walt Burch, Wa; Lindsay Burgreen, G, Wh; Chris Bycroft,FtM; Teri Bycroft,FtM; Keith Carter,DI; Ed Case,FtM; Walter Chambers, Eu; Bobby Cherones, T; Ken Cherry, Eu; Alice Christenson, B; Billye Christopher, FtM; Alice Crittenden, Wh; Dick Crittenden, Wh; Morris Clark, GS; Roger Clay, DI, FtM, M-T; David Cole, T; Mac Cone, Mg; Dwight Cooley, G; Bud Cooney, B; Chris Coppola, Eu; John Couchman, GS; Bobby Cox, DI, M-T; Barbara Dale, T; Fran David, Wa; Kim Davis, FtM; Larry Derrick, Wa; Chris Dorgan, GS; Bob Duncan, FtM, GS; Lucy Duncan, GS; Will Duncan, GS; Rosemary Dusi, Au; Dusi, Au; Betsy Eagar, FtM, M-T; John Ehinger, G, Wh; Etheridge, Mg; Lenny Fenimore, GS; Harriet Findlay, Wh; Mary Floyd, DI, GS, M-T; Ann Forster, FtM; Dan Forster, FtM; Paul Franklin, B, G, Wh; Elizabeth French, DI; Friend, GS, M-T; Bill Friday, Wh; Sherlie Gade, FtM; Gardella, Mg; Ben Garmon, B, GS; Jeff Garner, Wa; David George, B, G, T, Wh; George Gerry, Wh; Peggy Gibbs, FtM; Verdon Gibbs, FtM; Jimmy Gilliland, Mg; Clara Granata, T; Tom Haggerty, Wa; Dena Hamilton, Wh; Stan Hamilton, Wh; John Hall,T; Greg Harber,Wh; Burt Harris,G,Wh; Milton Harris,G,Wh; Louise

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Total: 221 - Gerald Moske and Sue Moske, 702 Royce Circle, Huntsville, AL 35803.

FLORIDA CHRISTMAS BIRD COUNTS, 1996-1997

Gerald Moske and Sue Moske

CHOCTAWHATCHEE BAY*, 23 December, 31 observers, 115.0 party-hours, 562 party miles:

Com Loon, 301; Pied-b Grebe, 121; Horned Grebe, 115; Eared Grebe, 3; Gannet, 24; Wh Pelican, 2; Brn Pelican, 298; D-cr Cormorant, 516; Anhinga, 1; Gt Blue Heron, 51; Gt Egret,6; Gn Heron,1; Bl-cr N-Heron,6; Snow Goose,3; Canada Goose,2; Wood Duck,4; Green-w Teal,69; Mallard,20; Shoveler,13; Gadwall,6; Canvasback,1; Redhead, 201; Ring-nk Duck, 39; Gt Scaup, 31; L Scaup, 402; Surf Scoter, 1; Bufflehead, 354; Red-br Merganser, 222; Ruddy Duck, 26; Black Vulture, 36; Turkey Vulture, 147; Osprey, 9; Bald Eagle, 2; N Harrier, 1; Sharp-shin Hawk, 10; Cooper's Hawk,4; Red-shlrd Hawk,5; Red-t Hawk,24; Am Kestrel,43; Virginia Rail,5; Sora Rail, 5; Com Moorhen, 1; Am Coot, 956; Black-b Plover, 9; Semipalm Plover, 1; Killdeer, 302; G Yellowlegs, 12; L Yellowlegs, 1; Willet, 13; Spotted Sandpiper, 1; Ruddy Turnstone,3; Sanderling,133; W Sandpiper,1; Least Sandpiper,184; Dunlin,8; S-b Dowitcher,2; Com Snipe,19; Laughing Gull,1366; Bonaparte's Gull,392; Ring-b Gull, 390; Herring Gull, 56; Royal Tern, 84; Sandwich Tern, 1; Forster's Tern, 154; Black Skimmer,4; Rock Dove,320; Eur Col Dove,209(no details); Wh-winged Dove,2(no details); Mourning Dove,2315; Grn-Dove,5; E Screech Owl,1; Ruf Hummingbird,1; Bl-chin Hummingbird,1(banded); B Kingfisher,25; Red-hd Wdpkr,1; Red-b Wdpkr,56; Y-b Sapsucker,4; Downy Wdpkr,20; Rec-c Wdpkr,3; N Flicker, 38; Pileated Wdpkr, 4; E Phoebe, 14; Tree Swallow, 80; Blue Jay, 318; Am Crow,93; Fish Crow,50; Caro Chickadee,149; Tufted Titmouse,91; Brn-hd Nuthatch,14; Caro Wren,69; House Wren,18; R-c Kinglet,36; Bl-gr Knatcatcher,21; E Bluebird, 70(H); Hermit Thrush, 4; Am Robin, 4417; Catbird, 4; Mockingbird, 185; Brn Thrasher, 12; Am Pipit, 1; Cedar Waxwing, 1152; L Shrike, 23; Starling, 3304; Solitary Vireo,14; Orange-cr Warbler,3; Yel-rp Warbler,1486; Yel-thr Warbler,1; Pine Warbler,177; Palm Warbler,14; Com Yellowthroat,6; Cardinal,178; E Towhee,38; Chipping Sp,294; Field Sp,18; Vesper Sp,72; Savannah Sp,155; Grasshopper Sp,3; Song Sp,23; Swamp Sp,29; White-thr Sp,134; White-cr Sp,2; Red-wg Blackbird,306; E Meadowlark, 54; Com Grackle, 4; Brn-h Cowbird, 343; House Finch, 154; Am Goldfinch,46; House Sp,311.

Total species: 128.; Total individuals: 24,258.

Count week: Hooded Merganzer,1; Purple Gallinule,1; Gt Horned Owl; Marsh Wren,1.

Compiler: Donald M. Ware, 662 Fairway Ave. NE, Fort Walton Beach, FL 32547. *Special Note: In the 1995-1996 count report, the authors incorrectly reported that a Kelp Gull was sighted in this count area.

MARIANNA: Count not conducted for 1996-1997.

PENSACOLA, 21 December, 21 observers, 92.5 party-hours, 442.0 miles:

Pacific Loon, 1(N); Com Loon, 159; Pied-b Grebe, 119(H); Horned Grebe, 58; N Gannet, 60; Brown Pelican, 758; D-cr Cormorant, 393; Gt Blue Heron, 112; Gt Egret, 14; Snowy Egret, 19; Little Blue Heron, 1; Reddish Egret, 3; Gn Heron, 1; Bl-cr N-Heron, 33(H); Snow Goose, 1; Canada Goose, 37; Mallard, 23; Blue-w Teal, 3; Shoveler,2; Gadwall,1; Am Widgeon,1; Redhead,32; Ring-nk Duck,10; Gt Scaup,3; L Scaup, 999; Com Goldeneye, 26; Bufflehead, 268; Hooded Merganser, 47(H); Red-br Merganser, 382; Ruddy Duck, 1; Black Vulture, 1(L); Turkey Vulture, 1; Osprey, 1; N Harrier,2; Sharp-shin Hawk,3; Cooper's Hawk,3; Red-shlrd Hawk,8; Red-t Hawk,12; Am Kestrel, 12; Merlin, 1; Clapper Rail, 5; King Rail, 1(N); Am Coot, 352; Black-b Plover,51; Semipalm Plover,9; Killdeer,106; G Yellowlegs,15; L Yellowlegs,8; Willet, 80; Spotted Sandpiper, 9; Ruddy Turnstone, 65; Sanderling, 123; Dunlin, 14; Com Snipe,2; Laughing Gull,1607; Bonaparte's Gull,117; Ring-b Gull,1895; Herring Gull, 186; Royal Tern, 73; Forster's Tern, 50; Black Skimmer, 5; Rock Dove, 633; Eur Col Dove, 104; White-w Dove, 21(N); Mourning Dove, 642; Grn-Dove, 1; E Screech Gt Horned Owl,3; Buff-b Hummingbird,1(no details): Hummingbird,3(no details); Ruf Hummingbird,3(no details); B Kingfisher,39; Redhd Wdpkr,2; Red-b Wdpkr,64; Y-b Sapsucker,10; Downy Wdpkr,23(H); N(Yshft)Flicker,20; Pileated Wdpkr,2; E Phoebe,24; Tree Swallow,401; Blue Jay,374; Am Crow,12; Fish Crow,5444; Caro Chickadee,73; Tufted Titmouse,85; Brn-hd Nuthatch, 28; Caro Wren, 75; House Wren, 9; Sedge Wren, 3; Marsh Wren, 12; G-c Kinglet,1; R-c Kinglet,28; Bl-gr Knatcatcher,13; E Bluebird,98; Thrush, 18(H); Am Robin, 1509; Catbird, 5; Mockingbird, 226; Brn Thrasher, 26; Cedar Waxwing, 171; L Shrike, 15; Starling, 2014; Solitary Vireo, 7; Orange-cr Warbler, 14; Yel-rp Warbler, 1985; Pine Warbler, 70; Palm Warbler, 8; Com Yellowthroat, 8; Cardinal, 138; E Towhee, 34; Chipping Sp, 219; Field Sp, 8; Vesper Sp, 4(N); Savannah Sp,29; Henslow's Sp,8(H); (Nel's)Sharp-t Sp,2; Seaside Sp,2; Song Sp,35; Swamp Sp,30; White-thr Sp,130; Red-wg Blackbird,406; E Meadowlark,49; Brewer's Blackbird, 300; Com Grackle, 3007; Brn-h Cowbird, 311; Baltimore Oriole, 19(N) (no details); House Finch, 84; Am Goldfinch, 41; House Sp. 220.

Total species, 129(H); Total individuals, 27,777.

Count week: Am White Pelican.

Compiler: Edmond G. Case, 3634 Tiger Point Blvd., Gulf Breeze, FL 32561.

PERDIDO BAY, FL-AL, 28 December, 36 observers, **.* party-hours, **.* miles: Com Loon,174; Pied-b Grebe,68; Horned Grebe,62; Wh Pelican,14; Bwn Pelican,730; D-cr Cormorant,242; Am Bittern,1; Gt Blue Heron,167; Gt Egret,6; Snowy Egret,10; Reddish Egret,1; Gn Heron,1; Bl-cr N-Heron,1; Yl-cr N-Heron,1; Canada Goose,1; Wood Duck,21; Green-w Teal,2; Mallard,31; Ring-nk Duck,85; Gt Scaup,7; L Scaup,1553; scaup,15; Surf Scoter,1; Bufflehead,52; Hooded Merganser,40; Red-br Merganser,219; Ruddy Duck,1; duck,23; Black Vulture,25; Turkey Vulture,8; Osprey,7; N Harrier,2; Sharp-shin Hawk,2; Cooper's Hawk,4; Red-shlrd Hawk,4; Red-t Hawk,7; Am Kestrel,14; Merlin,3; hawk,1; Turkey,1(N); Clapper Rail,13; King Rail,1; Virginia Rail,2; Sora Rail,2; Am Coot,357(H); Black-b Plover,35; Semipalm Plover,15; Killdeer,71; Willet,36; Spotted Sandpiper,1; Ruddy Turnstone,21; Sanderling,123; Dunlin,55; Com Snipe,1; Laughing Gull,770; Bonaparte's Gull,12(L);

Ring-b Gull,564; Herring Gull,121; Royal Tern,36; Sandwich Tern,1; Forster's Tern.163: Black Skimmer.55: Rock Dove,348: Eur Col Dove,50; Wh-winged Dove, 1(N); Mourning Dove, 705; Grn-Dove, 7; E Screech Owl, 20; Gt Horned Owl, 6; Barred Owl,2; B Kingfisher,64; Red-hd Wdpkr,2; Red-b Wdpkr,127; Y-b Sapsucker, 20; Downy Wdpkr, 25; Hairy Wdpkr, 1; N Flicker, 30; Pileated Wdpkr, 9; E Phoebe, 51; W Kingbird, 1; Tree Swallow, 331; Barn Swallow, 1; Blue Jay, 484(H); Am Crow, 31; Fish Crow, 144; Caro Chickadee, 125(H); Tufted Titmouse, 115(H); Brn-hd Nuthatch, 104; Caro Wren, 160(H); House Wren, 51; Sedge Wren, 15; Marsh Wren,33(H); G-c Kinglet,1; R-c Kinglet,67; Bl-gr Knatcatcher,37; E Bluebird,237(H); Hermit Thrush,20; Am Robin,9371; Catbird,44; Mockingbird,344; Brn Thrasher, 52; Am Pipit, 32; Cedar Waxwing, 602(H); L Shrike, 34; Starling, 1377; White-e Vireo,1; Solitary Vireo,16; Orange-cr Warbler,11; Yel-rp Warbler,3436; Pine Warbler, 268(H); Palm Warbler, 46; Com Yellowthroat, 10; Cardinal, 225; Blue Grosbeak, 1(N); Indigo Bunting, 1(N); Dickcissel, 1; E Towhee, 138; Chipping Sp, 225; Field Sp.20; Vesper Sp,10; Savannah Sp,87; Seaside Sp,5; Song Sp,41; Swamp Sp,63; White-thr Sp,214; sparrow,2; Red-wg Blackbird,726; E Meadowlark,66; Com Grackle, 1738; Brn-h Cowbird, 239; Purple Finch, 7; House Finch, 80; Am Goldfinch, 75; House Sp.94.

Total species, 120; Total individuals, 29,219.

Count week: Least Flycatcher, 1.

Compiler: Ann Forster, P.O. Box 16418, Pensacola, FL 32507.

PORT ST. JOE, 27 December, 15 observers, 69.5 party-hours, 254.5 miles: Com Loon, 45; Pied-b Grebe, 64(H); Horned Grebe, 53(H); N Gannet, 31; Brown Pelican, 204; D-cr Cormorant, 354; Anhinga, 1; Gt Blue Heron, 81; Gt Egret, 38; Snowy Egret,52; Little Blue Heron,28; Tricolored Heron,19; Reddish Egret,5; Cattle Egret,1; Bl-cr N-Heron, 3; Wh Ibis, 2; Green-w Teal, 1; Blue-w Teal, 2; Canvasback, 60(H); Ring-nk Duck,4; Gt Scaup,20; L Scaup,412; Com Goldeneye,1; Bufflehead,129; Hooded Merganser,34; Red-br Merganser,926; Ruddy Duck,1; Black Vulture,7; Turkey Vulture,41; Bald Eagle,5; N Harrier,2; Sharp-shin Hawk,2; Cooper's Hawk,2; Red-shlrd Hawk,8; Red-t Hawk,11; Am Kestrel,18; Merlin,1; Clapper Rail,10; King Rail,2(H); Virginia Rail,1; Sora Rail,1; Am Coot,23; Black-b Plover,46(H); Snowy Plover,5; Semipalm Plover,60; Piping Plover,33; Killdeer,58; G Yellowlegs,11; L Yellowlegs, 4; Willet, 339; Marbled Godwit, 1; Ruddy Turnstone, 51; Red Knot, 71; Sanderling, 58; W Sandpiper, 11; Least Sandpiper, 21; Dunlin,591; Dowitcher, 517(H); dowitcher, 7; Com Snipe, 4; Laughing Gull, 720; Bonaparte's Gull,90; Ring-b Gull,523; Herring Gull,89; Caspian Tern,33(H); Royal Tern,44; Forster's Tern, 122; Black Skimmer, 28; Rock Dove, 3; Eur Col Dove, 127(H); Mourning Dove, 69; Grn-Dove, 42; E Screech Owl, 18(H); Gt Horned Owl, 4; Barred Owl,2; B Kingfisher,29; Red-b Wdpkr,30; Y-b Sapsucker,4; Downy Wdpkr,10; N Flicker, 10; Pileated Wdpkr, 16(H); E Phoebe, 34; Tree Swallow, 1677; Blue Jay, 31; Am Crow,21; Fish Crow,1161; Caro Chickadee,29; Tufted Titmouse,2; Brn-hd Nuthatch, 22; Caro Wren, 50; House Wren, 66(H); Sedge Wren, 16; Marsh Wren, 21; Rc Kinglet, 40; Bl-gr Knatcatcher, 3; E Bluebird, 88(H); Hermit Thrush, 8; Am Robin, 5128(H); Catbird, 44; Mockingbird, 127; Brn Thrasher, 10; Cedar Waxwing, 945; L Shrike,6(H); Starling,329; White-e Vireo,5; Solitary Vireo,10(H); Orange-cr

Warbler,2; Yel-rp Warbler,1548; Yel-thr Warbler,2; Pine Warbler,35; Palm Warbler,21(H); Black-and-wh Warbler,1; Com Yellowthroat,63(H); Cardinal,121; Indigo Bunting,1; E Towhee,98; Bachman's Sparrow(1); Chipping Sp,199(H); Field Sp,3; Vesper Sp,8; Savannah Sp,31; Henslow's Sp,1; sharp-t sp,12; Seaside Sp,7; Song Sp,53; Swamp Sp,84(H); White-thr Sp,14; Red-wg Blackbird,401; E Meadowlark,41; Com Grackle,32; Brn-h Cowbird,10; Am Goldfinch,2; House Sp,18.

Total species: 132; Total individuals: 19,297.

Count week: No report.

Compiler: Richard L. West, 2808 Rabbit Hill Rd., Tallahassee, FL 32312.

LIST OF OBSERVERS with initials of count: Janet Aylward, CB; Julia Babb, PB, P; Pat Baker, CB; Evelyn Barbig, P; Howard Barbig, P; Thomas Barbig, P; Michele Belson, PSJ; Phil Berry, CB; Frank Bray, P; Bill Bremser, PB, P; Greta Bremser, P; Edmond Case, CB, PB, P; Lois Case, CB; Ron Chrusten, PSJ; Marcia Clark, PB; Morris Clark, PB, P; Kim Davis, PB, P; Bill Dillon, CB; Bob Duncan, CB, PB, P; Lucy Duncan, PB; Scot Duncan, PB; William Duncan, CB, P; Duncan Evered, PSJ; Pat Ezell, PSJ; Jan Fabozzi, CB; Owen Fang, PB; Bob Ferris, CB; Gene Fleming, PB; Carolyn Flory,P; Ann Forster,CB,PB,P; Dan Forster,CB,M,P; Jere French,P; Ann Fullilove, P; Kathy Gault, CB; Patrick Gault, CB; Peggy Gibbs, PB; Verdon Gibbs, PB; Bernice Gilley, PB; Bob Henderson, PSJ; Mike Hudson, PB; Mary Hollis, PSJ; Dave Horrigan,P; Marcia Horrigan,P; Joyce Johnson,P; Allen Knothe,CB; James Knothe, CB; Jessie Knothe, CB; Alice Knowles, PSJ; Liz Langston, PB, P; Thom E. Lewis, PSJ; Frank Logan, PB; Larry McDonald, PB; Mike McMillian, PB; Debbie McWhorter.PB: Van McWhorter.PB: Gail Menk.PSJ; Lyla Messick.PSJ; Daryl Michael,P; Bill Milmore,PB; Liz Milum,CB; Steve Milum,CB; Mary Newman,PB; Gertrude Oakman, CB; Pete Pappas, PB; Betsy Reid, CB; Bob Reid, CB; Jim Roberts, P; Marilu Rose, CB, PB, P; Rufous Rose, CB, PB; Don Russell, PB; Caroly Shaeffer, CB; John Shaeffer, CB; Alan Shepperd, P; Virginia Spisak, CB; Mike Stangeland, PB, P; Barb Stedman, PSJ; S.J. Stedman, PSJ; Mildred Stennis, PSJ; Phil Tetlow, CB, P; Mary Theberge, CB; Carney Timmons, PB; Dana Timmons, PB; Chris Verlinde, PB; Carol Ware, CB; Donald Ware, CB, PB, P; Donna Wells, PSJ; Richard West, PSJ; Fred Wicke, P. Sonya Wood, PB: Dick Zani, PB.

Total: 90 - Gerald Moske and Sue Moske, 702 Royce Circle, Huntsville AL, 35803.

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Black and white photos are preferred, but color prints and slides are acceptable. Convert slides to prints before submitting article.

The title should be in CAPS. If the name of a species is used in the title, it should be followed by the scientific name in parentheses, e.g. CONNECTICUT WARBLER (OPORONIS AGILIS).

The author's name should be in lower case and centered under the title.

If the article is coauthored by a married couple bearing the same last name, the names should be kept separate, e.g. John B. Brown and Sarah D. Brown.

Whenever a species name is used for the first time in the body of an article, it should be followed by the scientific name in parentheses, e.g. Connecticut Warbler (*Oporornis agilis*). To save space, scientific names are not necessary in extensive lists such as Christmas Bird Counts and Seasonal Summaries.

When using dates, the day should be placed before the month, e.g. 13 April 1992.

Distances should be expressed in English units followed by the metric equivalent in parentheses, e.g. 6.2 miles (10 km). Use the metric system only for scientific measurements, e.g. wing 10.3 cm; tail 15.6 cm.

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The description of figures should be in lower case and placed beneath the figure.

Refer to the Literature Cited in this issue for the correct way to state references.

Three or less references should be incorporated into the text of the article rather than listed separately at the end, e.g. Imhof (1976, Alabama Birds) or Dusi (1994, Alabama Birdlife 41 (1)).

The author's name and full address should be line typed at the end of the article. The name used should match the name given under the title.



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