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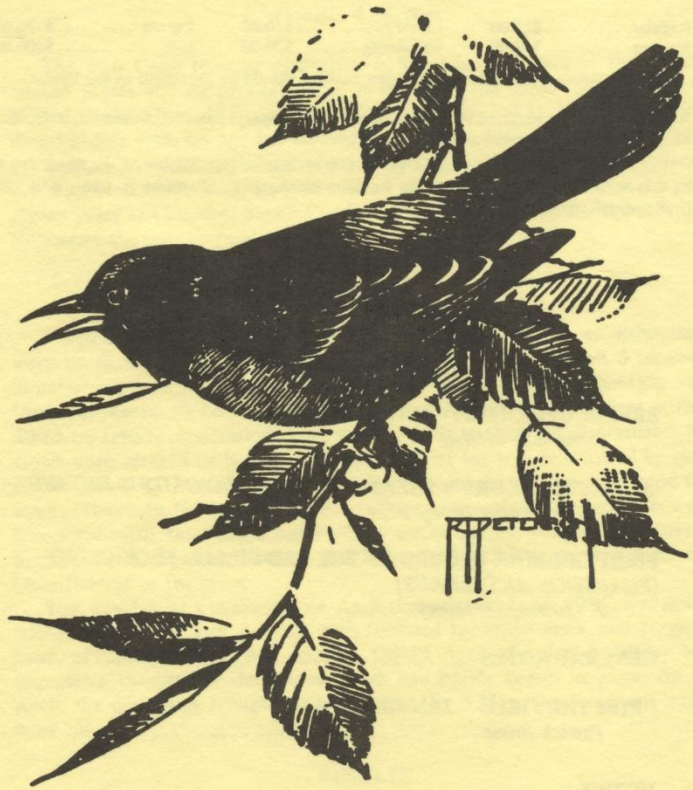

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BREEDING BIOLOGY OF THE FISH CROW

Douglas B. McNair

The Fish Crow (*Corvus ossifragus*) is an endemic corvid of the eastern United States and its primary range is the tidewater areas of the southern United States (Bent 1946, Johnston 1961, A.O.U. 1983). Despite its abundance in this area, no one has studied the breeding biology of the Fish Crow in detail on the coast or inland where it is increasing its range and abundance (op. cit.; Fink 1975, Meanley 1981). The Fish Crow has increased for the past eleven years at Clemson, South Carolina, and in 1984 I had the opportunity to observe the breeding and associated behaviors of two pairs.

METHODS

I watched breeding Fish Crows from inside or near my car. Ethograms were taken for 34 hours and behaviors recorded to the nearest 5 seconds. Supplementary untimed observations totaled about 20 hours. Nesting Fish Crows appeared to be disturbed only when I approached on foot within 30-35 m; several observations were deleted from analysis if this occurred. No crows were marked or banded. Identification of sex was determined by individual behavior. Only the female is known to incubate the eggs and brood the young (Goodwin 1976), and my observations of parents at the two nests were consistent with this. Some observations could not be properly interpreted because rapid behavioral events and obstructed visibility prevented certain identification of the sexes.

The weather at Clemson from April through mid-June, 1984, was much cooler and wetter than normal, with frequent torrential rains, and development of the vegetation was delayed. On 13 April, the flower display was impressive though the deciduous leaves had barely begun to grow. By 21 April, the deciduous foliage was leafing out. By 3 May, the deciduous leaves were out.

RESULTS

Fish Crows nested in a small pine grove adjacent to the Clemson University Cemetery, which is atop a modest hill on the Clemson University campus. The pine grove was comprised of tall (20-30 m) loblolly pine (*Pinus taeda*). Both nests were built in the crowns of 30 m pines; nests were placed 2 m

from the top along the trunk in the top whorl of branches. The first nest was relatively well hidden while the other was more exposed.

Nest-building. – Nest-building at the first nest was discovered on 12 April when the outside cup, composed of large sticks and twigs, was almost completed. Nest-building by both sexes continued until 21 April. I did not always distinguish between the sexes during this period so timed observations of nest-building visits were combined for both sexes (Table 1). However, both sexes contributed to nest-building frequently. The visits to the nest were longer and less frequent when only large sticks were carried to the nest compared to several other dates when smaller materials were used. In addition, visits to the nest without materials were fairly frequent (first nest only: mean = 124 ± 106 sec, N = 14). Sticks and twigs used in nest-building were usually deciduous, taken from various tree species within 70 m of the nest. Usually only one stick was carried in the bill but occasionally several were carried at once. Sticks carried on 13 April were large, some as long as or longer than the Fish Crows, but most were shorter. Sticks were detached by grasping them in the bill, tugging and pulling, until they were severed from the tree. By 15 April, the nest rim was well developed and nest-building materials used thereafter were for the inner cup. In nest-building behavior using any material, only one sex remained inside the nest to build and rearrange. Both sexes may occur on the nest together, but only one built while the other remained standing inside, on the rim, or just outside the nest looking. Sometimes a pair flew to the nest, one with materials, the other without. Occasionally, one sex brought materials to its mate, who remained inside the nest to build and rearrange. The pair frequently vocalized during the nest-building period and rarely returned to the nest without calling. Sometimes an individual flew off silently. Both birds either flew directly to the nest and paused briefly (mean = 77 sec ± 92 sec, N = 7) in the top of the nest tree on twigs or pine needle tufts, or paused once or twice in nearby trees before descending to the nest. This second route of entry was somewhat difficult because the tree crown was dense and stiff. Departing birds usually flew off directly with a glide and

Table 1. – Number, frequency, length, and time of nest-building visits by either sex of Fish Crow at the first nest.

Date	Number of visits	Frequency of visits/hr	Times of visits (EST)	Mean visit length ± SD (sec)	Nest-building materials
13 April	14	6.2	1001-1048 1407-1535	156 ± 168	sticks
14 April	22	12.7	1533-1717	117 ± 119	sticks, twigs, pine needles
16 April	9	11.0	0804-0853	113 ± 119	pine needles, bark slabs, paper towels, wrappers
17 April	3	6.9	1305-1331	75 ± 23	twigs, wrappers

a few steady wingbeats. Sometimes, however, they would pause and scout from branches 1-2 m from the nest before flying off.

Nest-building was virtually completed at the first nest by 21 April and no materials were brought to it afterwards, the birds only remaining inside to rearrange and inspect the nest. Rearrangement of nest materials occurred as late as 25 April, but incubation began by this date. The outer cup of the completed nest had a few sticks hanging down or protruding, as did the second nest. The second nest was not closely watched during the nest-building stage, but building continued at least through 27 April and rearrangement of materials continued at least through 2 May. Several times during this period, individuals carried twigs or pine needle tufts to the nest-tree, peered into the nest without entering, and either dropped the materials at the nest-tree or at the cemetery when they flew back. Incubation clearly began by 3 May.

Incubation. – Attentive and inattentive periods during incubation were calculated for each female Fish Crow on each day seen (Table 2). The data show no obvious trends; this result is not surprising because sample sizes were low, only seven dates are covered, and time of day is not always similar. Accordingly, I calculated the mean attentive and inattentive periods for both females combined. The mean attentive period was 31 min 39 sec ± 25 min (N = 11). This calculation omits two very brief shifts on the nest, for the birds were probably not settled. The complete attentive period mean may underestimate the true attentive period, as the incomplete attentive period mean was 57 min ± 29 min (N = 8). The shortest and longest attentive periods were 15 min 10 sec and 104 + min, respectively. The mean inattentive period was 3 min 43 sec ± 110 sec (N = 21) and this did not vary much with time of day.

The female on the first nest was difficult to see during incubation unless she moved, but the female on the second was easier to observe. The latter's tail frequently jutted over the nest rim, and the top of her head and oc-

Table 2. – Mean attentive and inattentive periods during incubation by female Fish Crows at each nest.

Date	Nest	Times of visits (EST)	Mean attentive period ± SD (min:sec) (N)	Mean inattentive period ± SD (min:sec) (N)
25 April	1	1555-1624	17:00	3:40
1 May	1	1742-1930	15:10	5:17 ± 25 sec (2)
2 May	1	0510-0800	32:58 ± 1181 sec (2)	3:52 ± 43 sec (3)
6 May	1	1118-1253	–	3:00
	2	1118-1253	28:18 ± 880 sec (2)	5:40 ± 167 sec (3)
	1	1718-1915	20:00	4:05 ± 78 sec (2)
	2	1718-1915	24:23 ± 246 sec (3)	2:53 ± 119 sec (5)
20 May	2	1457-1729	101:20	1:40 ± 57 sec (2)
21 May	2	1700-1903	–	4:00
25 May	2	1530-1645	–	2:10

casionally her bill were easily seen when she stretched or moved on the nest. Each female preferred facing one direction (first female W; second female SW) during incubation but each occasionally faced other directions. Females were twice seen to shift position on the nest after previously having settled; usually females maintained the same direction once an attentive period commenced. Both sexes perched on the nest-tree 1-2 m from the nest as described under nest-building behavior. Either sex usually remained 5-30 sec before going to the nest or leaving the nest-tree. When off the nest-tree during inattentive periods, the first female did not perch in adjacent pine trees, while the second female frequently did. Rather, the first female perched 10-20 m away in deciduous trees. Both females were always called off their nests by their mates and each pair behaved cooperatively toward each other. Both sexes were usually more cautious about entering the nest during incubation than during the nest-building period, but obvious intrusive approaches with quick ascents to the nest were frequent. On 20 May, the pair at the first nest were feeding nestlings and approaches to their nest became quicker.

Brooding. – Attentive and inattentive periods during brooding by the female at the first nest were calculated for each date (Table 3). All visits began in mid- to late afternoon. The data exclude observations where the female was on and off the nest feeding young constantly for short (15-20 min) periods. No trend in mean length of attentive period with increasing date was detected, but mean inattentive periods were longer later in the brooding period (Table 3). Despite the possibility that the length of attentive and inattentive periods varied with day since hatching, mean attentive and inattentive periods were calculated using data from all dates. The mean attentive period was 24 min 58 sec ± 784 sec (N = 11). The range was 10 min 40 sec to 57 min 25 sec. The mean inattentive period was 6 min ± 242 sec (N = 17). The range was 25 sec to 13 min 50 sec.

General behavior of breeding adults described herein at and near the nest was similar during all three nesting stages. The first female faced more directions during the nestling stage compared to the incubation stage, and she shifted and changed directions more frequently later in the nestling stage. The

Table 3. – Mean attentive and inattentive periods during brooding by the female Fish Crow at the first nest.

Date	Times of visits (EST)	Mean attentive period ± SD (min:sec) (N)	Mean inattentive period ± SD (min:sec) (N)
20 May	1457-1729	32:28 ± 1298 sec (3)	4:51 ± 190 sec (4)
21 May	1700-1903	23:28 ± 847 sec (3)	4:51 ± 189 sec (4)
23 May	1654-1804	27:30	–
24 May	1427-1630	21:30 ± 274 sec (3)	4:45
25 May	1530-1645	14:15	6:03 ± 250 sec (4)
11 June	1540-1640	–	12:25
12 June	1632-1732	–	7:18 ± 403 sec (3)

nestlings were well grown and several were seen feeding above the nest rim by 8 June. Four young were seen in the nest on 11-12 June and two sometimes stood on the nest rim, flapping their wings. The female did little brooding on these two days but was frequently perched 1 m above the nest or in nearby pine and deciduous trees watching the nest. The incessantly begging nestlings eventually quieted down if they were ignored by the female. At least two young fledged on 13 June and they were seen in the area begging for food from their parents. At least one young was still present in the nest, but none were present in the nest on 14 June and a family of six was seen in the area.

The other pair did not successfully raise young. The pair was at the nest on 8 June, but the status of the nest was unclear. It was apparent by 11-12 June that the nest had been abandoned for unknown reasons.

Feeding behavior at the nest. – All food brought from campus dumpsters to the nest or its immediate vicinity was refuse, usually bread or dough and once a piece of chicken. Bread or dough was often pre-formed into a bolus upon arrival of either sex of the two nesting pairs in the pine grove or cemetery. The male of the first nest cached food during the breeding period; this behavior is described elsewhere (McNair, in prep.).

Courtship feeding, with the male feeding the female off the incomplete nest, was seen several times during the nest-building stage. Courtship feeding behavior will be described elsewhere.

Incubation feeding, the male feeding the female on or off the nest, was seen from 1-20 May. Of 14 incubation feeds seen, 8 (57%) were on the nest; most observations were at the first nest. The male flew in silently, with a quick approach, and fed the female while he perched on the nest rim briefly (mean = 10 ± 6 sec, N = 4). The male fed the female off the nest within 50 m of it, and the female usually returned to her nest within 1 min (N = 6).

The male fed the female during the nestling stage on and off the first nest from 20 May - 11 June. Of 10 brood feeds seen, 6 (60%) were on the nest. The male often perched on the nest rim and remained much longer than during the incubation stage, apparently lingering to watch the female then feed the nestlings (mean = 62 ± 3 sec, N = 3). After the female was fed on the nest, she frequently flew off briefly to nearby trees in the pine grove or cemetery, where the male also occasionally fed her.

Both male and female fed the nestlings at the first nest from 24 May - 12 June. I could not always determine if the male fed only the female or nestlings or both; the male certainly fed both female and nestlings together at least once. The male's tail and body frequently stuck out over the nest rim, as did the female's occasionally, particularly late in the nestling stage when the nestlings were large. The female fed the nestlings much more often than did the male (20 of 23 visits, 87%). This percentage does not account for food directly provided by the male to the female when she was off the nest, nor for the frequent brief (3-5 sec) visits to the nest by the male when just passing food to the female, nor cached food provided by the male for the female. The latter two behaviors often occurred during rapid interchanges at the nest for 15-20 min periods when apparently nestling demands for food were strong. On the three certain occasions when the male fed the nestlings on the nest, visits were much longer than during the incubation stage; two visits were 3

min apiece, and the other was 9 min long on 23 May as the male remained on the nest rim guarding the nest while the female was off. In general, both sexes were usually silent at the nest, except for frequent 'purr craaah' calls.

Territory and Nest Defense. – Breeding Fish Crows defend an area around the immediate nest-site, and forage with little conflict with other Fish Crows in a large home range (Bent 1948; pers. obsv.). Both pairs behaved socially in the nesting area during the nest-building stage and less so during the incubation and nestling stages. When the first pair left the nesting area during the nest-building stage, the second pair often followed them, and I sometimes followed the crows to roosting areas 2-3 km away. Breeding Fish Crows left the nesting area (except incubating or brooding females) to roost elsewhere before sunset (mean = 43 ± 23 min; range = 20-79 min; N = 6). The only relevant morning observation occurred on 2 May when the breeding Fish Crows returned to the nesting area 71 min after sunrise. Furthermore, during all three nesting stages, Fish Crows (except incubating or brooding females) were regularly absent from the nesting area throughout the day (absent period mean = 15 min 11 sec ± 5 min 38 sec, N = 22). Breeding pairs were social with non-breeding Fish Crows during these absent periods and were seen feeding, flying, or resting together.

Vocalizations and displays advertise the territory around the nest-site and these behaviors shall be described elsewhere. Guarding the nest and chasing intra- and interspecific intruders are low and high intensity behaviors, respectively, of nest defense. Fish Crows rely on vigilance, not secrecy, for nest defense because their nests and their activity at and near their nests are conspicuous. The male is much more active in both types of nest defense.

Both sexes scout from the top of the nest-tree, nearby trees, or in trees within 50 m of the nest during nest guarding. Nest guarding by the male often occurs in the context of territorial advertisement. Conspicuous nest-guarding by the female occurred when she remained on or near the nest while the male was chasing other Fish Crows. The female once guarded the second nest from trees 30 m away when the male was not present during the incubation stage. The female then landed 5 m from the nest in the nest-tree when five Fish Crows sailed near the nest-site. Similar behavior was seen at both nests several times. However, the female usually appeared reluctant to be aggressive in nest defense against conspecifics though not against other species.

Intraspecific chases involved up to 5-6 Fish Crows and only the male was seen to actually chase conspecifics. Most chases lasted < 10 sec and were often punctuated by aggressive calls of the pursuing male. Chases occurred whether or not the female was on the nest. Chases usually occurred in three contexts: (1) Fish Crows sailing over or near the nest site; (2) Fish Crows approaching the nest-site if near the top of the nest tree or an adjacent tree; or (3) when Fish Crows were within 10-15 m of the nest-site and their posture and behavior indicated an intent to fly toward the nest. Chases in these three contexts did not invariably occur, *e.g.*, conspecifics were sometimes permitted to sail near the nest if they did not begin to descend toward the nest tree or attempt to perch nearby. Perching in the lower half of either nest tree (> 15 m from nests) by conspecifics or other species was permitted by both pairs. The nesting pairs appeared to recognize each other as each pair was more

tolerant of the other than toward other conspecfics except for an auxiliary sometimes tolerated at the first nest (McNair, 1985).

Both males chased non-breeding conspecifics during the nest-building, incubation, and nestling stages. Records of chasing bouts were not standardized, but examination of ethograms indicates chasing bouts occurred with approximate equal frequency in each breeding stage. The most intense chases occurred during the incubation period; body contact between pursued and pursuer occurred more often and bouts were usually longer compared to the two other stages.

Non-nesting Fish Crows frequently perched in the pine grove and cemetery at distances > 50 m from the two nests. Use of a tall (25 m) bare deciduous stub was particularly frequent. This stub was used far more often during the incubation stage than the two other stages combined (16 times compared to twice). This observation agrees with less quantitative evidence of greater perch use of other perches during the incubation stage compared to the two other stages. Ostensibly, these non-nesting Fish Crows were watching the nesting activity of the breeding pairs, rather than perching just to rest.

Nesting Fish Crows responded aggressively to four other avian species that are potential avian predators of eggs, young, or adults. However, nesting crows did not aggressively respond to Broad-winged (*Buteo platypterus*) and Red-tailed (*B. jamaicensis*) Hawks. Adult hawks, either alone or with one other individual, soared as close as 30 m from the nest sites or pine grove at least 6 times, including visits during the nestling period. Neither nesting Fish Crows nor non-breeding Fish Crows ever aggressively responded to these hawks.

A nesting Fish Crow did aggressively respond to one hawk, however. An adult Cooper's Hawk (*Accipiter cooperii*) sailed directly over the incubating female on the second nest at 1718 hr on 20 May. The hawk's closest approach to the nest was 3 m. The incubating female raised her head above the nest rim, elevated her bill and neck toward the hawk, clattered her mandibles and uttered the 'clatter call'. The Cooper's Hawk continued sailing by the nest without an apparent response and left the area with one wingbeat. No other Fish Crows were present (except the brooding female on the first nest), so the response by other Fish Crows is unknown.

No apparent aggressive response by Fish Crows toward American Crows (*C. brachyrhynchos*) was seen, except once. During the entire breeding period (12 April - 14 June), American Crows were in agricultural fields at least 175 m away, below the pine grove and cemetery. Occasionally, American Crows approached the pine grove or cemetery, but did not fly over either. Only once did an American Crow perch in the area, on a deciduous stub often used by both breeding and non-breeding Fish Crows as a perch. This stub was located 60 m from the first nest. The stub was used by one American Crow once from 1814-1849 hr on 21 May when nestlings were in the first nest of the Fish Crow. The American Crow called intermittently to a distant American Crow while perched on the stub. Several non-breeding Fish Crows were present in the area, but none responded to the American Crow's intrusion. Only

the male Fish Crow of the first nest responded aggressively to the American Crow. The male flew to a deciduous tree within 10 m of the deciduous stub, and uttered the 'clatter call' for 5 min. The male left afterwards when the American Crow did not respond to this threat.

A pair of Blue Jays (*Cyanocitta cristata*) nested in the pine grove and several other pairs nested nearby. The male Fish Crow of the first nest protected food caches from Blue Jays several times (McNair, 1985). No other chases of jays by Fish Crows were seen. The strongest aggressive response by crows toward jays occurred several times when jays were near the Fish Crow nests during the incubation stage. Each time, the crows closely watched the jays but did not chase them. Reciprocal behavior was seen when Fish Crows approached the jay's nest. The strongest response by a jay occurred when the first female Fish Crow was off her nest and near the jay's nest on 20 May. The jay approached to within 1-2 m of the female and threatened her by clattering and fluttering her mandibles. The female did not resist and soon flew back to her nest.

Nesting Fish Crows responded more aggressively toward Common Grackles (*Quiscalus quiscula*) than to any other avian predator. Grackles were closely watched any time they approached to within 15 m of either nest during the incubation stage. One chase was seen at 1238 hr on 6 May. The female Fish Crow of the second nest was 10-15 m away from it during an inattentive period. A male grackle perched at the top of the nest tree. Even before it landed momentarily, the female flew as quickly as I have seen a Fish Crow fly and knocked the grackle off its perch. On 14 May, a male grackle flew over the second nest while the female was incubating. The female shifted her position on the nest at that moment, so she faced another direction, the direction from which the grackle could be best seen. I do not believe this nest shift was a coincidence, as shifting on the nest is rare once an attentive period begins. All the above aggressive responses by Fish Crows to grackles occurred during the incubation stage. Earlier, during the nest-building stage on 21 April, a male Common Grackle visited inside the empty nest of the first pair for 20 sec at 1626 hr while both parent Fish Crows were absent. This grackle emerged from the nest with nothing in its bill.

Fish Crows only responded aggressively at or near their nests toward these four above avian species. The Eastern Gray Squirrel (*Sciurus carolinensis*) was common, but no aggressive responses were seen toward these or other animals that are potential predators of eggs or young.

Behavioral Dominance. – Breeding female Fish Crows were dominant over males when near (< 40 m) the nest. The male often perched lower than the female when a pair was in the same or adjacent tree. The nesting pair was likewise dominant over non-breeding Fish Crows and perched higher than these crows in pine or deciduous trees when the latter were < 50 m from the nests. Displacement of the male by the female and displacement of non-breeding Fish Crows by nesting individuals were seen throughout the nesting period. Interspecific dominance was seen at 1100 hr on 25 April when a Fish Crow displaced a male Common Grackle that perched above it in a deciduous stub beyond the defended area around the nest-site.

Maintenance Behavior. – Preening, comfort movements, and ruffling of feathers occurred both on and off the nest, though these behaviors were more numerous off. Bill-wiping and face-wiping was only seen off the nest. Breeding pairs preened alone or together. Plumage of both breeding pairs and non-breeding crows became noticeably worn by mid-May to mid-June, especially the flight feathers, and crows frequently preened to reattach these feathers. Plumage of breeding females was especially worn by fledgling time, and their plumage lost much of its gloss. Occurrence of actual molt at this time is unknown. Ruffling the plumage was most common during heavy rains.

Fish Crows allopreened which occurred off the nest. Mutual allopreening by the first pair while perched in a deciduous tree 20 m from the nest was seen for 20 sec at 1509 hr on 13 April. Nest-building by both sexes and chasing of other Fish Crows by the male preceded this bout of allopreening. The male allopreened the female in the same area at 0829-0834 hr on 2 May. The male had previously called the female off the nest and fed her. Following the allopreening bout, the male flew 40 m to a perch in the cemetery and then both sexes duetted for 30 sec, uttering a 'tin horn canh'. In both allopreening bouts, the crows preened the upper neck and head which cannot be reached by the bird's own bill. For this same reason, face- and bill-wiping were seen frequently. Crows were not in bodily contact while allopreening.

DISCUSSION

Typical parental behavior of corvids are: (1) feeding of the female by its mate, (2) nest-building by both sexes, and (3) incubation and brooding by the female only (Goodwin 1976). My observations of breeding Fish Crows concur with these facts.

The descriptive details of breeding biology and feeding, dominance, and maintenance behaviors at and near the nests of Fish Crows provided herein generally agree with other accounts of Fish Crows and general accounts of behavior of the genus *Corvus* (Bent 1946, Johnston 1961, Goodwin 1976, Meanley 1981). In addition, both nest placement and nest habitat of Fish Crows at Clemson are typical sites for inland localities (Bent 1946, Johnston 1961, Meanley 1981). Fish Crow nests built previously at Clemson were also placed high in pines in pine groves or woods.

Several facts about breeding biology and associated behaviors of Fish Crow should be emphasized. Attentive periods at Clemson closely agree with data from Virginia (Meanley 1981). Inattentive periods were much shorter at Clemson (ca. 4 min mean) compared to Virginia (10 min mean). Fish Crows in Virginia foraged in pastures and hayfields, usually greater than 0.9 km from their nests. Though female Fish Crows rarely or never feed themselves off the nest during incubation, males in Virginia may not have been able to provide food to females as quickly compared to Clemson because of greater distances traveled between feeding areas and the nest in Virginia. Sample sizes of attentive and inattentive periods are small in both studies and more data are needed.

Food provided by males must have accounted for all or almost all of their female's nutrition during incubation because the females' inattentive periods

were short (Table 2) and females were not seen to forage when off the nest. During the nestling stage, the male must have also provided the major portion of nutrition for his female and nestlings, either directly or indirectly as described herein. The female did occasionally provision herself and her nestlings directly. Her inattentive periods were longer than during the incubation period, and she occasionally flew over the cemetery, to return with food from nearby dumpsters or from other locations.

Maintenance behaviors observed in my study are described in detail for other corvids of the genus *Corvus* (Goodwin 1976). Allopreening was previously undocumented for Fish Crow.

Intra- and interspecific nest defense was an important aspect of Fish Crow breeding biology. Aggressive responses by breeding Fish Crows toward non-breeding congeners has been documented herein. Observations of non-breeding congeners perched near the nests are of additional interest. The relatedness of these crows to the breeding pairs is unknown. These non-breeding crows did not defend the nest, warn the parents of potential predators, or provide any other form of protection for eggs, brood, or adults. As noted before, these non-breeding crows were seen most frequently near the nest during the incubation stage and they failed to respond aggressively toward an American Crow when the latter perched on a favorite deciduous stub. These facts suggest that these non-breeding crows were watching the nest and waiting for an opportunity to rob it of its eggs. I have no evidence that these crows functioned as sentinels (Goodwin 1976, D'Agostino *et al.* 1981).

Nest defense against interspecific predators was also most frequent and intense during the incubation stage. The most important potential predators were Blue Jays and Common Grackles. Both species probably cannot harm nestling crows unless they are very young and possibly not even then. The absence of interactions among nesting Fish Crows and these two predators during the nestling stage supports this assertion.

In summary, aggression of breeding Fish Crows against intra- and interspecific intruders was most frequent and intense during the incubation stage compared to either the nest-building or nestling stages. Gowaty (1981) proposed that changes in levels of aggressive behavior during the breeding season could be modeled by one of four hypotheses, all of which predict a linear aggressive response from nest-building through the nestling stage. Although none of these hypotheses were tested, the data presented herein do not conform to any of the four. The significance of this shall be discussed later.

The anti-kleptogamy hypothesis, which predicts a decreased aggressive response, is unsupported by any evidence for Fish Crows. The food-resources-defense hypothesis predicts either an increased or equal aggressive response. Nesting Fish Crows did not feed near their nests and foraged amicably enough with other Fish Crows at campus dumpsters and elsewhere where food is perhaps available *ad libitum*. The only exception to these behaviors was protection of cached food by the first male away from the defended area surrounding the immediate nest-site. This hypothesis is considered inapplicable to Fish Crows, not only because foraging behavior is unrelated to defense of the immediate nest-site or surrounding areas, but because evidence is lacking.

The nest-site-defense hypothesis predicts either a decreased or equal aggressive response as the breeding season approaches. The prediction of an equal response may be valid for my limited data, but does not explain Fish Crow behavior very well. First, nest-sites are probably not limited at Clemson. Fish Crows did not previously breed at the cemetery, but they have certainly nested 1-2 km away in several previous years and other sites are probably available. Secondly, Fish Crows usually breed in small colonies and the pine grove had other nest-sites available for other pairs. A non-breeding Fish Crow carried a stick to the top of a pine about 30 m away from either nest at 1617 hr on 14 May, but dropped material at the prospective site. Neither pair of nesting Fish Crows harassed this crow, and both pairs were in the incubation stage. Thus, nest-sites were available and the reasons why non-breeding Fish Crows failed to nest are unknown. Third, a Common Grackle visited the empty nest of the first pair during nest-building. This agrees with other observations which indicate breeding Fish Crows were less vigilant during this stage compared to the incubation stage.

The anti-predation hypothesis predicts an increased aggressive response and appears to be the strongest hypothesis to account for Fish Crow aggressive behavior toward intra- and interspecific intruders. Fish Crows are monogamous and usually single-brooded, and both male and female parental investments are high. Fish Crow eggs were more threatened by actual or potential predators than were their nestlings. Except for predaceous Fish Crows, or several larger potential avian predators, other avian predators could probably not harm the nestlings unless they were very young. For any predator, there is probably not enough time available to approach, attack and dismember young before parent Fish Crows respond. The scarcity of perched non-nesting Fish Crows watching the first nest during the nestling stage may be explained by this assertion.

The observed pattern of greater Fish Crow aggressive responses against intra- and interspecific intruders during incubation compared to the two other nesting stages is not a linear response, and hence, does not conform to any of the four hypotheses (Gowaty 1981). My observations do not necessarily contradict these hypotheses. First, my data is primarily incidental and I conducted no tests of the hypotheses. Secondly, only the aggressive response of chasing was used to measure or infer the frequency and intensity of aggressive behavior and hence parental investment. Other aggressive behaviors, *e.g.*, nest-guarding, vocal territorial advertisement, were not used as measuring rods of aggressive responses to intra- and interspecific intruders. These behaviors, for example, could possibly account for less frequent intrusions during the nestling stage by conspecifics. Third, Fish Crows may have responded more aggressively during the incubation stage than others simply because intrusions were more frequent, and not because intruders presented more of a threat *per se*. Thus, without a proper experiment with appropriate models, observational data may not be able to reveal predicted patterns of aggressive responses for any of the four hypotheses. However, observational data can reveal the importance of real patterns of behavior to the life-history of a species. In Fish Crows breeding at Clemson University in 1984, the incubation stage was clearly the stage during which I observed the greatest level of nest defense.

ACKNOWLEDGMENTS

I thank M. Tannenbaum for reviewing this paper.

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ALBINISM IN CORY'S SHEARWATERS (*CALONECTRIS DIOMEDEA*)

J. Christopher Haney

Avian albinism is a lack of pigmentation in part or all of the body parts, due mainly to a genetic deficiency in amounts of the enzyme tyrosinase (Welty 1982). Albinism has been recorded in at least 163 bird species and 42 bird families in Great Britain and 304 species in 54 families in North America (reviewed by Sage 1963 and Gross 1965).

During seabird surveys conducted in 1983 and 1984 I observed albinism in Cory's Shearwaters on several occasions. Harrison (1983) mentions that albinism is occasionally reported in Cory's Shearwaters but gives no literature references to its occurrence in the species. I here report incidences of albinism in Cory's Shearwaters and relate the form of albinism taken by individual shearwaters I encountered.

The amount of albinism in birds varies and may be classified according to the extent or degree of effect on a given bird (Pettingill 1970). Total albinism is the condition when all pigments are completely absent from the plumage, iris, and skin. Incomplete albinism occurs when pigments are absent from the plumage, or irises, or skin but not from all three. Imperfect albinism is a dilution or reduction of at least one pigment in one or more of the three areas. Partial albinism, the commonest form, is a condition in which pigments are reduced or absent from parts of any or all three areas.

I observed both imperfect and partial albinism in Cory's Shearwaters, but neither the total nor incomplete forms. Imperfect albinism in this species is illustrated in Figure 1. This bird appeared as dull white in the field but one can observe somewhat darker markings on the primaries, secondaries, wing coverts, back, and tail. The underbody was pure white. The general effect was of a very white bird with some faint dark areas. The bill was a typical straw color and the eye was dark. Since pigment was not completely absent from either the plumage, skin, or iris, incomplete and total albinism were ruled out.

Also on 10 July 1984 and in the same general area, I observed a partially albinistic Cory's Shearwater. In this individual, most of the secondaries and secondary coverts were white giving the bird the appearance of having symmetrical white rectangles on the trailing edge of the wing. On three or four other occasions I witnessed individual Cory's Shearwaters with a few all-white primary or secondary wing feathers.

The incidence of albinism in this species is apparently very low since I found it in fewer than a dozen individuals out of several thousand observed during the two year study period. Cory's Shearwaters may also appear very faded, a creamy brown color, in late summer and fall due to feather abrasion and wear (Harrision 1983, pers. obs.). This is not due to albinism. Because the appearance of albinistic (and faded) Cory's Shearwaters could pose potential identification problems, seabird observers should acquaint themselves with the plumage variation exhibited by this species.

Figure 1. – Imperfectly albinistic Cory's Shearwater observed offshore on 10 July 1984 150 km east of St. Catherine's Island, Liberty Co., Georgia.

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FIRST GEORGIA RECORD OF THE RED-BILLED TROPICBIRD (*PHAETHON AETHEREUS*)

J. Christopher Haney

The White-tailed Tropicbird (*Phaethon lepturus*) was previously thought to be the only species of tropicbird occurring regularly in the western Atlantic north of the Caribbean. A summary of North Atlantic tropicbird records (Lee *et al.* 1981) in fact suggests that the relative statuses of the two tropicbird species found in the Atlantic may be inaccurate because of erroneous assumptions regarding the identification of all tropicbirds as *P. lepturus.*

On 7 June 1984 I observed and photographed an immature Red-billed Tropicbird in Georgia offshore waters. The bird was originally sighted resting on the water surface at a location on the outer continental shelf (31°40'N, 79°30'W) 145 km east of St. Catherine's Island, Liberty Co., Georgia. This location was about 20 km inshore of the Gulf Stream in 140 meters of water with a surface temperature of 26.7°C. Large amounts of *Sargassum*, flying fish (Exocoetidae), and dolphinfish (*Coryphaena*) were seen in the vicinity of the tropicbird. Cory's Shearwaters (*Calonectris diomedea*), Audubon's Shearwaters (*Puffinus lherminieri*), Wilson's (*Oceanites oceanicus*), Leach's (*Oceanodroma leucorhoa*), and Band-rumped (*Oceanodroma castro*) Storm-Petrels, and Bridled Terns (*Sterna anaethetus*) were observed nearby or within a few kilometers of the tropicbird.

A series of five photographs reveal the bird in flight and on the water surface. Although the quality of the slides is generally poor, definitive markings were present in two slides (UGAMNH #5254A-B). The narrow nuchal band running through the eye to the back and top of the head is detectable in one slide. Another shows the black of the distal primaries extending onto the distal primary coverts. Both of these field marks are never exhibited by either White-tailed or Red-tailed (*P. rubricauda*) Tropicbirds. The bill was yellow, very heavy, and thick at the base. The tail was wedge-shaped and lacked the long rectrices characteristic of adults. The fine gray barring on the back was not obvious and the bird's dorsal surface appeared white except for the already mentioned wing and head regions.

This is the first record for this species in Georgia. At-sea and specimen records of Red-billed Tropicbirds in southeastern states exist only for Florida (three: Stevenson 1964, Clapp *et al.* 1982) and North Carolina (five: Lee *et al.* 1981, Clapp *et al.* 1982, Lee and Irwin 1983, Davis and Bryan 1983). New York and Rhode Island each have one land-based or stranding record (A.O.U. 1983). This appears to be at least the eleventh record of the Red-billed Tropicbird on the Atlantic side of the United States. Records for this species span the period May to October. The sighting reported here is the only at-sea record between May and August for the southeastern states.

This record and recent summaries by Moore (1982) and Haney (1983) reveal how little is known about the status of seabirds in Georgia offshore waters. Only seven additional records of tropicbirds are available for the state. These include single adult White-tailed Tropicbirds photographed by P. W. Stangel on 2 May 1983 and myself on 11 May 1984. Additional sight records

by Moore (1980, 1982) and myself (1983) were certainly White-tailed, making five of these seven records identified to species. Records of an immature tropicbird by Stangel on 6 May 1983 and of an adult tropicbird by W. W. Griffin (Dental *et al.* 1977) on 15 August 1940 are not adequately documented for specific identification.

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GENERAL NOTES

EARED GREBE IN THE ATLANTA AREA – On 18 August 1984, late in the morning, I was checking the five ponds of the Clayton County Water Treatment Plant (approximately 20 miles south of Atlanta) for possible shorebirds. The water level in the ponds was too high to provide a good shorebird habitat and I was only able to find a dozen Killdeer (*Charadrius vociferus*) and two Pectoral Sandpipers (*Calidris melanotos*). Six Little Blue Herons (*Egretta caerulea*), two Snowy Egrets (*Egretta thula*), two Great Egrets (*Casmerodius albus*), eleven Blue-winged Teal (*Anas discors*) and one Pied-billed Grebe (*Podilymbus podiceps*) were also present.

It was a slow morning and I was ready to leave when I noticed a bird in the middle of the northwest pond. After a quick look I had no doubt about the identity of the bird: it was an Eared Grebe (*Podiceps nigricollis*) in breeding plumage. I immediately called a few friends. Robert and Didi Manns were able to see the bird 30 minutes later and Hugh Garrett saw it later that day. The head, neck and back were black, a crest was visible most of the time, the golden ear tufts were well defined and the flanks were rufous. The upturned lower mandible was observed along with the prominent red eye. The observation was made from about 100-150 m using a 15x60 zoom telescope.

The bird stayed until 5 Sept. when it was last seen by Father Francis Michael. During its stay it was seen by many observers and excellent photographs were taken. The bird moved after a week to a different pond and its departure was probably due to the fast reduction of the pond's water level. This is the fifth record of the species in Georgia and the first one for the Atlanta area (number 294 for the Atlanta list). I believe it is also the first record of a breeding plumaged bird for the state.

Patrick Brisse, 4960 Gatehouse Way, Stone Mountain, GA 30088.

WOOD DUCK AND HOODED MERGANSER SHARE SAME NEST AT OCMULGEE WILDLIFE MANAGEMENT AREA, COCHRAN, GA – On 7 May 1984 a Wood Duck (*Aix aponsa*) hen was observed entering a management area nesting structure and within one minute a Hooded Merganser (*Lophodytes cucullatus*) hen flew into the same nesting structure. After a period in excess of thirty minutes, neither hen exited from the box.

Nine days later (16 May) the box was checked in an attempt to band either hen but neither was sitting. Upon examination of the clutch, it was found to contain 11 Wood Duck and 3 Hooded Merganser eggs.

A final check of the nest box was made later and all eggs had hatched. During the period of incubation the Wood Duck hen was observed leaving the nest on one occasion. It was not ascertained as to which hen did the sitting.

Bob Watson, Area Manager, Ocmulgee W.M.A., Cochran, GA 31014.

OLDSQUAW PAIR SPRING VISITORS TO AUGUSTA – On 26 March 1984, 15 year old Daniel Waters reported seeing "a small duck with a lot of white on it on West Gordon Lake near downtown Augusta." He also saw the

duck 27-30 March as he traveled back and forth to school. On 31 March Vernon and Anne Waters checked the area and found a pair of Oldsquaws (*Clangula hyemalis*). The ducks were viewed from approximately 25 m with a 15-40X scope. When first studied on 31 March, the male was changing from winter into summer plumage. On subsequent visits on 2, 7, 9 and 11 April, the male was observed to change into total summer plumage with a black chest, neck and head, white cheek patch, and brilliant white sides. The female Oldsquaw changed very little during this time as she seemed to already have the dark throat and black patch on her lower face of summer plumage.

On all visits the pair of Oldsquaws was observed to dive repeatedly, resting only occasionally. Although seemingly paired, no mating behavior was observed. These ducks were viewed by many members of Augusta Audubon including Clarence Belger, Jim Clark, Jack Cooper, and Emil Urban. When Tom Price looked for the birds on 12 April, they were gone and were not seen again although the lake was checked several times in the next few days.

Oldsquaws are an uncommon occurrence in the Augusta area of inland Georgia. The only other fairly recent sighting was one Oldsquaw seen by Clarence Belger at the Savannah River Plant, S.C., on Pond B, 20 December, 1980. Its rarity in inland Georgia is echoed by Denton's publication where the Oldsquaw is listed as "uncommon and irregular winter visitor on coast; rare in interior, 24 Nov (1945) – 10 Apr (1927)" (*Annotated Checklist of Ga. Birds*, GOS Occ. Publ. No. 6, 1977). This evidently has not always been true. Eugene Murphey in his book *Observations on the Bird Life of the Middle Savannah Valley 1890-1937*, (Contrib. Charleston, S.C. Museum, No. IX), lists Oldsquaws as "irregular winter visitant, appearing in considerable numbers on the Savannah River during the periods of coldest weather". Although unusual for the Oldsquaw to be in Augusta at all, this 26 Mar-11 April sighting was not made in winter nor was it during a period of coldest weather. Also the last date seen is later (by one day) than the latest recorded date of 10 April 1927.

Anne Rogers Waters, 1621 Apple Valley Drive, Augusta, Georgia 30906

SPECIMEN OF VIRGINIA RAIL AT ATHENS, GEORGIA – On 23 April 1984, at approximately 1800, my wife and I found an apparently fresh specimen of Virginia Rail (*Rallus limicola*) in the gutter alongside Riverhill Drive. Although in a residential area, this location was about 600 m from relatively suitable rail habitat along the Middle Oconee River. The specimen was placed in a freezer and the skin later prepared by Elizabeth McGhee, who reported that the specimen was a male with enlarged gonads. The specimen appeared in good condition externally but showed internal damage that suggested a probable car-kill. The skin is No. 5253 in the University of Georgia Museum of Natural History.

In 1949, Robbins published a continental range map of the Virginia Rail, which showed no breeding records for this species in Georgia. Burleigh (1958) gave extreme dates of occurrence for Georgia as 7 August 1932 (I. R. Tomkins, near Savannah) to 20 May 1922 (Burleigh, at Athens). Denton *et al.* (1977) stated that the Virginia Rail was a common transient and winter resident on the coast and locally in the Coastal Plain and a scarce transient

elsewhere in the state, but also mentioned two breeding records at Atlanta, in 1970 and 1971.

The breeding records at Atlanta, the first and second for the state, involved two adults with two downy chicks found by Robert Manns on 14 June 1970 (Einhorn 1971) and an adult with chicks found by Walter and Leonard Gray on 30 May 1971 (Teulings 1971). More recently, on 1 August 1981, near Savannah, Patrick and Donna Brisse observed an adult with two nearly fullgrown chicks (Brisse 1981). With the existence of both coastal and inland breeding records, plus a specimen at Athens in breeding condition that may or may not have been a transient, evidence is accumulating for the occasional year-round occurrence in the state of this secretive, easily-overlooked species.

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BUFF-BREASTED SANDPIPERS OBSERVED IN SOUTH FULTON COUNTY, GEORGIA – While doing a study of the bird species present on a short-grass field near the Chattahoochee River in south Fulton County on 2 September 1984, my wife and I observed three Buff-breasted Sandpipers (*Tryngites subruficollis*) for approximately one hour beginning at 1800. The birds gave the appearance of being fairly tame allowing us to approach them within a distance of about 7 m as they moved across the field picking food from the grass with their bills. The field was rather large with an almost uniform grass cover and generally dry with a few small, scattered puddles of standing water. Other species of birds noted during the period of observation were over 75 Killdeer (*Charadrius vociferus*) and four American Crows (*Corvus brachyrhynchos*).

All three birds possessed a buff-colored face without any noticeable pattern or streaking with the exception of a very pale eye-ring which was especially noted when the birds cocked their heads. The thin, black bills were shorter than the head and appeared to be straight. Underparts were also of a buff coloration with a few light brown spots noted on the sides of the breast. Upperparts were of a dusky-brown color with a clearly defined scaly pattern evident. The legs of the three birds were yellow. During the period of observation, the sandpipers were seen in flight on four separate occasions. It was clearly noted that the wing linings were white in contrast to the buff underparts of the birds.

According to the *Annotated Checklist of Georgia Birds* (1977, Georgia

Ornithological Society, Occasional Publication No. 6), the Buff-breasted Sandpiper is a rare fall transient on and near coast, 17 Jul (1976) - 29 Sep (1951), at Augusta 13 - 23 Sep 1962 and in Irwin County 6 Sep 1957, 13 Sep 1963.

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FIRST GEORGIA SPECIMEN OF THE ICELAND GULL: A CORRECTION –I. R. Tomkins (1941) reported the first Georgia specimen of the Iceland Gull (*Larus glaucoides*), which he collected 6 km E of Savannah on 13 February 1941. This specimen, a first winter male (I. R. Tomkins #665), was deposited in the Charleston Museum (ChM #42.56.4).

This specimen was actually not the first for Georgia. Another Iceland Gull, also collected by Tomkins (I. R. Tomkins #523; ChM #35.63) on 14 February 1935 at Savannah, was misidentified as a Glaucous Gull (*Larus hyperboreus*). This specimen, whose sex is not determined, is in second winter plumage. This error in identification has spread through the literature (Tomkins, 1941, 1958; Greene *et al.*, 1945; Burleigh, 1958).

Other problems arise from the fact that Tomkins collected three other purported Glaucous Gulls around Savannah. These are: I.R.T. #285, collected 28 February 1931; I.R.T. #305, collected 14 April 1931 (Tomkins, 1931); and I.R.T. #691, collected 30 May 1951 (Tomkins 1951, 1958). Only the latter specimen could be located (U. Ga. #911) and its identification confirmed. The other two specimens are not in any of the known repositories of Tomkins' collection.

I appreciate the efforts of Roxie C. Laybourne, U.S. National Museum, who confirmed that I.R.T. #523 is an Iceland Gull. Chris Haney, Zoology Department, University of Georgia, confirmed that I.R.T. #691 is a Glaucous Gull.

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BREEDING SEASON RECORD OF GRAY KINGBIRD FROM THE GEORGIA MAINLAND – The Gray Kingbird (*Tyrranus dominicensis*) is a very local and rare summer resident along the United States Atlantic coast outside of south Florida (R. T. Peterson, *A Field Guide to the Birds east of the Rockies*, Houghton Mifflin Co., 1980). The A.O.U. Checklist (*Checklist of North American Birds,* 6th edition, Allen Press, Inc., 1983) implies that breeding by this species as far north as South Carolina is historical only. In

Georgia, Gray Kingbirds have nested on Cockspur Island in Chatham County and on St. Simons and Sea Islands in Glynn County (*Annotated Checklist of Georgia Birds*, Georgia Ornithological Society, Occasional Publication No. 6, 1977). The area around "The Cloister" on Sea Island has been the most regular location for presumed nesting by this species in recent years.

On 28 May 1984, Patrick Brisse, Daniel Jacobson, Kathy Davidson, and I observed a Gray Kingbird on a telephone wire on Newcastle Street in a residential area of downtown Brunswick, Glynn County, Georgia. We did not observe more than one individual. On 1 July 1984 I returned to investigate whether the bird was still present. I observed one bird on that date and again later on 8 July. On 16 August I observed two individuals. No additional birds or evidence of nesting was ever found but the amount of time spent searching on each visit was limited. This is the first summer record of the Gray Kingbird on the Georgia mainland and its occurrence during the nesting season away from coastal, barrier islands is unexpected.

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A PROBABLE NEW GEORGIA EARLY FALL ARRIVAL DATE FOR SEDGE WREN – On 20 Sept. 1981 I was walking up the hill toward the plant from the ponds of the Wayne Poultry Company, Pendergrass, Jackson County, Georgia when a small wren flushed out of the vegetation beside the path. After flushing the bird two or three more times and being unsuccessful in getting a look at it other than in flight I called it a Sedge Wren (*Cistothorus platensis*). I thought I saw stripes on its back but it was hard to be certain when you only got glimpses in flight. It was the right size for a Sedge Wren and the habitat was open fescue pasture about 23 cm in height.

After consulting *The Annotated Checklist of Georgia Birds* (1977, GOS, Occ. Publ. No. 6) I concluded that my sighting must have been one of a Winter Wren (*Troglodytes troglodytes*) even though the habitat was all wrong. The checklist suggested that the earliest previous date for the Sedge Wren in Georgia was 1 October 1970.

On 22 Sept. 1982 I had an almost identical experience in almost the same spot. After my initial experience was repeated the following year I became convinced that I must have two new early fall records for the Sedge Wren.

I also found a reference in my notes to a Sedge Wren sighting in Dawson County on 12 May 1973. This date matches exactly the checklist's published late spring date for Georgia of 12 May 1928.

John M. Paget, 1530 Vine St. NE, Gainesville, Georgia 30501.

SIGHTING OF MOURNING WARBLER IN CARROLL COUNTY, GEORGIA – While on a birding trip along Georgia Highway 5 in Carroll County on 20 May 1984, my wife and I observed an adult male Mourning Warbler (*Oporonis philadelphia*) in full breeding plumage west of the small community of Tyus at approximately 1415. We had begun playing the call of an Eastern Screech Owl on a portable tape recorder near an area of shrubby

growth when the bird was noted. The warbler first appeared on the branch of a small shrub 6 m to 8 m from us, remained a short time, turned and disappeared back toward the ground. No amount of coaxing caused it to return within the view of the observers.

The chin and throat of this warbler were of a dark slate-gray coloration with a black wash or smudge clearly evident on the lower throat and upper breast while the belly was of a yellowish color. Undertail coverts were also yellowish; however, this yellowish coloration did not appear to extend beyond the middle of the tail. The warbler possessed a slate-gray hood which completely encircled its head and neck. No trace of either an eye ring or stripe was evident. The back, rump and uppertail coverts were of a fairly uniform olive-green.

The Mourning Warbler is reported as an occasional spring transient by the *Annotated Checklist of Georgia Birds* (1977, Georgia Ornithological Society, Occasional Publication No. 6) in the northern part of the state with previous occurrences at Roswell 23 May 1931, Atlanta 17 May 1956, Dalton 3 June 1964 and Rising Fawn, Dade County, 14 - 20 May 1885.

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A FIRST SIGHT RECORD OF THE PAINTED REDSTART FOR GEORGIA – My husband and I checked into our cabin at the Crooked River State Park near St. Mary's, Georgia at about 1600 on 13 April 1984. The sun was shining but we had been having turbulent weather for several days across the south and southwest. Our cabin backed onto the St. Mary's River and since the backyard was full of birds I went to investigate.

I found a flock of American Redstarts (*Setophaga ruticilla*) chattering excitedly and moving rapidly through the area. I scanned the trees and shrubs for several minutes and suddenly I froze. There, facing me in full view, about 7 m away, sat a Painted Redstart (*Myioborus pictus*). It was in a shrub about 1.5m off the ground.

There was no mistaking this bird. I could plainly see his jet black head, shoulders and throat and his vivid red breast. He seemed to be resting. He sat perfectly still for what seemed like hours but most likely was a full minute. As it turned and flew, I saw the large white wing patches and the white on either side of its tail.

I have observed the Painted Redstart several times on a recent birding trip to Arizona and New Mexico but I never dreamed I would see it again in southeast Georgia. Although this is the first record for Georgia, there have been previous records of this southwestern species in the northeast.

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DICKCISSELS BREEDING IN GEORGIA COASTAL PLAIN – On 17 May 1984, as Chris Haney and I were investigating areas in the northwest section of Laurens County, near Dublin, we observed Dickcissels (*Spiza americana*) in two separate locations.

One location was in a 200h field, approximately 9.5 km NNE of the courthouse in Dublin. Prior to this year, the field had been planted in grain crops; but the land was recently leased to Georgia Kraft, which planted pine seedlings only a few months earlier. The seedlings had grown only to a height of about 25 cm. Consequently, the area was essentially a fallow field.

The second location was on either side of an unpaved road near a dairy farm, 3 km NE of the first area. The north side of the road was in cultivation, except for an overgrown weedy area of about 1 h. To the south was a fallow field between areas of cultivation. The fallow area was only about 75 m along the road, but widened as it extended to a depth of 500 m or more.

In the days following the first sighting, I checked more carefully into the locations to determine just how many birds were present, and whether or not nesting might occur.

In the large fallow field, four singing males were present, each accompanied by a female. The pairs appeared to have established territories on the north side of a 10 h marsh. Specifically, the birds appeared to covet the poorly defined brushy row that runs east/west in separating the marsh area from the old field. Later in my investigations only three singing males could be located. The females, which could rarely be seen, were believed to be on nests.

One pair successfully brought forth four young. On 2 June, I noted a female carrying an insect from the field toward the row. After a few seconds, apprehensive about my presence, she devoured the insect and dropped onto the ground a scant 5 m away. She proceeded to "lead" me away from the area. After following a short distance. I returned to the area of the bird's original concern, and noted a juvenile fly clumsily from a clump of grasses for about 3 m into a low bush. I was able to observe the fledgling at close range, and to take photographs. Though the nest was not found, the bird had obviously left it only a few hours – or perhaps, minutes – earlier. Allowing 12 to 13 days for incubation and 7 to 9 days in the nest (Bent, Arthur Cleveland, *et al. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows and Allies*, Part One. Dover Publications, Inc., New York, 1968, p. 168), I concluded that nesting must have begun on or about May 11. During most of the month of June, the pair of adults at this location was observed with three or four juveniles on several occasions.

About 150 m to the west of this family, a female and two young were observed on 15 June. No young were noted with the third pair, and nesting attempts were believed to have been unsuccessful. The birds at this location were last seen on 23 June.

At the dairy location, two singing males, sometimes accompanied by the female, were seen through May; but by 2 June, only the pair on the south side of the road could be found. The male continued to sing from its perch on a snag and from the overhead wire through 6 July. Four young were observed flying with the female adult on 30 June and 6 July. The last observation at this location was that of two juveniles on 15 July.

Of the six original pairs noted in late May, only four pairs remained into the month of June. Three of the four were successful in breeding, but only two of the families remained together in the nesting area for any length of time. The third family disappeared when the juveniles were only a few days

old. There was only one nesting at the locations described; a second nesting, if, indeed there was one, occurred at an entirely different place.

During the weeks of observation, many behaviors were noted. The Dickcissels were very approachable during their nesting season, particularly after the young had fledged. Singing males would allow an approach to within 10 to 15 m before moving to another perch or dropping into the brush. The juveniles would permit an even closer approach, with the adult female only slightly farther away. The communication was a low, whistling "whewt" between members of the family. The male, never observed to participate in caring for the young, would perch and sing during all but the hottest part of the day; the female appeared diligent and concerned as she went about her family chores.

Bent (*op. cit.*, p. 159) notes that the species is common but erratic in its midwestern breeding grounds, with its numbers fluctuating greatly from year to year. In the eastern United States, the Dickcissel, present in summer in small numbers, is not only erratic, but there is an historical recession and reoccupation in numbers and areas. In Georgia, the species is listed (Denton, *et al., Annotated Checklist of Georgia Birds*, GOS Occ. Publ. No. 6, 1977) as an uncommon and erratic summer resident in the Upper Coastal Plain, and northward.

Thomas K. Patterson, 1409 Edgewood Drive, Dublin, Georgia 31021.

SUMMER GRASSHOPPER SPARROW NEAR AMERICUS – A singing Grasshopper Sparrow (*Ammodramus savannarum*) was seen near Americus on 20 June 1984. While covering the La Crosse breeding bird survey route, Carolina Lane and I saw an adult Grasshopper Sparrow in a recently mowed field. The field is located in Sumter County, 0.5 mile west of GA 377 and approximately 0.5 mile south of the Schley County line. We could clearly see the bird's flat head, striped crown and unstreaked, buffy breast, but the lower body was hidden in the grass. Its song was two notes with a trill. Although we had no other evidence of nesting, this observation is consistent with other sightings this summer in the coastal plain. Haney had a singing bird in June on a breeding bird survey route northeast of Americus (pers. comm). Patterson reported several pairs with young earlier in the month in Dublin (pers. comm.). The apparent increase in breeding attempts by this species south of its usual range may reflect an increase in coverage by birders, an erratic breeding phenomenon, or an extension of its permanent range due to the extensive conversion of forest to open land in the last decade.

Mark W. Oberle, 231 Kathryn Avenue, Decatur, GA 30030.

TUFTED TITMOUSE GATHERS COCOONS IN COURTYARD – Two issues of the *Oriole* have detailed previously unrecorded feeding habits of the Tufted Titmouse (*Parus bicolor*). Crawford (*Oriole* 47:42) observed a titmouse robbing food from the sealed tube of a mud-dauber's hut. McNair (*Oriole* 47: 12-13) described an acorn-storing activity which he had witnessed in several situations. To these accounts of titmouse foraging I add another: a

titmouse coming for three successive years to an almost inaccessible area in search of cocoons of the Eastern Tent Caterpillar (*Malacosoma americana*).

The area entered by the titmouse was the central courtyard of a suburban house. The courtyard is enclosed on the sides with glass but open above to the sky (4.5 m deep, 6 m wide). It contains nothing attractive to birds. The few which enter come by accident and usually experience difficulty, or trauma, in exiting. A Black Cherry (*Prunus serotinus*) overhangs the courtyard. In years when tent caterpillars are active they drop from the limbs of the cherry into the courtyard. Caterpillars not eaten by captive frogs eventually form cocoons in crevices around the walls. On 8 May 1979, a lone titmouse entered this courtyard for unknown reasons and immediately began finding and carrying away caterpillar cocoons. It continued until most of the cocoons were removed (perhaps fifteen trips).

The following year, on approximately the same date (5 May 1980), a titmouse again appeared and repeated this action. It is tempting to think that this was the same individual as before, although such an assumption cannot be proved. Presently a second titmouse appeared as well. These two, it turned out, were a pair which were nesting that year in a box a short distance (25 m) from the courtyard. Both birds collected cocoons. They flew with them to the branches of a nearby oak, where they extracted the grubs from the cocoons. From there they flew with the grubs directly to the nest box, and thence again to the courtyard. They continued these cycles until virtually all cocoons were removed, at which time they ceased coming.

In the following year there were very few tent caterpillars (these flourish periodically) on the cherry tree. A titmouse once more appeared (1 May 1981) and searched for cocoons. Finding only one or two, it soon left for good. It did not return the following year, nor has any returned since that date (caterpillars have also been scarce).

I think it is interesting that any bird would successfully discover food in so inaccessible a place, a place not customarily scouted, and not entered by any known titmouse prior to the appearance of the cocoon raider. Assuming (which is not unreasonable) that the same titmouse entered three years in a row, it is also interesting to note the power of the bird's memory, as well as its sense of timing, in addition to its ability to guide its mate to a difficult but plentiful food source.

Anselm Atkins, 2525 McKinnon Drive, Decatur, Georgia 30030.

NASHVILLE WARBLER SEEN ON AUGUSTA CHRISTMAS BIRD COUNT – On 24 December 1983 a Nashville Warbler (*Vermivora ruficapilla*) was discovered by Anne and Vernon Waters near the Augusta levee while surveying for the Augusta Christmas Count. The bird was foraging with a Ruby-crowned Kinglet (*Regulus calendula*) in a low shrub approximately 15-30 cm above the water of a swampy stream about 50 m off the west side of the levee. The bird was studied for approximately 5 minutes through 7X binoculars from a distance of 10 m. The first field mark noted was the distinct, complete white eye ring on the gray head and the bright yellow upper breast. As the bird foraged we also noted the absence of wingbars on the grayish-olive

wings and the grayish back. We also noted the white area below the yellow belly which changed to a slight yellow wash on the undertail coverts which continued throughout the under tail area. The bird was seen on the Augusta Christmas Count on 24 Dec.

The Nashville Warbler is considered to be a rare fall transient in the northern part of the state and along the coast as well as a rare spring transient above the Fall Line (*Annotated Checklist of Georgia Birds*, GOS, Occ. Publ. No. 6, 1977). It appears that this is the first winter sighting of this species in Augusta and possibly the state. The fact that temperatures for this date did not climb above freezing makes this sighting even more unusual.

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

FROM THE FIELD

Jan. - June, 1984

This was an exciting period for birding in Georgia. First Georgia records were reported for Red-billed Tropicbird, Harlequin Duck, Say's Phoebe, and Painted Redstart. Pelagic sightings continued to add to our knowledge with Chris Haney's trips and two others sponsored by the Atlanta Audubon Society. Spring migration was reported to have been very good especially in the Atlanta area. Nestings of Dickcissels near Dublin and Grasshopper sparrows at Americus, Dublin and Vienna were also noteworthy. Abbreviations used include AS (Audubon Society), CCWTP (Clayton County Water Treatment Plant near Atlanta) and SCSP (Sweetwater Creek State Park near Atlanta).

RED-THROATED LOON – Amazingly, only one coastal report was received. Bill Pulliam and Mary Ann Vernocy observed one from the South Beach of Jekyll Island on 19 Feb.

PIED-BILLED GREBE – Unusual for the Piedmont was a bird observed near Fairburn, Fulton County, on 2 June and then off and on during the summer (Dennie and Pam McClure). More expected was the species found nesting in Laurens County during the summer (Tom Patterson).

NORTHERN FULMAR – Outstanding for Georgia was the second sight record on 8 Feb. when Robert Manns found 5 birds 38 miles east of St. Catherine's Island.

BLACK-CAPPED PETREL – Chris Haney reported 65 individuals from 85 miles east of St. Catherine's Island on 13 April. This represents the highest state count. He also observed 20 more on 11 May off Tybee Island and an additional 15 between 4-14 June 80-90 miles from land. During the 27 May Atlanta AS pelagic trip one bird was noted about 65 miles east of Jekyll Island.

CORY'S SHEARWATER – Chris Haney saw 21 during his 4-14 June trip. An additional 13 were seen by Hugh Garrett, David Glass and Terry Moore on 16 June while on a fishing trip off Tybee Island.

GREATER SHEARWATER – Chris Haney reported a single individual on 9 June and Hugh Garrett, David Glass and Terry Moore reported 3 more from 65-70 miles offshore of Tybee Island during their 16 June fishing trip.

SOOTY SHEARWATER – Rather close to land were 6 birds found 13 miles southeast of Tybee Island on 18 May (Chris Haney). This is only the third state record for the species.

MANX SHEARWATER – The fifth record for Georgia was 2 individuals well observed and identified during the 18 Feb. Atlanta AS pelagic trip. The birds were found 45 miles east of Jekyll Island.

AUDUBON'S SHEARWATER – Chris Haney found the species as early as 13 April when 2 were seen 85 miles east of St. Catherine's Island. He noted 38 more on 11 May 125 miles east of Tybee Island. During his 4-14 June trip between South Carolina and Georgia he counted over 750 birds, mostly in South Carolina where flocks of 150 and 200 individuals were observed. Only 83 were seen in Georgia waters. The 16 June trip by Terry Moore and others yielded only 3 birds.

WILSON'S STORM-PETREL – Very early was a bird found on 13 April, 85 miles east of St. Catherine's Island (Chris Haney). The bird was almost 3 weeks early. Additional sightings from Chris's trips include 5 on 11 May, 10 on 18 May (about 15 miles southeast of Tybee Island) and 32 on 4-14 June. The 27 May Atlanta AS and 16 June trips previously mentioned only recorded 2 birds each. This species can be difficult to find in Georgia waters.

LEACH'S STORM-PETREL – Chris Haney was the only one to report the species. One on 11 May, though outside the state boundaries at 125 miles offshore is still worth mentioning. Five more were noted 90-100 miles offshore by Chris on 7 June.

BAND-RUMPED STORM-PETREL – Two birds 90 miles east of St. Catherine's Island on 7 June provided Georgia's fourth record (Chris Haney). Both Leach's and Band-rumped were first seen in Georgia only a year ago.

WHITE-TAILED TROPICBIRD – Also outside the state boundaries was an adult photographed 125 miles east of Tybee Island on 11 May (Chris Haney). The state limits are being discussed and lately the American Birding Association changed their limits from 100 to 200 miles.

RED-BILLED TROPICBIRD – New to the Georgia list and very rare in the north Atlantic Ocean was an immature seen and photographed by Chris Haney on 7 June about 90 miles east of St. Catherine's Island.

MASKED BOOBY – One subadult was observed 95 miles east of Cumberland Island on 6 June (Chris Haney). This represents only the third state record. However, all 3 were seen in less than a year.

NORTHERN GANNET – A very high count was the 600+ found by Chris Haney during his 1 Feb. trip 40 miles east of Sapelo Island. The 18 Feb. Atlanta AS trip yielded 100+, a little more than on previous trips. Also interesting were 23 birds seen as late as 8 April from Jekyll Island by Bill Pulliam.

GREAT CORMORANT – The bird found in mid-Nov. in the Albany area remained until early March at the same pond and was seen by many observers (fide Terry Moore). Excellent photos were taken by Mark Oberle on 29 Jan.

DOUBLE-CRESTED CORMORANT – Outstanding for an inland location in Georgia were the 200+ reported from Augusta by Anne Waters on 14 April. The species has been reported in very large numbers lately from inland locations in the Carolinas and is definitely on the increase. Elsewhere inland, singles were seen near Griffin on 21 April (Francis Michael) and at Sweetwater Creek State Park (SCSP) in Douglas County on 22-24 April (Dennie and Pam McClure). In addition 1 to 3 birds were seen from mid-March through April in the Coastal Plain in Laurens County (Tom Patterson).

AMERICAN BITTERN – A late record for Laurens County was a bird seen by Tom Patterson on 17 May.

SNOWY EGRET – Very rare in the spring in the Piedmont was a bird seen by Patrick Brisse, Bill Pulliam and Paul Raney at Roger's Bridge near Duluth on 6 May.

GREEN-BACKED HERON – An early migrant or possible wintering bird was noted in Augusta on 21 Feb. during an Augusta AS field trip.

ROSEATE SPOONBILL – Once again, the species was reported from the Brunswick-Jekyll Island area. Dennie and Pam McClure noted an adult on 20 June near Brunswick.

TUNDRA SWAN – For the first time in many years the Augusta birders noted the swans at the Merry Brothers Brick and Tile Company ponds. Up to 8 individuals stayed until 21 Feb. Very unusual for Atlanta was one flying near the stadium on 9 March (Carole Anderson, Joe Greenberg).

BLUE-WINGED TEAL – A very good inland count was the 100+ mentioned by Hugh Garrett at Roger's Bridge near Duluth on 9 April.

CANVASBACK – The early winter good showing of the species in the Atlanta area was still apparent in Jan. and Feb. Ten were at Peachtree City Lake on 28 Jan. (Patrick Brisse, Terry Moore) and 2 were at the Chattahoochee Nature Center on the same day (Paul Raney). At SCSP 19 were seen on 27 Feb. (Dennie and Pam McClure) and the last ones were 12 there on 29 Feb. (Paul Raney).

REDHEAD – A very decent count for an inland location was 25 at SCSP, Douglas County, on 27 Feb. (Dennie and Pam McClure).

RING-NECKED DUCK – For the fourth year, the species has been found summering at Peachtree City Lake. Up to 4 individuals were seen by many observers (fide Patrick Brisse). An additional summering male was noted at SCSP, fide Dennie and Pam McClure.

OLDSQUAW – The only seasonal report was 2 near Augusta from 10 March to 11 April (Mark Oberle, Anne and Vernon Waters, and others). It is very unusual for the species to stay that long at an inland location.

HARLEQUIN DUCK – Another first for Georgia was a male seen and photographed on 18 Feb. near the Tybee Island Lighthouse. The bird was seen by many observers and was last noted on 10 March (Patrick Brisse, Mark Oberle and Bill Pulliam). Rumor is that the bird was there starting in late Dec. but this has not been confirmed. The bird was discovered by David Rogers.

WHITE-WINGED SCOTER – Terry Moore and others reported 5 from Cumberland Island on 1 Jan. along with 100+ Black Scoters. Other coastal reports were 6 off Jekyll Island on 3 March and 9 off St. Simon's Island on 3 April, both sightings by Dennie and Pam McClure. More interesting was an inland sighting at the Rum Creek Wildlife Management Area near Forsyth on 1 Feb. by Terry Johnson.

COMMON GOLDENEYE – Seven at SCSP on 22 Jan. (Dennie and Pam McClure) and 4 at Peachtree City Lake on 28 Jan. (Patrick Brisse, Terry Miller) were good numbers for inland locations.

BUFFLEHEAD – Dennie and Pam McClure noted some very late birds at SCSP on 25 April.

RED-BREASTED MERGANSER – The species is definitely more common than in the past in the Atlanta area. The spring high counts were 32 on 10 April and 28 on 21 April both from SCSP (Dennie and Pam McClure). One bird stayed there as late as 5 May (Paul Raney).

OSPREY – Interesting inland summer records of non-breeding individuals were one in SW Atlanta on 12 June (Dennie and Pam McClure) and another one on 23 June at Benn Hall Lake in Laurens County (Tom Patterson).

SWALLOW-TAILED KITE – As expected a few birds were noted in the general area of Folkston where the species is known to nest. Sightings were on 7 April (Dennie and Pam McClure) and again on 28 April (Terry Moore and others).

BALD EAGLE – Very few reports away from Eufaula NWR crossed my desk. One adult was near Lake Oconee Dam on 21 Jan. (Patrick Brisse and Hugh Garrett). Other adults were noted by John Paget in Jackson County on 1 and 20 April.

NORTHERN GOSHAWK – R. T. Damian and Chris Haney reported one on 12-26 Jan. from the University of Georgia campus. This is the fourth state record and the third sighting for the winter.

ROUGH-LEGGED HAWK – As usual, the only report came from the Lookout Plateau in NW Georgia where one light-phase bird was observed on 22 Jan. during an Atlanta AS field trip.

GOLDEN EAGLE – During the same trip on 22 Jan., 2 Golden Eagles were observed and were noted off and on until 4 March (Carole Anderson and Joe Greenberg).

PEREGRINE FALCON – Clarence Belger reported a rare sighting of one over Gracewood Gardens near Augusta on 2 Jan. Not only is the species rare in Georgia in the winter, but this sighting appears to be only the second record for the Augusta area.

VIRGINIA RAIL – Of note was a single bird at the Chattahoochee Nature Center, Fulton County, on 2 Jan. (Eileen Hutcheson). More expected but still a good count was 5 answering a tape at Richmond Hill State Park on 7 April (Bill Pulliam).

SORA – Uncommon in the Atlanta area was a lone bird found by Bill Pulliam on 21 April at the Regional Hospital in the south part of the city.

AMERICAN COOT – Large inland counts include 500+ at Peachtree City Lake all winter long (fide Patrick Brisse) and 233 at SCSP on 25 March (Dennie and Pam McClure). Once again, up to 4 birds were seen at Peachtree City Lake through the month of June. This is the fifth year the species has been found there during the summertime.

SANDHILL CRANE – As usual the best migration sightings occurred over the Atlanta area. The first ones were seen near Conyers on 17 Feb. (Francis Michael). The largest group was noticed 4-6 March and a few were even noted as late as 9 April in north Atlanta (Peggy and Terry Moore). The total reported was above 1000 birds.

BLACK-BELLIED PLOVER – Very rare inland in early spring was a lone bird at the Clayton County Water Treatment Plant (CCWTP) in south Atlanta on 25 March (Patrick Brisse).

SEMIPALMATED PLOVER – Up to 5 birds were seen at the CCWTP from 5 May to 4 June (Patrick Brisse, Hugh and Liz Garrett, Peggy and Terry Moore). Given suitable habitat, this species will probably be found to be a rare but regular spring transient inland.

AMERICAN AVOCET – The highest count reported this season was of only 44 indivi-

duals on Jekyll Island on 31 March (Dennie and Pam McClure).

GREATER YELLOWLEGS – A very early bird for an inland location, since the species normally arrives in late March, was a single individual at the CCWTP on 17 Feb. (Bill Pulliam, Mary Ann Vernocy).

SOLITARY SANDPIPER – Peggy and Terry Moore reported a rather late bird along the Chattahoochee River in north Atlanta on 27 May.

WILLET – A single bird on 29 April provides Atlanta's sixth record. The bird was seen by many observers during an Atlanta AS migration walk.

SPOTTED SANDPIPER – A few wintering individuals were noted in Jan. at Peachtree City Lake (Patrick Brisse) and between 18 Feb. and 3 March near Augusta (Augusta AS).

UPLAND SANDPIPER – The species was noted as early as 17 March near Duluth when Bill Pulliam saw a lone bird. The maximum there was 3 on 10 April (Hugh Garrett). In the Laurens County area Tom Patterson rep rted 14 on 15 April and 7 on 21 April.

SEMIPALMATED SANDPIPER – The best inland counts were 37 at Peachtree City Lake on 12 May and 30 at the CCWTP on 20 May. Both sightings by Patrick Brisse. Numbers were down from the 90+ of the previous year.

LEAST SANDPIPER – Unusual in the winter in Laurens Couty were the 7 seen on 11 Jan. by Tom Patterson. Even more unusual was the bird that spent the winter at the CCWTP in south Atlanta for the first local winter record (many observers). The maximum inland spring count was 29, also at the CCWTP, on 5 May (Patrick Brisse).

WHITE-RUMPED SANDPIPER – GOS members found 2 at the CCWTP on 5 May. Two birds were seen there between 26 May and 2 June (Patrick Brisse, Chris Haney, Peggy and Terry Moore).

PECTORAL SANDPIPER – Noteworthy was an early bird seen by Bill Pulliam on 25 Feb. near the Georgia side of Eufaula NWR along Route 39. In Atlanta Bill found another early one near Duluth on 4 March.

PURPLE SANDPIPER – One on 3 Jan. was at its usual spot on Tybee Island (Bill Pulliam). Has anyone else seen the species at other places in Georgia and how long do they stay?

STILT SANDPIPER – Rare inland, but becoming more regular, this species was noted twice. One bird was seen at the John Ward Swamp west of Marietta on 2 May (Terry Miller *et al.*) and the other was at the CCWTP on 12 May (Patrick Brisse, Ellery McClintock, Francis Michael).

SHORT-BILLED DOWITCHER –Patrick Brisse saw one at the CCWTP on 14 April for a rare but now regular sighting.

WILSON'S PHALAROPE – Independently, Joe Greenberg and John Paget noted one bird near Pendergrass on 5 and 6 May. Another bird, a female in breeding plumage, was at the CCWTP on 19 May (Patrick Brisse and Chris Haney).

RED-NECKED PHALAROPE – Chris Haney reported a high count of 240 on 1 Feb. and 1 on 8 Feb. east of Sapelo Island. Is it possible the species winters off the Georgia coast? More data is definitely required to determine the real status of the species.

RED PHALAROPE – Chris Haney reported the species on all his winter trips. The maximum was a very high count of 1250+ on 1 Feb. about 45 miles east of Sapelo Island. On 8 Feb. Robert Manns saw 600+ phalaropes but was unable to get a good feeling about the % of each species. The last report was on 18 Feb. when 30 birds were seen during the Atlanta AS trip.

POMARINE JAEGER – One bird was seen harrassing gulls during the 18 Feb. Atlanta AS trip. Chris Haney reported an additional 4 during his 12-13 April trip and a single on 7 June. All Chris's reports are from 70-85 miles from shore.

PARASITIC JAEGER – The 18 Feb. pelagic trip out from Jekyll Island produced 6 jaegers (Atlanta AS). The only other seasonal report was one by Chris Haney on 21 March about 50 miles east of Cumberland Island.

LONG-TAILED JAEGER – An adult bird was 85 miles east of Cumberland Island on 6 June (Chris Haney). This is only the third state record.

Black-legged Kittiwake. Photo by Bill Dupree.

LAUGHING GULL – The only inland reports came from SCSP on 22 April (Dennie and Pam McClure) and from the Georgia side of Clark Hill Lake on 17 June (Chris Haney).

FRANKLIN'S GULL – A rare bird was found by Dorothy and Arthur Green on 4 May at Lake Chatuge in Towns County. Photos were taken on the 4th and again the next day. Two of the photos have been published in American Birds 38: 911.

LESSER BLACK-BACKED GULL – An adult was photographed during the 18 Feb. Atlanta AS pelagic trip. This species has been found a number of times along the coast in the fall but this appears to be only the second winter record.

GREAT BLACK-BACKED GULL – Does anyone see Great Black-backed Gulls anymore? I only received 2 reports, one on Cumberland Island on 1 Jan. (Terry Moore *et al.*) and 2 on Tybee Island on 3 Jan. (Bill Pulliam).

BLACK-LEGGED KITTIWAKE – For the second winter the species was found with regularity. Chris Haney reported a few on 1 Feb. and saw an immature as late as 22 March about 50 miles offshore. Robert Manns reported 40-50 birds on 8 Feb., a very good count for Georgia. The 18 Feb. trip previously mentioned yielded 4 individuals (Atlanta AS).

SABINE'S GULL – Though beyond the 100 mile limit, the sighting of an adult in breeding plumage on 11 May, 125 miles east of Tybee Island, is worth mentioning as only two previous records for Georgia exist.

Razorbill and Bonaparte's Gull. Photo by Bill Dupree.

ARCTIC TERN – Five were observed about 45 miles east of Jekyll Island on 27 May as they alternately flew and rested on the water (Atlanta AS).

FORSTER'S TERN – The only inland reports came from Macon with a single on 14 Jan. at the Cherokee Brick Company Ponds (fide Don and Joyce Duncan) and from Atlanta, at SCSP on 22 April and 9 May (Dennie and Pam McClure). The April record was a high of 11 birds.

LEAST TERN – Always noteworthy inland was one at Augusta on 9 April (Anne and Vernon Waters).

BRIDLED TERN – 13 were seen by Atlanta AS members on 27 May and Chris Haney noted 15 more during his 4-14 June trip.

SOOTY TERN – The only ones sighted by Chris Haney were rather far from shore: one was 130 miles east of Sapelo Island on 11 May and 7 were 120 miles east of Savannah on 13 June.

RAZORBILL – Georgia's 3rd and 4th records were 5 seen on 1 Feb. about 15 miles east of Ossabaw Island (Chris Haney) and 4 more on 18 Feb. about 40 miles east of Jekyll Island (Atlanta AS).

BLACK-BILLED CUCKOO – Compared to 1983 the 1984 spring migration was rather dull as only one report came from Atlanta. Paul Raney noted a single individual on 16 May in Marietta.

RUBY-THROATED HUMMINGBIRD – Tom Patterson noted an early migrant in Laurens County on 22 March.

YELLOW-BELLIED SAPSUCKER – A bird sighted by John Paget on 29 April was late in the vicinity of Gainesville.

OLIVE-SIDED FLYCATCHER – Dennie and Pam McClure reported the only migrants on 12 May from Palmetto in south Fulton County and another one on 20 May from Douglas County.

WILLOW FLYCATCHER – The species, once again, has been found with no difficulty in June at its regular nesting ground near Dillard, Rabun County (Chris Haney and others).

LEAST FLYCATCHER – Chris Haney reported one from the extreme northern part of Rabun County during June; this is the exact location where the species has been found nesting in the past.

SAY'S PHOEBE – Gregory and Carmen Valpey-Toussignant found one at the A & B Farm, between Americus and Cordele, on 17 March. Robert Manns from Atlanta saw the bird in late March. Though full details are still to be received, this sighting is a first for Georgia.

GRAY KINGBIRD – The species was reported in late May and June from its usual nesting area near the Cloister on St. Simons Island (many observers). More unusual was the one found in Brunswick on 28 May by Patrick Brisse, Chris Haney and Dan Jacobson. The species is rarely found away from the coastal islands.

HORNED LARK – Unusual were the few individuals found by Patrick Brisse, Hugh Garrett and Bill Pulliam on 1 April while looking for the Say's Phoebe near Cordele. Also unusual for the upper coastal plain were 6 birds found on a breeding bird survey route near Vienna, Dooly County, on 24 June (Chris Haney).

PURPLE MARTIN – Early arrivals were reported from Murray County on 10 Feb. (Harriett DiGioia), Augusta on 19 Feb. (Augusta AS), Albany on 25 Feb. (Peggy and Terry Moore) and Conyers on 3 March (Francis Michael).

TREE SWALLOW –Early birds were at Conyers on 9 March (Francis Michael) and 2 at the CCWTP on 2 June were rather late for the area (Patrick Brisse). Arthur Green reported successful nesting again from Lake Chatuge, Towns County. This is the fifth summer record there and the third year they nested with success.

BANK SWALLOW – Early and late migrants for the Atlanta area were noted at the CCWTP on 15 April and 2 June (Patrick Brisse).

CLIFF SWALLOW – Five reports were received: 7 and 21 April near Atlanta (Bill Pulliam); 18 April also near Atlanta (Francis Michael) and 7 April at Robbins Air Force Base (Don and Joyce Duncan). The 6 birds found at Clark Hill Lake on 17 June were probably nesting; Chris Haney saw them at the Highway 378 bridge in Lincoln County.

BARN SWALLOW – Early birds were near Conyers on 16 March fide Francis Michael.

FISH CROW – Unusual inland north of the fall line were single birds near Washington, Wilkes County, on 17 June and at the UGA Campus at Athens on 19 June (fide Chris Haney). The species has yet to be confirmed from near the Atlanta area.

COMMON RAVEN – Though a resident in the northeast Georgia mountains, very few birds are reported. So 3 on 14 Jan. near Patterson Gap (Bill Pulliam) and another on 1 June near Rabun Bald (Chris Haney) are worth mentioning.

RED-BREASTED NUTHATCH – It was not an invasion year, as shown in the following few reports. Three were near Dillard on 14 Jan. (Bill Pulliam). Two were noted in Augusta, the first one on 23 Jan. in Clarence Belger's yard and the other on 10 March at Clark Hill by Anne Waters. A couple more were seen during the Atlanta AS migration walks at Fernbank on 25 March and 15 April.

BEWICK'S WREN – The bird first noted in late Nov. near Pendergrass was last seen on 14 March (John Paget and others). A second bird was well described by Dennie and Pam McClure on 26 March from south Fulton County.

MARSH WREN – One was along the Chattahoochee River in north Atlanta on 11 May as reported by Paul Raney. Another transient was late in Laurens County when Tom Patterson spotted it on 17 May at Buckeye Marsh.

BLUE-GRAY GNATCATCHER – On 19 March early individuals were in Augusta (Clarence Belger) and Emory University in Atlanta (Bill Pulliam).

GRAY CATBIRD – About three weeks early was a bird noted at Shakerag Swamp near Duluth on 24 March (Patrick Brisse).

WHITE-EYED VIREO – Clarence Belger reported an early bird from Augusta on 19 March.

SOLITARY VIREO – Out of range, one answered a Screech Owl tape on Jekyll Island on 18 June (Dennie and Pam McClure).

WARBLING VIREO – Starting on 21 April, a "fallout" of landbirds in the north Piedmont area produced records of unusual species. Chris Haney reported a Warbling Vireo from the Oconee River, Clarke County, on 23 April.

PHILADELPHIA VIREO – Although rather rare in the spring, a bird was noted by Terry Miller on 30 April along the Chattahoochee River in north Atlanta.

NASHVILLE WARBLER – Once again, reports came mostly from Atlanta: 23 April (Robert Manns and Bill Pulliam), 23 April and 1 May near Conyers (Francis Michael) and the last one on 5 May (Paul Raney).

NORTHERN PARULA – Early individuals were in Augusta on 19 March (Clarence Belger) and Atlanta on 21 March (Paul Raney).

MAGNOLIA WARBLER – For a rare spring transient, the species was noted in at least 15 different occasions around Atlanta, a lot more than we are used to seeing in the past.

BLACKBURNIAN WARBLER – The late April fallout brought at least 10 times more birds in the north Piedmont than usual. Bay-breasted Warblers were also rather abundant.

CERULEAN WARBLER – Atlanta is definitely on the migration path of this species. Over 25 reports were received.

BLACK-AND-WHITE WARBLER – Of note was one seen on 14 Jan. during an Ocmulgee AS field trip at the Cherokee Brick Company near Macon.

PAINTED REDSTART – Another Gerogia first and one of the few for eastern North America was a male seen in a group of American Redstarts on 13 April at Crooked River State Park in southeast Georgia (Dot Garrett).

CONNECTICUT WARBLER – One was heard on 13 May during an Atlanta AS migration walk. Chris Haney reported another one on 16 May from the University of Georgia Botanical Garden.

MOURNING WARBLER – One of the rarest warblers was noted twice, on 20 May in Carroll County by Dennie and Pam McClure, and on 21 May, along the Oconee River Bottoms, Clarke County, by Chris Haney. The latter bird was previously heard by Peter Stangel and Craig Faanes.

WILSON'S WARBLER – Three reports were about normal for this rather uncommon warbler. John Paget found one in Forsyth County on 25 April and again on 5 and 11 May. Don and Doris Cohrs had another on 5 May in southwest Atlanta and the

last one was at the University of Georgia Botanical Garden on 22 May according to Chris Haney.

PAINTED BUNTING – For the first time in a few years, Tom Patterson reported a male during the first week of May and a female in the last week. Both were noted in Laurens County.

DICKCISSEL – One female was on the Georgia side of the Eufaula NWR on 22 April (Bill Pulliam). While doine a breeding bird survey near Vienna, Dooly County, Chris Haney reported another bird on 24 June. But the best news came from Laurens County. Tom Patterson reported the species first on 17 May, 8 birds were there on 19 May and 12 on the 28th. Six singing males and 2 separate families were studied later that summer. This is the first record of the species in Laurens County.

BACHMAN'S SPARROW – Although rare for the north Piedmont area, a singing individual was heard by Peggy and Terry Moore on 2 June about 25 miles south of Atlanta.

LARK SPARROW – One sparrow was reported from Whitfield County by Harriett DiGioia on 28 April.

GRASSHOPPER SPARROW – Rare for the coastal plain was one singing near Americus on 20 June (Mark Oberle). Chris Haney also reported 2 singing individuals from Dooly County, near Vienna, on 24 June. Even more unusual for the coastal plain was the pair found by Tom Patterson on 29 April in Laurens County. This pair was observed feeding young on 28 May. Other nests were suspected in the same area.

HENSLOW'S SPARROW – Bill Pulliam had a wintering bird near Everett, in the Brunswick area, on 2 Jan. Probably the same bird was seen by Terry Moore and others on 19 Feb. at the same place. Another coastal report was one near Darien on 4 March by Dennie and Pam McClure. Two more individuals were seen in the Piedmont area on 13 April at Pendergrass (Chris Haney) and 21 April in Atlanta (Bill Pulliam).

LINCOLN'S SPARROW – More active field work this spring produced 2 sightings of this rare sparrow; one was at Sandy Creek Nature Center in Clarke County on 17 April (Chris Haney) and another was in Atlanta on 21 April (Bill Pulliam).

YELLOW-HEADED BLACKBIRD – Ken and Arlene Clark sighted a male at their home on Lake Tobesofkee on 27 May.

BREWER'S BLACKBIRD – Over 100 were near the Georgia side of Eufaula NWR on 25 Feb. (Bill Pulliam). Over 30 were still there on 1 April as reported by Patrick Brisse, Hugh Garrett and Bill Pulliam.

NORTHERN ORIOLE – Rather uncommon in the winter was a male coming to Clarence Belger's feeder in Augusta on 6 Jan.

PURPLE FINCH – One near Gainesville on 29 April was rather late (John Paget).

RED CROSSBILL – Harriett DiGioia reported the species occasionally from the Cohuttas during the winter and the spring. Outside that regular spot only one other bird was reported. That one was from Atlanta by Bill Pulliam on 6 Feb.

PINE SISKIN – Though not an invasion year, there were scattered reports during the period and the species was reported as late as 21 April from Laurens County (Tom Patterson), 23 April from Clarke County (Chris Haney) and 1 May from south Fulton County (Dennie and Pam McClure).

EVENING GROSBEAK – In Atlanta about 15 different feeders had grosbeaks this winter with the largest number around 40 individuals. A few other winter sightings came from Columbus, Augusta, Athens and Dublin. The last ones were noted on 23 April in Clarke County (Chris Haney) and 30 April in Laurens County (Tom Patterson).

Patrick Brisse, 4960 Gatehouse Way, Stone Mountain, Georgia 30088.

NOTICE

On 13 August 1986, during the IV International Congress of Ecology to be held in Syracuse, New York from 10-16 August 1986, the General Meeting of the Working Group on Granivorous Birds (INTECOL) will be held.

The theme of the symposium has tentatively been formulated as "The role of granivorous birds in ecosystems". The following topics will be included: population dynamics, biomass and production rates, energetics, impact of granivorous birds on ecosystems and pest management.

The meeting will include a review of up-to-date results of international studies on Passer and other granivorous birds and a discussion of the most fruitful directions for further study.

Oral presentations at the symposium will be limited to 15 minutes. The program of the symposium will be established by 31 December 1985, based on titles and one page abstracts submitted by that date.

All correspondence including requests for information should be sent to: Chairman of the Working Group, Prof. Dr. Jan Pinowski, Department of Vertebrate Ecology, Institute of Ecology PAS, Dziekanow Lesny, 05-092 Lomianki, Poland.

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