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Cover: Pied-billed Grebe (*Podilymbus podiceps*). Photo by Jerome A. Jackson.

FEEDER USE BY SPRING MIGRANT ROSE-BREASTED GROSBEAKS IN NORTH MISSISSIPPI AND ADJACENT STATES

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The Rose-breasted Grosbeak (*Pheucticus ludovicianus*) does not nest in Mississippi, but is regularly seen in spring and fall migration. Species that use seed feeders in the mid-south region are almost exclusively permanent residents or winter residents. Two exceptions to this generality of which we are aware are Indigo Bunting (*Passerina cyanea*) and Blue Grosbeak (*Guiraca caerulea*), both of which breed in the area. However, neither is reported to use feeders consistently or in large numbers. Thus, it is unusual for a neotropical migrant to use seed feeders during migratory passage. We report here the use of feeders by Rose-breasted Grosbeaks in Spring of 1995 in north Mississippi and nearby areas of adjacent states.

The initial report calling our attention to this event was from Dennis Welch of Grenada, Grenada Co., Mississippi, who reported that "two pairs" of grosbeaks were using his feeders from 30 April to 7 May. A later report of two more pairs came from southern Grenada County. At least 12 households in Oxford and elsewhere in Lafayette County had feeder visits by grosbeaks of both sexes during the first 7-10 days of May. In one case, as many as 15 birds were present. Similarly, Margaret Copeland of Starkville, Oktibbeha Co., Mississippi, had calls from 9 residents of that county, most of whom had also for the first time noted Rose-breasted Grosbeaks using their feeders.

In Hernando, Desoto Co., Mississippi, Gilbert Beaver on 7 May observed a grosbeak attempting to use a hanging feeder. After sunflower seeds were provided on a platform feeder, 6 or more Rose-breasted Grosbeaks fed there through 14 May. Beaver had another observation on 7 May at a boat dock business north of West Memphis, Crittenden Co., Arkansas, where a feeder was being used by 7 or 8 grosbeaks. Numerous observers in the Memphis metropolitan area and nearby western Tennessee had an unaccustomed visit by these grosbeaks. These reports were collected by Martha Waldron and Richard Preston. Thus, between 26 April and 14 May 1995,

I received more than 25 reports from persons who had seen Rose-breasted Grosbeaks at their seed feeders for the first time. This was noted in 3 counties of Mississippi and one each of Tennessee and Arkansas. We, along with other birders, observed flocks of Rose-breasted Grosbeaks consisting of both adult males and females and ranging from 2 to 16 individuals.

The experience of a few observers in this area who had prior records of Rose-breasted Grosbeaks coming to their feeders was mainly of single birds: e.g., one male was seen 23-27 April 1990 at a feeder maintained by J.A. Jackson at Starkville. Burleigh (1945) said of Rose-breasted Grosbeaks on the Gulf Coast of Mississippi, "although small flocks of three to five birds are sometimes noted, more often than not only a single bird is seen." More recently, it has been said that the species is "seldom seen in flocks of more than ten or twelve" on the Gulf Coast (Toups and Jackson 1987). The feeder visits of 1995 suggest that there may have been more instances of flocks of Rose-breasted Grosbeaks than is usual for north Mississippi.

The simultaneous visitation by multiple grosbeaks at seed feeders seems to have been unreported previously from this region. There are several possible explanations for this. One is that a "fallout" of Rose-breasted Grosbeaks may have occurred farther inland than usual after trans-Gulf passage in 1995. This could have been caused by exceptional helping winds. A delayed stopover might have tended to increase the urgency of the birds' need to replenish energy stores, thereby making seed feeders the most favorable option for replacing fat levels.

It may be asked whether the Rose-breasted Grosbeak commonly uses seed feeders upon its annual arrival on the Mississippi Gulf Coast. According to Toups and Jackson (1987), "a difficult trans-Gulf spring flight may result in Rose-breasted Grosbeaks at feeding stations for a few days after arrival." However, observers in coastal counties are unaccustomed to a high level of feeder visits: e.g., typically only one or very few cases per year and usually lone birds (C. Cassibry, personal communication to WMD).

Consideration was given as to repetition of the 1995 events in 1996. On the basis of personal observations, local contacts, and the very few responses to a statewide solicitation of reports on grosbeaks in spring 1996, it was apparent that there was not a repetition of the 1995 pattern in Mississippi. However, the Rare Bird Alert for Tennessee of 7 May 1996 carried numerous reports from a wide area on migrant Rose-breasted Grosbeaks coming to feeders in numbers ranging from pairs to flocks of 20-30. One case specified was that on 25 April 1996 there were a "half dozen pairs" at a feeder in Lawrence Co., Tennessee, which borders on the northwest part of Alabama. Efforts to obtain more details of those reports were fruitless. However, it was clear that

such behavior by Rose-breasted Grosbeaks was regarded as unusual by Tennessee observers.

In the spring migration of 1997 there again came numerous reports of "feeder Rose-breasted Grosbeaks" from persons in north Mississippi who had never previously seen the species at their feeders. I sent an e-mail request for information to Arkansas and Mississippi birders and received reports not only for 1997, but also for earlier. From Oxford, Gary Gaston in late April found about 15 grosbeaks competing vigorously for approach to his seed feeder in what was said to be the fourth consecutive year of visits. Allen Jolley in Shannon, Mississippi first had one grosbeak at a feeder in spring, 1996, but on 30 April 1997 had 3 males and 2 females, while his mother next door had 2 males and 2 females. On 2 May 1997 he saw at least 23 grosbeaks, 19 males and 4 females at his feeders at one time; they arrived coincidentally with squally weather.

More e-mail reports came from Arkansas observers: Lucy Sauer and a friend in Little Rock both had their first feeder grosbeaks in spring 1995, repeating in 1996. From Evelyn Good in Arkadelphia on 12 May 1997: "We have had Rose-breasted Grosbeaks coming to our backyard feeders since the late 1980s; I do not have the exact year, but the birds visited prior to a move in 1990. They have been at feeders in our yard for the past 2 weeks."

Douglas James, of the University of Arkansas, Fayetteville, reported that "Rose-breasted Grosbeaks first started visiting feeders in northwestern Arkansas in spring 1994 when massive numbers began frequenting feeders all over towns. That year I got numerous phone calls on the situation -- many people not knowing what the bird was. I soon gathered reports from all over Arkansas, then across Missouri, and even into Virginia. All people said it was the first year that Rose-breasted Grosbeaks had visited their feeders. *So it looks like spring 1994 was the first year, at least in the southeast USA."* [emphasis added]

From Robert Sargent in central Alabama came word that, "This species is a regular visitor to feeders in this area, as it has been for the past 15 years that I have been birdwatching." Other communicants had recollection of unspecified records for isolated instances of grosbeaks at feeders before the 1990s or even the 1980s.

One might gain the impression that the track of highest density for migrating grosbeaks could shift between years -- more westward across Arkansas in 1994 and more eastward across Alabama in 1996 than for 1995 and 1997, when numbers were high across Mississippi. Data are unavailable to permit an inference as to what may be a "customary" track for the heavier flight of Rose-breasted Grosbeaks across the

southcentral-Gulf states, e.g., whether crossing Alabama more heavily, where it is a "common" transient (Imhof 1976), or Mississippi, where it is "fairly common" (Toups and Jackson 1987). It is clear that from 1994 through 1997 Rose-breasted Grosbeaks have shown a distinctly increasing propensity to use food resources from seed feeders in the southcentral United States.

A related question is where grosbeaks learned to use feeders. It appears most unlikely to have occurred on their wintering grounds in the Neotropics. There also may be limited opportunity on the breeding grounds, for the species has been slow to adapt to nesting near human habitations (Bent 1968). However, use of seed feeders by Rose-breasted Grosbeaks has been noted recently in Michigan (A.D. Geis, personal communication to DJH). It may be that use of feeders was indeed acquired at termination of trans-Gulf migration in the Gulf Coast states, where in recent years there have been increasing numbers of households supplying seeds in spring and summer. This modification of human behavior may have given grosbeaks the opportunity to change their behaviors for coping with migratory metabolic stress. It seems likely that use of feeders restores energy stores more efficiently than would natural feeding patterns. Will such use of feeders continue and become more common among Rose-breasted Grosbeaks on their nesting grounds as well as in migration?

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ROOSTING POSTURE OF CAROLINA WRENS

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On 12 January 1997, I photographed a pair of Carolina Wrens (*Thryothorus ludovicianus*; Figure 1) as they roosted in a wreath of pine cones hanging on the wall of the front porch of my son Jim's house in southwest Jackson, Hinds County, Mississippi. All of the back and body feathers of the birds were raised so as to show irregular spots of white against the dark gray and cinnamon brown of their plumage. The white spotting on the feathers is concealed when they are not thus raised. In the roosting posture, one bird almost atop the other, they gave the appearance of rounded pin cushions and little resemblance to the shape of a bird. Each bird's tail was raised and flattened against the surface they were on.

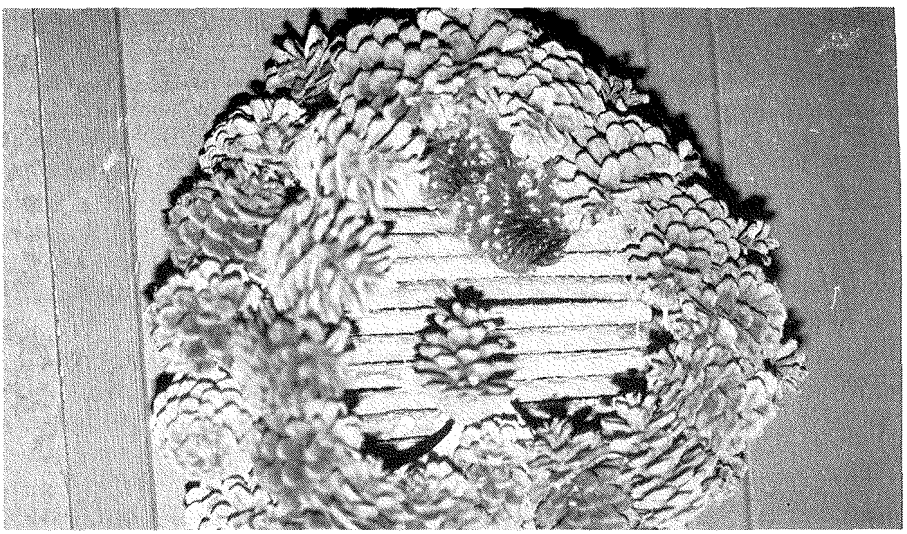

Figure 1. Roosting posture of Carolina Wrens showing raised back feathers with white spots inside the lower part of this heart-shaped pine-cone wreath.

I surmise that this roosting posture might serve as camouflage, protecting the wrens against predators. The raised feathers might also provide more adequate insulation by trapping air between them. The temperature at the time of my observations was in the low 30s F and it was sleeting. Most Carolina Wrens I have seen going to roost used protected niches such as porches, gourds, or nest boxes placed on or near buildings.

ANTIPHONAL SINGING IN THE YELLOW-THROATED VIREO

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Duet singing is fairly common in tropical birds world wide. Males and females may sing the same song together, different songs, or different parts of the same song alternately (Terres 1980). When birds sing alternately, the duet is referred to as antiphonal singing. Among North American birds, the Common Grackle (*Quiscalus quiscula*) is an antiphonal singer (Peer and Bollinger 1997). I present an observation here of the Yellow-throated Vireo (*Vireo flavifrons*) also using this behavior.

On 5 April 1997, in a hardwood forest approximately eight miles south of Vicksburg, Warren County, Mississippi, I observed two Yellow-throated Vireos duetting. The birds were alternately singing different parts of their primary song (Rodewald and James 1996). One bird sang the first ascending-pitch phrase of the song, and the other sang the second descending pitch phrase. To me this song was indistinguishable from any other Yellow-throated Vireo's primary song. The birds were observed in this behavior for about two minutes, during which they sang continuously and moved about in the lower canopy about five to 15 feet apart from one another.

Antiphonal singing has not been previously recorded in Yellow-throated Vireos (James 1978, 1984, Rodewald and James 1996). The primary song of the Yellow-throated Vireo is used while the birds are involved in many different activities: territory establishment and defense, mate attraction, pair formation, nest construction, as part of maintenance of contact between a mated pair, during courtship and copulation, at nest exchanges, and during contact with young birds. Only males are known to sing the primary song (James 1984). This duet could have been part of pair formation or territory establishment, since Yellow-throated Vireos had been in the Vicksburg area for only about two weeks and these would be expected behaviors. However, both of these functions would require a female to be part of the duetting pair.

This isolated observation does not establish antiphonal singing as a common behavior in Yellow-throated Vireos. Additional observations will be required to determine the frequency of this behavior.

ACKNOWLEDGMENTS

I appreciate Dan Twedt's review of this paper.

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KILLDEER WITH AN EXTRA RECTRIX

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On 2 April 1994, during the course of banding operations, we trapped an adult female Killdeer (*Charadrius vociferus*) that was incubating at a nest with four eggs. While examining her plumage we discovered that she had an extra rectrix (tail feather) number two on the left side (Figure 1), giving her an asymmetrical complement of 13 rectrices. In general, the plumage of birds is remarkably symmetrical. Not only are the flight feathers usually symmetrical in number, shape, size, color, and position in the wing or tail, but their replacement through the process of molt is symmetrical as well. For example, when rectrix number three on the right side is molted, rectrix number three on the left side is generally molted simultaneously. Such symmetry would maximize balance and symmetry of feather function during flight. It seems likely that under most circumstances such an extra rectrix as reported here would cause the bird no problem. However, subtle movements of the rectrices, as a result of contraction or relaxation of muscles intimately associated with each feather, facilitate twisting, turning, and air speed change in flight. Such could be critical during pursuit by a potential predator and it is possible that an extra rectrix could then be detrimental to the bird.

In the case of this extra rectrix, the follicles of the two number two rectrices on the left side were much closer to one another than either was to its nearest neighbor on the other side. The cause of such an abnormality is not clear. Perhaps at some point during the embryological development of the feather follicles, or perhaps as a result of inappropriate healing following an injury, the "number two right" rectrix follicle split to become to separate follicles.

Although Figure 1 suggests that the central rectrices were displaced to the right, during this bird's distraction display which was used in an effort to lure us from the nest, the central rectrices were the ones most intimately drug along the ground. This is typical of Killdeer and is evidenced by the similar, more excessive wear at the tip of rectrices number one right and left.

Figure 1. The tail of the female Killdeer with an extra rectrix number two on the left side. Rectrices are numbered from the innermost pair (those lacking the white tips in this case) to the outermost. Note not only the extra tail feather, but also the symmetry of color pattern in members of each pair.

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