

BIRD LIFE OF A FARM IN PIEDMONT SOUTH CAROLINA

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Between 2 January 1977 and 3 August 1978, various students from Fort Mill High School, Fort Mill, S.C., studied the bird population of a 250-acre farm in central York County, S.C.

A total of 14 observers, most of whom were my general or advanced biology students while I taught at Fort Mill, participated in 46 outings over the 20-month period. During that time, we accumulated a list of 90 species of birds (Table 1). Of these 90 species, both male and female birds were seen for 23 species, and active nests were found for nine species.

The study was conducted on the Mac Stewart Farm near York. The tract, situated at the intersection of SC 161 and York County Road S-46-117, included approximately 100 acres of open pasture, 25 acres of near-monoculture pine forest, 75 acres of mixed pine/hardwood forest, and 40 acres of stream-bottom hardwood forest. The farm also had a 10-acre open pond, a smaller 2-acre holding pond that was heavily overgrown to the water's edge, several unused outbuildings, and a house and barn in constant use. The entire tract was in active cattle graze for the duration of the study.

The bird population of the farm was as might be expected for any similar locality in the northern piedmont of the state, but not all species have been reported from York County in either *South Carolina Bird Life* or *The Chat*. Although one function of this report is to supplement those publications in some small way, my chief motivation in writing this article is to encourage other bird watchers who are also teachers (or who simply know teachers) to help students become involved in natural history studies.

Traditionally, amateur naturalists have made meaningful contributions to the scholarly knowledge of the natural world, particularly in the field of ornithology. I personally believe that high school students are not too young to act as competent observers if they are properly trained. Several of the students involved in this study are already "very good" observers, and will graduate to the ranks of "expert" amateur ornithologists within a few years. Students can—on the average—get much more involved in their studies of high school biology if they are encouraged to do field work along with their classroom and laboratory assignments. The trend in many high schools and colleges in the past 15 years has been to stress cellular and sub-cellular biology and to neglect natural history studies. Happily, recent textbooks have begun a swing back to ecological approaches to biology, and certainly a happy medium can be found to the benefit of the student and of the flora and fauna around him.

Table 1 lists only birds that were sighted. No audible-only records are included, chiefly because of the relative inexperience of the observers in identifying species by call or song. All visual records were verified by the author. The presence of young implies that breeding occurred on or near the Stewart farm even though a nest might not have been found. The absence of fall records for some common species is the result of the small number of visits made during that season.

The only species that requires special comment is the Brown-headed Cowbird (*Molothrus ater*), which has previously been reported as nesting in South Carolina only from Oconee, Charleston, and Spartanburg Counties (South Carolina Bird Life, Sprunt and Chamberlain, revised 1970 by Burton, p. 628-629).

On 1 June 1978 we were raft-floating on the farm's 10-acre pond—in an attempt to approach otherwise unapproachable water snakes that habitually sunned in overhanging shrubs—when a female Blue Grosbeak (*Guiraca caerulea*) flushed from her nest. The nest was placed in a central fork of a common alder about 57 inches from the ground. The shrub overhung the pond surface, but the nest itself was directly over the shoreline. The structure consisted of various grasses woven tightly around a central core of balled up clear polyethylene sheeting, that latter constituting about 50% of the nest by volume.

TABLE 1. Birds of the Stewart Farm, York County, S.C.,
Between 2 January 1977 and 3 August 1978.*

Great Blue Heron	WS	Wood Thrush	SSu
Green Heron	SSu	Hermit Thrush	WS
Turkey Vulture	WSSuF	Eastern Bluebird, m, f, y, n, e	WSSuF
Black Vulture	WSSu	Blue-gray Gnatcatcher, ad., n	SSu
Sharp-shinned Hawk	FWS	Golden-crowned Kinglet	FWS
Cooper's Hawk	F	Ruby-crowned Kinglet, m	WS
Red-tailed Hawk	FW	Cedar Waxwing	FS
Red-shouldered Hawk	WSSu	Starling, ad., y	WSSuF
Broad-winged Hawk, ad., y	SSu	White-eyed Vireo	Su
Marsh Hawk, m	S	Red-eyed Vireo, ad., y	SSu
Bobwhite, m & f	WSSu	Black-and-white Warbler, m	Su
American Woodcock	W	Prothonotary Warbler, m, f	SSu
Spotted Sandpiper	S	Northern Parula, m, f	SSu
Solitary Sandpiper	Su	Yellow Warbler, m, f	SSu
Mourning Dove	WSSu	Magnolia Warbler	S
Rock Dove	SSuF	Yellow-rumped Warbler, f	WS
Yellow-billed Cuckoo, y, n	SSu	Pine Warbler	S
Chimney Swift	SSuF	Louisiana Waterthrush, m	Su
Ruby-throated Hummingbird, f	Su	Kentucky Warbler, m	SSu
Belted Kingfisher, m, f	SSu	Common Yellowthroat, m, f	SSu
Common Flicker, m	WSSuF	Yellow-breasted Chat	Su
Red-bellied Woodpecker, m, f, y	SSu	Canada Warbler, m	S
Yellow-bellied Sapsucker	FWS	American Redstart, m, f	SSu
Hairy Woodpecker	Su	House Sparrow, m, f	Su
Downy Woodpecker, m, f	WSSu	Eastern Meadowlark, ad., n, e	WSSuF
Eastern Kingbird	SSu	Red-winged Blackbird, m, f, n, e	SSu
Great Crested Flycatcher	Su	Orchard Oriole, m, f	S
Eastern Phoebe, ad., y, n	WSSuF	Rusty Blackbird	WS
Acadian Flycatcher	Su	Common Grackle, m, f, y	WSSu
Eastern Wood Pewee	S	Brown-headed Cowbird, f, y, e	Su
Rough-winged Swallow	SSu	Summer Tanager, m, f	SSu
Barn Swallow, ad., y, n	SSu	Cardinal, m, f, n, e, y	WSSuF
Purple Martin, m, f	SSu	Blue Grosbeak, m, f, n, e, y	SSu
Blue Jay	WSSuF	Indigo Bunting, m, f	SSu
Common Crow	WSSuF	Purple Finch, m, f	WS
Carolina Chickadee	WSSuF	American Goldfinch, m, f	S
Tufted Titmouse	WSSuF	Rufous-sided Towhee, m, f, y	WSSuF
White-breasted Nuthatch	S	Savannah Sparrow	WS
Red-breasted Nuthatch	FW	Dark-eyed Junco	FWS
Brown Creeper	W	Chipping Sparrow	WS
Carolina Wren	WSSu	Field Sparrow, ad., y	SSu
Mockingbird	WSSu	White-throated Sparrow	WS
Catbird	SSuF	Swamp Sparrow	S
Brown Thrasher	SSu	Song Sparrow	WSSuF
American Robin, ad., y	WSSuF	Grasshopper Sparrow, ad., y	SSu

*m = male, f = female, ad. = adult, y = young, n = active nest, e = eggs in nest, S = March through May, Su = June through August, F = September through November, and W = December through February.

Examination of the nest revealed five eggs—four of them very pale blue (average size 2.20 cm x 1.51 cm) and one of them off-white with brown speckling (2.16 cm x 1.57 cm). The color, texture, size, and circumstances of the latter egg left little doubt that it came from a Brown-headed Cowbird.

The nest was checked at random times, but at least twice daily after 1 June. Typically, the female grosbeak was on the nest when it was visited, although there were a few exceptions. As I approached the nest, the female would usually remain motionless until the last moment and then suddenly burst from the nest, fly to a nearby tree, and chirp loudly for the duration of my examination. Only once was a male Blue Grosbeak seen in the vicinity. On 11 June, the female was not on the nest at 1515, and I subsequently found that the speckled egg had hatched since that morning. By 2030 the next day, three of the grosbeak eggs had hatched, followed by the fourth on 13 June.

All five young were similar in appearance, with the cowbird nestling being slightly larger for the first 2 days. The grosbeaks soon caught up in size, and all five developed thereafter at about the same rate. One pronounced difference was that the colored target area of the cowbird's gaping mouth was a bright red-orange, while the grosbeak mouths were a paler yellow-orange. Color slides were taken of the nest, eggs, and nestlings.

On 18 June I departed on a previously planned trip; thus, no data are available on brood duration, fledging, or possible mortalities. The nest was found to be deserted on the next inspection date of 30 June. A female Brown-headed Cowbird was seen near the pond on 4 July 1978. This was the first and only appearance of an adult cowbird recorded during the entire 20-month study of the Stewart Farm.

Observers for the study were Bill Hilton Jr., Susan and Billy Hilton, and Jim Shuman (a graduate student in nature interpretation at West Virginia University) in addition to Fort Mill students Melissa Ballard, Fred Nims, Guy Molnar, Robby Bryant, Russ Rogers, Julie Belrose, Chris Moore, Frances Parks, Terri Coltharp, and Cindy Kelly.

POSTSCRIPT: Within a few weeks of the termination of this study, the Mac Stewart Farm was sold to a group of real estate developers. Shrubs that once provided nesting sites have been bulldozed away. Alterations in the habitat will no doubt result in major changes in the bird population of the tract.

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