## BACHMAN'S WARBLER OBSERVATIONS CONTINUE IN I'ON SWAMP

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Reports in 1977 of a male Bachman's Warbler (*Vermivora bachmanii*) at one site, and a female at another, both in I'On Swamp near Charleston, S.C., encourage belief that the endangered species may still occur there.

While watching a hawk's nest near Mayrant's Backwater, 2 April at about 1030, Nugent heard a loud song that consisted of repeated phrases, "zzzzz-zzzzz-zzzzz-zzzzz," sometimes with a perceptible accent on the end of the final phrase. Immediately he suspected the singer to be a Bachman's. To Nugent, who watched a singing Bachman's Warbler twice in 1969 (The Lesser Squawk XX[12]:2), the monotone quality of the song is distinctive, but difficult to put into words. He feels that this quality has been lost in recorded songs of Bachman's Warbler.

Nugent moved toward the singer and stopped at the edge of a little pond. Presently he located the bird 50 or 60 feet away about 40 feet up in a tupelo (Nyssa sp.) that was growing in the water. For about 30 seconds he enjoyed an unimpeded view as it sang from an exposed perch among a dense clump of leafy twigs. He was using field glasses.

The bird's breast was bright yellow, throat black, and chin yellow (see CBC Roundtable, Chat 41:28-29, for a discussion of these features). The yellow of the face extended across the forehead and around the eye. A black cap started behind the yellow brow. Above the dark eye the cap blended into gray and then into bluish gray behind the head. The bird had a detectable ear patch. Its wings, olive like the back, lacked wing bars.

The bird flew and could not be located again that day, but Nugent was certain it was a male Bachman's Warbler.

Word of Nugent's sighting spread among a number of people searching I'On Swamp at the time. Van Os had spent several days at the site when, on 12 April at 1030, he heard a loud song new to him. Like Nugent, Van Os was by then familiar with the song varients of the Northern Parulas (*Parula americana*) with territories at the site, and suspected he was hearing the Bachman's. The song reminded him somewhat of the first phrase of the Bluewinged Warbler (*V. pinus*), and he wrote it down as "buzz-buzz-buzz-buzzip." The singer, invisible in the dense canopy, fell silent before Van Os could catch sight of it.

At 1130 the bird sang again. This time, though the bird was not facing him and was perched in thick foliage about 60 feet away some 50 feet up in a 100-foot hickory (Carya sp.) whose lower branches were intertwined with those of a holly (Ilex opaca), Van Os obtained a partial view. He saw clearly, with field glasses, that the underparts visible to him were yellow, the back olive, and that the olive wings lacked wingbars. These field marks, and the song, convinced him that he had seen the Bachman's Warbler.

Nugent and a companion, Jeremy James, heard the Bachman's again on 16 April at 1315; but it stopped singing when they approached the tree from which it sang, and they could not find it. Later, Nugent learned that he and James had heard it singing from the same part of the same tree in which Van Os had seen and heard it, about 150 feet from Nugent's 2 April sighting.

Though observers frequented the site throughout April and the first 2 weeks of May, the Bachman's Warbler was not heard again.

Otto Widmann (Auk 14:305-309, 1897), discoverer of the first Bachman's Warbler nest known to science, wrote, "The time of nest building is probably the period of constant song, but after the eggs are deposited the census-taking of the Bachman's population is a time consuming task." Shuler (Chat, in press) used data on 24 nests found by Arthur T. Wayne to show that egg laying probably had begun in more than half of these nests (14) by 31 March. By the time of its discovery, Nugent's bird well may have reached the point in its breeding cycle when its singing would drop off sharply, and it would be difficult to find.

At about 0700 on 17 April, Trochet, who had been searching I'On Swamp for 3 weeks, returned for the third time to a site where a male had been seen in 1976 (Shuler, Chat 41:11-

12, 1977). A rustle of leaves or wings about 15 feet away caught his attention, and he focused his field glasses on a small warbler. It remained in sight for about 2 minutes, moving through the underbrush between 6 and 20 inches from the ground, giving Trochet an opportunity to study it intently. Then from about 25 feet away, it flew deeper into the swamp.

During the period of observation, as the bird flitted and turned, Trochet saw that white patches were visible on the under surface of the tail. The precise color of the undertail coverts could not be made out. Trochet noted the bird's small size, even for a warbler, its thin bill, its generally olive back, gray-olive tail, and dull yellowish belly. The gray-olive wings lacked wing bars, but showed some yellowish at the bend. The cap was olive-gray and the nape and cheeks grayish, setting off the yellow forehead and eye ring. The chin was yellow, eyes dark, and legs medium brown. It was silent. Trochet is certain that it was a female Bachman's Warbler, which is even more elusive than the male. It is not surprising that this bird was not seen again.

The "Nugent" site (N) and the "Trochet" site (T) share a number of habitat features. Both are mature swamp hardwood forest. Trees may reach 100 feet or more in both sites, and canopies are closed except for gaps created by the natural fall of trees to storm, disease, or age. Cypress (Taxodium sp.) and loblolly pine (Pinus taeda) grow at both sites in close association. Hickory is more abundant than oak at N, while the reverse is true at T. Forest Service records give the birth dates for stands at T as 1900 and 1904. Stands at N may be older.

Patchy understory at N consists mostly of cane (Arundinaria gigantea) and swamp palmetto (Sabal minor). At T the understory is more varied and extensive. In addition to cane and swamp palmetto, wax myrtle (Myrica cerifera), briar (Smilax sp.), blackberry (Rubus sp.), and other shrubs occur.

At N standing water occurs as small ponds or permanent pools, and as sloughs from Mayrant's. T is flooded seasonally by I'On Swamp Creek, and in dry weather pools form in the creek bed.

The Bachman's Warbler at N was about 100 feet from the forest edge; the warbler at T was about 150 feet from the edge.

Although the habitats at N and T differ in detail, both are consistent with Wayne's descriptions of Bachman's Warbler habitat as summarized by Shuler (Chat 41:19-23, 1977).

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