

NESTING CLIFF SWALLOWS IN SULLIVAN COUNTY, NY, 1996

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ABSTRACT – A 1996 study of Cliff Swallows (*Hirundo pyrrhonata*) in Sullivan County, NY, at the edge of their breeding range, found 600 active nests in 27 colonies. Two New York City reservoirs, the Rondout and the Neversink, and 3 bridges over the Delaware River provided sites for 44% of the nests. Of all the nests, 83% were clustered in four regions of the county and most of the larger colonies were under bridges or on buildings where there was little human disturbance.

INTRODUCTION

The Cliff Swallow, *Hirundo pyrrhonata*, is found across much of North America and is most abundant in the west, where it nests in huge colonies on natural cliff and canyon sites. During the past 100 to 150 years it has expanded its range into eastern North America, adapting to man-made structures such as bridges and buildings for nesting sites (Brown and Brown 1995). While the range extends into Maine, it does not include eastern Connecticut, eastern Massachusetts, and parts of southeastern New York State. Its status in southeastern NY was clarified during the *Atlas* project, when no breeding Cliff Swallows were found in Long Island, New York City, and Rockland County. Few were found in Westchester, Orange and Ulster counties, and there was only one record each in Putnam and Dutchess counties. In Sullivan and Delaware counties, however, these swallows nested in most of the *Atlas* blocks (Eaton 1988). The Pennsylvania breeding bird *Atlas* project also found a high occurrence of Cliff Swallows in the northeast region across the Delaware River from Sullivan and Delaware counties (Schwalbe 1992).

Sullivan County is thus at the edge of the breeding range of this species. During June and early July of 1996 an effort was made to reassess the status of nesting Cliff Swallows in Sullivan County and to determine their favored nesting sites as part of an attempt to determine what conditions might differ from those of nearby counties (Orange, Ulster, Dutchess) where so few can be found.

METHODS

The author enlisted the aid of students from a Sullivan County Community College Ornithology class and volunteers from the local Audubon Society in order to locate colonies and count the active nests. Every major bridge in the county was checked and many hundreds of miles of roads through appropriate

habitat were systematically covered. Colony locations were recorded, photographed and mapped, and active nests were counted.

RESULTS

We found 600 active nests in 27 colonies. Eighteen of the colonies were very small, containing fewer than 15 nests each (averaging 6 nests). All of these were located on buildings of various types, including hotels, barns, churches, and a school. All were found under roof overhangs. The most common base material was wood, but three were on old stucco buildings, and two were on stone buildings. Only one small colony of 5 nests was found on a private home.

Two medium sized colonies of 20 to 38 nests were located under bridges over the Delaware River, one was on a stone building at Neversink Reservoir and one was under a bridge over the Mongaup Falls Reservoir.

The six largest colonies (over 50 nests each) included almost two-thirds of the nests found in the county. (Note that these "large" colonies are small compared with those in the center of the breeding range.) Three were on bridges and three were on buildings, and all but one were in sparsely populated areas of the northern region of the county. The largest colony consisted of 76 nests under the eaves of several well-maintained wooden farm buildings on an inactive farm along the Beaverkill near Lew Beach. This farm is occasionally used as a vacation home, and the caretaker reported that the swallow colony had been there, undisturbed, for several years.

The next largest colony, 73 nests, was on the windows and cornices of a NY City Department of Environmental Protection stone building adjacent to the dam on the Rondout Reservoir. (This site is in Ulster County, but is included here because another colony of 50 nests was under a bridge at the opposite end of the same reservoir, about six miles away in Sullivan County.) A colony of 65 nests was located under the northbound lane of a Route 17 bridge at the north edge of the county and 51 nests were under a bridge over the Delaware River at Callicoon.

The most unusual of the larger colonies was under the roof of a loading dock of a hardware store at the edge of the village of Liberty, overlooking a parking lot and close to a golf course. The 60 nests at this location were only 15 feet above the ground, in a location where trucks frequently unloaded within a few feet of the nests, just across the road from a shopping center. In contrast with the other large colonies in Sullivan County, there was frequent human activity close to the nests. Also, House Sparrows, which commonly take over Cliff Swallow nests, were seen near the swallow nests. The manager of the loading dock was protective of the birds, and said that the nests were not removed at the end of the season. He reported that they have been nesting there for more than 10 years.

Two New York City reservoirs and the Delaware River proved to be the most important nesting locations for Cliff Swallows in Sullivan County. The Rondout Reservoir had 123 active nest sites in two locations and the Neversink Reservoir had another 20 active nests. Both of these locations are undisturbed, free of House Sparrows, and have been used by the birds for many years. The two reservoirs thus provided about 24% of the known nests in Sullivan County. Bridges over the Delaware River at Cochection, Callicoon and Skinners Falls provided sites for 115 nests, accounting for another 20% of the total.

DISCUSSION

Examination of the *Atlas* map shows that Cliff Swallows are clearly concentrated in four clusters in New York State (Eaton 1988). One of those population clusters is centered in the western Catskill region, primarily in Delaware and Sullivan counties. This study showed that within Sullivan County the colonies are also clustered, and that most of the small colonies were not far from the larger ones. We hypothesize that the small groups could be "spillover" from the larger ones, consisting of birds that could not obtain nest sites or partners in the larger colonies for some reason (possibly inexperience, low social status, or lack of space). It should be noted that to our eyes at least, it appeared that there was plenty of room for more nests in each of the larger colonies. The clusters of colonies in the county were in the Rondout-Neversink Reservoir region, Callicoon-Skinners Falls region, the Liberty area, and the Lew Beach area. These four regions included 83% of all nests found in 1996.

We looked for patterns in the characteristics of the colony sites. Each of the 27 colony sites was located near a open area to allow foraging, and most were close to a body of water. A suitable substrate for nest attachment was available in each case. Except for the loading dock site, all of the colonies of over 25 nests were in locations where there were few people and little or no disturbance. Four of the largest colonies appeared to be free of House Sparrows, a well-known usurper of Cliff Swallow nests. Two large colonies had some nests taken over by House Sparrows, but their occurrence in many colonies was not documented in this study. According to Brown and Brown (1995, p 3) "only in the northeast U.S. does nest usurpation by House Sparrows appear to be limiting breeding range expansion." The population of House Sparrows in Sullivan County may not be as large as in the neighboring counties that have few Cliff Swallows. We hope to be able to clarify this in the future.

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