

National Seashore Recreational Area, U.S. Dept. of Interior 1-88) did not record the species nesting in the Outer Banks area. Rough-winged Swallows first appeared in the Beaufort area about 20 years ago (J.O. Fussell III, pers. comm.), and they were absent in the southeastern portion of the state prior to the 1960s (Funderburg and Quay 1959, J. Elisha Mitchell Sci. Soc. 75:13-18).

Bird students should be aware that Bank Swallows and Tree Swallows (*Iridoprocne bicolor*), while rare mountain nesting species in North Carolina, are regular nesting birds in the tidewater region of the Chesapeake Bay. An extension of their breeding range into coastal North Carolina would not be unexpected. The rapid expansion of nesting Barn Swallows (*Hirundo rustica*) during the 1950s and 1960s, unlike that of the Cliff Swallow (*Petrochelidon pyrrhonota*) (Grant and Quay 1977, Wilson Bull. 89:286-290), went relatively undocumented. This is publication 1981-8 of the North Carolina Biological Survey.

[NOTE: The North Carolina Biological Survey is maintaining nesting records for all the breeding birds of the state. Eloise Potter has been primarily responsible for assembling these records. Persons with definite nesting records for any species are urged to send information to her. Work maps such as the one for the Rough-winged Swallow will appear in *Chat* when they will enhance articles and notes discussing distributional patterns. It is hoped that the occasional appearance of these maps will encourage contributors of breeding records. As can be seen here, nesting information even for the common species is relatively fragmentary.—DSL]

Cliff Swallows Nesting on Fontana Dam, N.C.

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Birds of the Carolinas (1980) summarizes the recent expansion of the Cliff Swallow (*Petrochelidon pyrrhonota*) as a breeding species in the Carolina piedmont and coastal plain since it was first reported nesting at Hartwell Dam on the upper Savannah River in the spring of 1965. Its preference for dam sites, the dams serving as sheltered locations for the attachment of the swallows' characteristic mud nests, was also noted. No nesting activity has been reported for any of the larger dams or other suitable areas in the mountain region of either North Carolina or South Carolina. The discovery of a nesting pair of Cliff Swallows on 15 June 1981 on the Graham County side of the Fontana Dam by Owen McConnell and me represents the first evidence of the logical extension of breeding into the mountain region where suitable habitat exists. Accordingly, Stupka, in his *Notes on the Birds of Great Smoky Mountains National Park* (a park adjacent to Graham County and including the Swain County portion of Fontana Dam) recognized the Cliff Swallow only as a "very common fall migrant in the vicinity of the park." His studies were concluded in 1963, before the advent of the species as a breeder in the Carolinas.

The Cliff Swallows were carefully observed while they were flying with Barn and Rough-winged Swallows in the vicinity of the dam. The pair had placed their jug-like mud nest under a concrete overhang at the top of the dam about 35 m from the shore and a few meters from the first flood gate. This nest was entirely separate from a colony of Barn Swallows occupying the flood gate openings on the opposite side of the dam. We watched the nest between 1400 and 1500 EDT, during which time both adults made frequent visits. An adult bird would arrive, on the average, once every 5 to 10 minutes. There seemed to be no synchronization between the two adults' visits to the nest. Sometimes they would arrive simultaneously, but at other times at well-spaced intervals. They stayed in the nest from 1 to 3 minutes, apparently feeding young. No evidence of additional pairs was found around the dam, and only time will tell whether the species will establish a colony here.