

## A 2005 CLIFF SWALLOW CENSUS OF THE BENJAMIN HARRISON BRIDGE

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### INTRODUCTION

A 1995 comprehensive study of bank-nesting birds within the lower Chesapeake Bay (Watts, et al. 1996) revealed a total of 454 Coastal Plain Cliff Swallow (*Petrochelidon pyrrhonota*) nests at 6 sites, 5 within the lower James River drainage and 1 within the lower Rappahanock River drainage. Of these sites, the Route 156 Benjamin Harrison Bridge, which traverses the James River between Prince George and Charles City counties, had 292 nests, 64% of the total nests documented. Since that study no systematic census of that breeding population has been done. Kain (1987) and Rottenborn and Brinkley (in press) list the Cliff Swallow as a rare Coastal Plain transient and breeder. This species was recommended for "special concern" status for Virginia in 1991 due to perceived loss of nesting sites (Ridd and Hale 1991). The purpose of this paper is to provide an update on the status of the largest breeding colony known for the state and to evaluate the proposed status of "special concern" for the state.

### METHODS

On 17 June 2005 we made a detailed census of the entire length of the Benjamin Harrison Bridge by boat. We piloted the boat beneath the bridge, through adjoining bridge piling sections, making 2 passes through each, one from up river, one from down river. As the boat passed under each span, 2 observers counted nests independently.

### RESULTS

Our completed census revealed 899 active Cliff Swallow nests. At least 41 (5%) had visible young or direct fecal stain evidence of young. Of the total nest count ~75 were under construction. All nests were found on the bridge's concrete superstructures which were immediately below and at right angles to the bridge roadway. Nests were found on both the north and south facing sides of the structural support elements. No nests were found on the bridge's metal superstructure. The highest nest densities (~25-35/section) were within 150 meters of both the north and south shorelines. Nest density declined significantly from either side with proximity to the center of the bridge span. Nest placement on the bridge's concrete superstructure was consistent with the findings of the 1995 survey.

## DISCUSSION

The first recorded Virginia Coastal Plain Cliff Swallow nesting was in 1979 with 12 nests located on the Benjamin Harrison Bridge (Scott 1979a, 1979b). This report was consistent with a southeast range expansion which had been occurring for some time (Brown and Brown 1995). Growth of the Benjamin Harrison Bridge colony between 1979 and 2005 has been exponential with an average doubling time of 3.9 years. Our 2005 nest count represents a 300% increase at this site since 1995, and is 199% higher than the entire Coastal Plain count documented in 1995. This count exceeded all previously reported Virginia peak nest counts, not only for the Coastal Plain, but for the Piedmont (200 active nests at Kerr Reservoir 12 June 1977), and Mountains and Valleys (55 nests in Augusta County June 1984) (Kain 1987; Rottenborn and Brinkley, in press).

Results of the 1995 study indicated that available Coastal Plain concrete structures suitable for Cliff Swallow nesting were underutilized, and that those that were occupied "had numerous sections with no nests" (Watts et al. 1996). Since the 1995 survey, the breeding colony on the Benjamin Harrison Bridge has expanded to occupy a significant portion of the available structure. Surveys of other known and potential nesting locations are needed to assess growth in the broader Coastal Plain population. Given the exponential growth of the population and the fact that the species has only recently colonized the state, we believe that proposals requesting a status of "special concern" in Virginia should be reconsidered.

## LITERATURE CITED

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