

Robert Ridgway and the Black Swift (*Cypseloides niger*) in the Great Basin

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On 23 June 1868 a 17-year old boy reported seeing a flock of Black Swifts (*Cypseloides niger*) along the Carson River between Fort Churchill and what is now Dayton, Nevada. Although this species does not occur in large numbers anywhere in the interior mountain ranges, he described them as "...abundant...", stating that there were "...several hundreds..." of them, "...hovering over the cottonwood groves in a large swarm...", and that "...they were evidently breeding in the locality...". However, Black Swifts have never been seen there again nor anywhere near there in the ensuing 130+ years. Nevertheless, this observation has persisted in the literature and has been cited in many ornithological works, providing one of only three reports of the nesting of this species within the physiographic region we call the Great Basin.

At a time when customarily the only acceptable scientific evidence of the presence of a species was collected over the barrel of a gun, this sight record has endured because of the stature the observer was to achieve. This young man, Robert Ridgway, was destined to become the Curator of Birds in the United States National Museum of the Smithsonian Institution and to be considered America's most distinguished ornithologist. On that day in June of 1968, he was the naturalist accompanying the United States Geological Exploration of the Fortieth Parallel, a post arranged for him by his mentor Spencer Fullerton Baird, Director of the U.S. National Museum. (Just 17 years earlier, another "early bloomer" at age 22 was about to embark on an ocean voyage as the naturalist on the *Beagle*.)

The Ridgway report of Black Swifts in the Great Basin and their non-reappearance for over a century is puzzling in the light of what we know about them today. In all other locations, Black Swift breeding sites are occupied every year and none has ever been found to be abandoned (Knorr 1989). Did Ridgway really see Black Swifts in Nevada? A more recent discovery seemed at first to provide an answer to this question.

In 1982, Ryser was completing his *Birds of the Great Basin* and in an attempt to clear up the Ridgway Black Swift mystery, the location on the Carson River was analyzed in terms of the ecological characteristics of Black Swift nesting sites found in the states of Colorado and Montana (Knorr 1961, 1962; Hunter and Baldwin 1962). We found it to be unsuitable, lacking most of the factors associated with all other known Black Swift nesting sites, especially the most important element, falling water (Ryser 1985).

Aware that Black Swifts commonly forage for food many miles from the nest, I initiated field investigations to locate another breeding site from which Ridgway's birds might possibly have come. Working outward in increasingly larger concentric circles from the Carson River location, the terrain was searched through three breeding seasons with no success. Having found it much easier to cover large areas by airplane, our flight over the Carson Range in July 1986 revealed a likely waterfall on a tributary of the Carson River. Proceeding to the site on the ground, a breeding group of four to six pairs of Black Swifts was discovered at the waterfall which had been seen from the air. This nesting site is some 30 miles from the Ridgway location, cannot be seen from any existing road or trail, and has been under observation periodically since then (Knorr 1993).

At first it was tempting to consider this discovery as the source of birds in Ridgway's Black Swift observation. It is well known that this species forages far from its nests, and the distance involved here would not necessarily be extensive. But closer scrutiny of a number of factors cast doubt on this solution as well as on the original observation:

(1) Ridgway found the birds to be "...abundant..." and said there were "...several hundreds of them...in a large swarm...". Black Swifts simply do not occur in such numbers in the mountainous West. In many years of studying the Black Swift, we have never seen more than 20-30 in one flock on the breeding grounds, and even this number is unusual. According to Bent (1940), large flocks of up to 100-150 occur only in the Pacific Northwest, notably the Puget Sound region and coastal British Columbia where the residents of many colonies come out of the mountains to feed together over coastal waters or to migrate. In spite of the proximity of the newly discovered nesting colony to the Ridgway site, it could not have provided more than a dozen birds to his observation, the largest number we have ever seen in the air at one time at the new colony. That this may have been a migrating flock also does not seem plausible at the late date of the observation. The suggestion of a colleague that Ridgway may have

seen a mixed flock of Cliff Swallows or White-throated Swifts and a few Black Swifts is inconsistent with Black Swift behavior. Although they may be in the company of other swifts or swallows on migration, they do not forage with other species.

(2) At the time of Ridgway's departure with the expedition, the Black Swift had been known to science for only nine years. Nothing was known about the bird's nesting habits, and only five specimens were extant. We have no evidence that he had seen any of these, and certainly he had never seen a live bird. It is safe to say that he was not familiar with the bird.

(3) The nest and eggs of the Black Swift and more importantly the customary nesting habitat on wet cliffs or caves were not known to science until 1901, 33 years after Ridgway's observation. He postulated that the swifts were nesting either in the cottonwood trees along the Carson River or in "...crevices on the face of a high cliff which fronted the river nearby...". We now know that they do not nest in trees, and the high cliffs which Ryser located by following Ridgway's journal are hot and dry in the summer with no water present and entirely unsuited for nesting by the Black Swift.

(4) We have been present at the Ridgway Black Swift site on the anniversary date of 23 June a number of times during the years since the 1986 discovery and as recently as June 1999. On several early mornings, large flocks of Cliff Swallows (*Hirundo pyrrhonota*) were observed feeding over the cottonwoods. On another, a flock of White-throated Swifts (*Aeronautes saxatalis*), which nest on Ridgway's cliff, and a loose group of Common Nighthawks (*Chordeiles minor*) were also observed feeding over the cottonwoods.

We do not know what Ridgway saw along the Carson River in June 1868. In the years since then, increasing numbers of birdwatchers, biologists, and wildlife workers have gone up and down this river with no sign of the Black Swifts. In the light of the facts presented above, we believe it to be unlikely that Ridgway saw Black Swifts here.

During recent years, much field work has been done on the ground and in the air, searching for the Black Swift to no avail. Most of the mountain ranges in the Great Basin are narrow ridges with little high country watershed for the storage of snow that would provide the all-important falling water throughout the entire nesting season. At the time of this writing, only two Black Swift nesting sites have been found in the Great Basin – one at the extreme eastern edge and one at the extreme western edge (Knorr 1962, 1993), both still occupied in the summer of 1999.

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