

BLACK SWIFTS NESTING BEHIND A WATERFALL

WITH ONE ILLUSTRATION

By EMILY SMITH

FINDING nests of Black Swifts (*Cypseloides niger borealis*) behind a waterfall in a not very remote canyon of the Santa Cruz Mountains last summer was an exciting surprise. Many visitors to Berry Creek Falls have told of seeing the dark, long-winged birds dart in through the falling water, but I had not dreamed there were nests there.

The nest I first saw, however, was not behind the falls, but a little to one side in a niche twenty feet above the pool which lies at the base of the sheer seventy-foot cliff. It was disclosed by the bird flying to it to feed its sitting mate. Although there were fifty persons moving about in full view and within seventy feet of the nest, it had flown straight to a point just below the niche, and flat against the wall had fluttered up to the nest. The feeding was quickly done, and the bird was soon streaking down the canyon. That was July 16. Three days later I returned to look more carefully at the nest. I could not get closer than the edge of the pool, but from there the nest thirty feet away was in plain view, a thick, round mat of moss and possibly some mud, set in an almost square little niche in the rock wall. The wall roundabout, covered with mosses, five-finger ferns, and other moisture-loving plants, was dripping wet. The early morning sunlight, slanting in on the nest, showed the outer side to be hoary with fine drops of water. For an hour the sunlight, coming through the redwoods, passed on and off the bird sitting on its damp nest.

July 27 Mr. A. G. Vrooman of Santa Cruz accompanied me to the nesting site and assured me that I had not made a mistake. The egg had hatched, and there was a surprisingly large, downy gray bird sleeping on its mat of moss. While we watched, a swift sped over our heads and in through the falls fifty feet above the pool. Dimly through the falling water we could see it flutter its wings and then disappear into a niche. Mr. Vrooman suggested the possibility of a nest there behind the falls, but we could see nothing.

Three weeks later (August 16) in the middle of the afternoon I again saw a swift go in behind the falls in the same place, and soon afterwards, another dive in much lower down. Twenty minutes later a third swift appeared, and twittering, joined the second bird. Then, after reaching a better vantage point for observing, I saw, indistinctly, three birds and a nest behind the falls, only eight feet above the pool. Two heads were bobbing together, a young bird being fed by one of its parents, presumably the father, while the other parent looked on. The feeding was accompanied by a clicking sound, which I only faintly heard in the noise of the falls. After the father had left, the mother crept up onto the nest, and humping herself over the young bird hovered it, one long wing drooping over the side of the nest. She was still hovering it when I left at six o'clock.

The next morning when the early sunlight penetrated the falls (the falls face the southeast) I could see plainly the nest, hardly more than ten inches back from the main stream of the falling water. Some of the moss of which the nest was constructed appeared green and living, giving the nest a cushiony look. The young bird was snuggled down in it, and suggested a fat little mouse until it stretched a wing showing short quills. The sunlight also revealed a nest where Mr. Vrooman had

suggested there might be one. The young bird in the third nest was preening itself in the filtered sunlight, and appeared, with its long, white-tipped wing quills, to be



Fig. 52. BERRY CREEK FALLS, REDWOOD PARK, SANTA CRUZ MOUNTAINS, CALIFORNIA. THREE NESTING SITES OF THE BLACK SWIFT WERE, IN THE SUMMER OF 1927, LOCATED AS INDICATED BY THE ARROWS.

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as old as the first young bird, now more than three weeks old. Although there were droppings in several places on the cliff, I could not find any more nests.

During my visits with the Black Swifts I noted down everything I observed, but it did not take a large note-book to hold all my observations. As was Mr.

Michael's experience while observing nesting Black Swifts in Tenaya Canyon, there were long hours when nothing happened. My observations concerning the appearance and behaviour of the young birds correspond so perfectly with those recorded by Mr. Michael in his article in the CONDOR for March, 1927 (xxix, p. 89) that it would be only repetition to record them here.

Mr. Michael's conclusion that "the young birds can, and do, go long hours without food" was corroborated by observation of the young birds at Berry Creek Falls. On each visit my chief interest was in finding out how often and when the young birds were fed. Unfortunately, I was not able to spend a whole day with the swifts until August 25, and then the youngest bird was more than two weeks old. I had not seen Primus (so named because he was first discovered) fed during my four previous visits with him. I had, however, seen Secundus fed at about four o'clock in the afternoon, and again the next morning at half past nine. I suppose being a very young bird he was fed more than once on each of those two days. But August 25 they all were fed only at nightfall. That day my sister and I managed to cover the four and one half miles from camp to the falls before a quarter past five o'clock in the morning. As we approached we heard soft, low cheeping notes, and then in the dim light saw birds circling and darting about in the small amphitheatre in front of the falls. It was impossible for the eye to follow them or count them, they flew so swiftly and the light was so faint. One could be seen chasing another, and then we could see several fluttering up the cliff and disappearing behind a log, and almost immediately half a dozen swept by us. By half past five, before it was light enough to see clearly, every bird had left. From then until sunset not one of the swifts returned.

Just before sunset Primus backed out of his nest, and clinging to the threshold of the niche, exercised his long wings. Seven times he vibrated them, with short intervals of rest during which his wonderful wings were stretched wide against the rock. Suddenly a swift, surprisingly light gray in color, "plastered" itself against the wall below Primus, and motionless watched us for fifteen minutes. Primus, seeing no reason for concern about us, scrambled back onto the nest and waited patiently for his meal. Finally the old bird fluttered up and for two minutes in the fading light we could see it feeding the young one by regurgitation. Then the other parent arrived, darker and seemingly larger, and immediately we guessed it was the mother. She fed the young bird for four minutes with only very short pauses, while the father looked on. By this time more swifts had arrived, but it was impossible to see what was going on in the nests behind the falls. Soon swifts were rapidly circling and darting about in the dim twilight. We saw Primus' father slip away from the nest, and swerve by us. Then we saw swifts settling here and there on the wet rock wall, some starting up again for one more turn. But as was the case in the dim morning light, we could not count the birds. Possibly there were only six outside of the nests. When we left shortly before seven o'clock we could still see the faint forms of Primus and his mother on the nest in their little niche.

We nature guides in Big Basin consider these nests, and any eggs or nestlings they may ever contain, as our prize exhibit; and also, by right of discovery, our private property. We want every one to see nesting Black Swifts at Berry Creek Falls. And so, hands off, please, Mr. Egg Collector!

Los Gatos, California, October 2, 1927.