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ROOF-NESTING KILLDEERS

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The adoption of flat, graveled roofs as nesting sites by nighthawks has long been well known to ornithologists. That a bird so essentially terrestrial as the Killdeer (*Oxyechus vociferus*) should similarly be attracted by the same type of elevated plane is much less to be expected. In fact the only published records of such occurrences known to me are those of Pickwell (Auk, 42, 1925:485-496), who tells of finding a Killdeer's nest in 1922 on the roof of a grandstand at the State Fair Grounds near Lincoln, Nebraska, and of Stoner (Condor, 39, 1937:127), who had a similar experience in 1936 on the roof of the Benicia Arsenal, Benicia, California.

Other instances of roof-nesting Killdeers have lately been brought to my attention by friends. Two adjacent public buildings in Exposition Park, Los Angeles, California, have been favored by Killdeers in recent years—both buildings simultaneously for part of the time, at least. In May, 1943, Norman C. Bilderback showed me photographs which he had taken in 1942 and 1943 of nesting Killdeers on the roof of the California State Exposition Building. Soon thereafter George Willett informed me that a pair of Killdeers had also been nesting on the roof of the near-by Los Angeles Museum. When I expressed interest in the subject and my belief that the facts were worthy of publication, both observers placed their notes in my hands, with the suggestion that I incorporate them in an inclusive account.

While engaged in spraying black-out paint on the skylights, on May 21, 1942, Mr. Bilderback found two occupied Killdeers' nests on the graveled part of the State Exposition Building roof, one each on two separated wings. Both contained four eggs. One nest was close to a ventilating stand-pipe and was selected for photographic experiments. "The tripod was set up about 9:30 a.m. some $4\frac{1}{2}$ feet from the nest," the notes state, "and a thread was stretched from the shutter-release to a point about 50 feet distant, which was practically in full view of the nest. The weather was exceptionally hot and the bird appeared to be shading the eggs when at the nest. Both parents, sometimes singly and sometimes as a pair, went through the familiar antics, such as briskly running with the characteristic smooth glide and then pausing to bob intermittently, engaging in 'broken wing' tactics, and pretending to brood a patch of gravel." A picture was taken and the camera was left in place until after lunch, when the incubating Killdeer had apparently grown accustomed to the ominous object and more pictures were obtained. The following August a visit to the roof failed to reveal the slightest sign of shell fragments or other evidence of nesting.

On April 4, 1943, Mr. Bilderback found the Killdeers again nesting on the roof where the photographs were taken in 1942, but not at the other site. The 1943 nest, containing three eggs, was in the identical spot that was used in 1942, as may plainly be seen by comparing its relation to the stand-pipe. A blind was employed this time and within an hour a number of pictures was secured of the Killdeer at the nest.



Fig. 1. Eggs of the Killdeer on roof of California State Exposition Building, Exposition Park, Los Angeles; May 21, 1942. Photograph by Norman C. Bilderback.

A question that comes quickly to mind is, How do the young Killdeers reach the ground? Or it might better be expressed, How many of the young ever reach the ground in safety? Mr. Bilderback states that the distance from the edge of the roof of the California State Exposition Building to the lawn below is 42 feet. The rain-water drains can be of no aid, because their upper ends are screened and their lower ends discharge directly into the sewer. The only youngsters to survive a fall to the ground are probably those whose descent is broken by shrubbery or other soft vegetation. Old employees of the building, who say that the birds have nested on the roof "for a number of years," have more than once liberated chicks from light wells in front of basement windows, into which they had tumbled. Those that were thus assisted were quickly taken in charge by their parents; and a downy young was observed by Mr. Bilderback in 1942 in the company of an adult in the Exposition Park rose garden near the building. There is no direct evidence, however, that any of these chicks were hatched on the roof.

Mr. Willett's experience with roof-nesting Killdeers at the Los Angeles Museum is a story mainly of tragedy. "A pair of Killdeers," he writes, "have nested on the Los Angeles Museum roof (4th floor) since 1938. After the young were hatched, they usually fell off the roof and were killed by the fall. In 1941, the last remaining young of the year was captured on the roof by Miss Irene Tillinghast and carried down to the park rose garden, where it was accepted by the parent birds. In 1942, the eggs were taken to prevent hatching and consequent destruction of the young. This year (1943) the apertures through which the young formerly made their exit were plugged so that they were unable to fall from the roof, but before we realized what was happening, they had

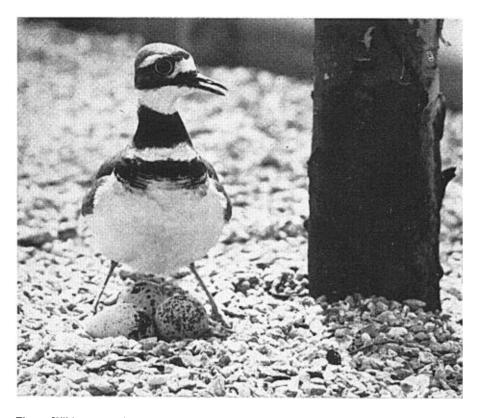


Fig. 2. Killdeer preparing to settle on nest after period of flying, April 4. 1943. Photograph by Norman C. Bilderback.

reached a point so near starvation that we were unable to save them. As was to be expected from birds with the habits of the Killdeer, the parents apparently made no attempt to bring food, and the young were unable to get to where the food was.

"I do not see how events could have been different unless we had detailed someone to spend most of his time watching the birds. The whole thing seems to constitute excellent evidence against reasoning power in Killdeers.

"Six downy young from the nestings are preserved in the Los Angeles Museum collection, as follows: 2, April 27, 1938; 2, April 8, 1940; 2, May 21, 1943."

San Diego Society of Natural History, Balboa Park, San Diego, California, July 22, 1943.