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USE OF INTERSTATE HIGHWAY OVERPASSES AND BILLBOARDS FOR NESTING BY THE COMMON RAVEN (*CORVUS CORAX*)

Clayton M. White¹ and Merle Tanner-White²

ABSTRACT.—Common ravens are usually rather shy birds around their nests and avoid nesting too near human activity. We here report the use of overpasses along heavily traveled Interstate Highway 84 in Idaho and Utah for nest placement. Nests are within 6 m of passing vehicles.

The feral pigeon (*Columba livia*) is a common inhabitant of overpasses and underpasses along interstate highway systems. Also, throughout the Great Basin at least, the cliff (*Hirundo pyrrhonota*) and barn (*Hirundo rustica*) swallows frequently nest on these structures. The western kingbird (*Tyrannus verticalis*) has also built nests on overpasses. A thorough survey of over- and underpasses would probably reveal numerous bird species nesting on them.

The common raven (*Corvus corax*), while widespread and often common, tends to be a shy species and nests in remote areas, especially in the eastern United States (Hooper 1977, Knight and Call 1981). Although it is not as retiring in the Great Basin, it nonetheless nests in areas more or less removed from busy human activity, especially as compared to the American crow (*Corvus brachyrhynchos*) that may nest in woodlots surrounding homes. Prior to the arrival of settlers in the Great Basin, ravens doubtless primarily used cliffs for nesting. Since the arrival of settlers, many man-made structures have been used for nest placement (Knight and Call 1981), usually remote from excessive human activity. Currently, high-tension steel pylons for electric transmission line support or other power line poles are being used with increasing frequency by ravens for nesting (personal observation, Steenhof et al. 1985). For example, along Interstate Highway 80 north of Rye Patch, Nevada, we found 10 nests on power poles within a distance of 21.7 km. Seven of the nests had young or adults present. The closest 2 nests with pairs were 0.64 km apart.

This may have resulted from the poles providing new nesting habitat in areas formerly nest-site limited but not food limited. The list of other man-made structures used by ravens for nest placement includes such things as buildings, windmills, and artificial platforms built for hawk nesting (Howard and Hilliard 1980, Knight and Call 1981, McBee 1927). A railroad bridge (Johnson 1899) was used formerly, the nest being located 0.6 m from the rails where a train passed four times daily.

Because overpasses structurally resemble cliffs, it is not surprising that ravens would use them. However, because of the retiring nature of ravens, it is noteworthy that they nested so close to busy vehicular traffic. This is the first report of which we are aware wherein ravens are documented nesting over interstate highways or freeways. We found seven raven nests on overpasses within a 466-km stretch of Highway I-84 between Boise, Idaho, and Brigham City, Utah, in 1986 and 1987. An additional nest was found in the same general area in 1978.

In the 466 km, 69 overpasses were examined. Of these, 12 were constructed in such a way that there were no ledges or other structures for nest placement. From the Wendall-Hagerman area south, to at least the Rupert-Deelo area, the land is so intensively and extensively crop-farmed that ravens are not seen there (although nesting crows may be seen). Between these two areas there is one stretch of interstate along which native vegetation occurs, but a stretch of about 107 km is deemed not suitable for raven nesting. (The development of cropland, unless extreme,

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does not necessarily exclude ravens). There are 22 overpasses in this 107 km, a disproportionate number for the distance, but results because there are many more roads in developed areas. In the mixed native grass and brush vegetation areas one may travel long distances through which no roads cross the interstate. Twenty-four overpasses occur in areas we categorized as native vegetation of mixed grass and brush. Between the junction of I-84 and I-86 and Tremonton, Utah, we judged the habitat to be a complex mosaic of cropland and native vegetation. This area has many ravens, covers 166 km, and contains 22 overpasses and underpasses. Based on habitat and overpass structure, then, we judged only 25 overpasses available to ravens for nesting. We extended our survey to Brigham City, Utah, in spite of extensive crop development between Tremonton and Brigham City, because ravens nest on a steel electric power pylon 300 m from the interstate near Brigham City and could thus easily have used an overpass.

In May 1986 we found a raven nest on the Power Plant Road overpass (Exit 129) of I-84 at the Gooding-Elmore County line in Idaho. It was situated on the top of a pillar support of the overpass that was in the area between south- and northbound traffic lanes (Fig. 1). The nest was about 7.2 m from the nearest road edge and 5.5 m above the southbound traffic lanes. The intact condition of regurgitation pellets below the nest and the amount of fecal stain suggested that the nest was used in 1985 or, at the latest, 1984. The good construction and size of the nest suggested that it had been used more than one year. By May 1987 no pellets remained intact.

In May 1986 a second nest was found on the overpass at the Malta-York exit (Exit 228) of I-84, Cassia County, Idaho. Its location on the overpass, as shown in Figure 1, was about 1 m from the nearest road edge and 5.5 m above the traffic. It was not in use, its state of disrepair suggesting that it had not been used for three or four years. In September 1986 it showed further disrepair, and by May 1987 only a dozen or so sticks remained.

About 4.8 km further south (mile 230.5) another overpass (without an exit) crosses I-84. There was a partially constructed nest on the southbound traffic side in the same location as above. The nest consisted of about



Fig. 1. Nest on Power Plant overpass in Idaho showing position of nest relative to traffic. Overpasses with the type of pillar support shown were those types of construction most easily used by ravens in Idaho. The nest is indicated by the arrow.

15–20 sticks and a couple of mammal ribs (calf size?). In May 1987 a nest of similarly poor construction was on the opposite side of the overpass above the northbound traffic lane. These two nests and the one 4.8 km north may have been built by the same birds and, at least the latter two, were probably never used.

On 14 May 1987 a fifth nest was found above the northbound traffic at Exit 32 (Ranch Road) of I-84 in Box Elder County, Utah. The construction style of the overpass and, consequently, nest placement were different from the above four nests (Fig. 2). The nest was about 6 m to the left of the inside traffic lane and 6.1 m above the traffic. At least three young, approximately two weeks old, were in the nest. Wings of two fledgling meadowlarks (*Sturna neglecta*) were below the nest. On 23 May the three young were about one week from fledging. On 13 June at least two young had fledged.

At the Howell underpass (Exit 26) in Box Elder County, Utah, two more nests were

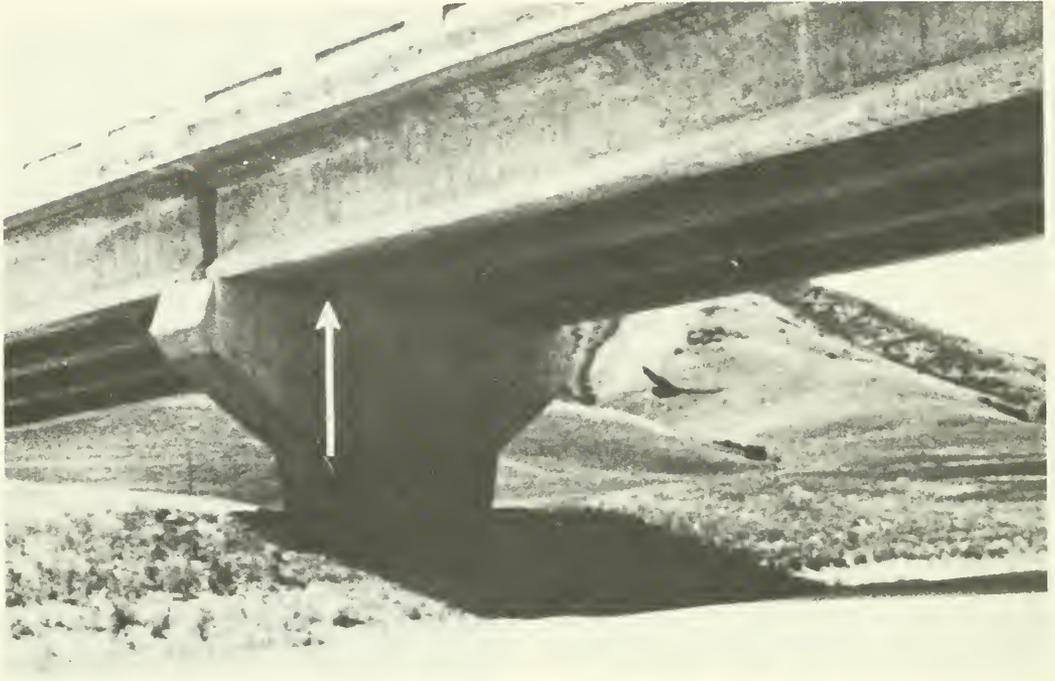


Fig. 2. Overpass construction made in Utah used by ravens. This nest was used in 1987, and its location is indicated by the arrow in the upper figure (also shows an adult leaving the nest). In the lower figure, young nearly ready to fledge (23 May) are shown in the nest.

found on 22 August 1987. Both looked freshly built, but neither had been used beyond the incubation period, if at all. While one was well constructed, the other consisted of only 30–40 sticks. They faced each other on opposite sides of the underpass about 15 m apart. Used cliff or barn swallow nests were within 1 m of them.

Lastly, a nest was found in 1978 on a roadside billboard along Idaho State Highway 81 some 32 km due west of I–84. The nest, from which young fledged from at least 1978 to 1980, was 25 km south of Malta, Cassia County. The billboard, which had been torn down by 1984, was 26 m from the road. This was a dual-directional billboard, with advertisements facing both north- and southbound traffic. The south-facing billboard, about 4.5 m high, was connected to the north-facing sign, and both were supported by two "telephone polelike" poles with the tops of the poles about 3.6 m above ground. The nest was on top of one pole and, although between both signs, was easily accessible to the raven because the north-facing sign was also only about 3.6 m high.

If raven populations continue to increase at the rate shown by Robbins et al. (1986), it will be of interest to see how extensively this "interstate habitat" will be used. The fact that most cars do not stop along the highway and

people remain in the cars has probably removed the human disturbance element from these nestings.

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