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GROUND NESTING AND AGGRESSIVE BEHAVIOR BY THE SWAINSON'S HAWK (*BUTEO SWAINSONI*)

Neil D. Woffinden^{1,2} and James A. Mosher^{1,3}

ABSTRACT.— A successful ground nesting by Swainson's Hawks, *Buteo swainsoni*, is reported for central Utah. Unusual aggressive nest defense behavior is described for this ground nesting pair.

The Swainson's Hawk (*Buteo swainsoni*) is a large Buteo of western North America, nesting almost exclusively in trees (Bent 1937, Life Histories of North American birds of prey, part 1, U.S. Natl. Mus. Bull. No. 167). In central Utah, on 9 May 1973, we found a Swainson's Hawk nest that was constructed on a rock ledge approximately 1.5 m above the surrounding ground. The ledge sloped gently to the ground providing easy access to the nest. The nearest tree was approximately 700 m to the southwest. The nest was composed primarily of dry sticks, both woody and herbaceous, with green, leaf-bearing branches from juniper (*Juniperus osteosperma*) and atriplex (*Atriplex spp.*). The cup was lined with strips of juniper bark and grass. Three young were successfully fledged from this ground nest.

The nest was used only during the 1973 nesting season. In both 1974 and 1975 Swainson's Hawks successfully nested in the small juniper tree, mentioned above. The tree nest was constructed by refurbishing a Ferruginous Hawk (*Buteo regalis*) nest that had previously been built in the 2 m tree. It is not known if the same pair of hawks were involved in all three nestings; the premise appears likely, however, based on the proximity of the two nest sites. Two young hawks fledged from the tree nest in 1974; one fledged in 1975. It would appear that, because of their greater vulnerability, ground nests would be less productive than tree nests. In this particular case, we feel that any

increased vulnerability was compensated by the additional aggressiveness of the ground nesting hawks. However, it should be pointed out that ground nesting Ferruginous Hawks appear to be as reproductively successful as tree nesting pairs.

Bent (1937:231-232) characterized the Swainson's Hawk as "a gentle, unobtrusive bird, living in harmony with its feathered neighbors both large and small." He further stated that this species is not aggressive and "has rarely been known even to threaten to attack an intruder" at the nest. Dunkle (1977, Auk 94:65-71) found Swainson's Hawks nesting in Wyoming to vary in their aggressiveness toward humans, with some females coming to within a few meters of the intruder while others stayed many meters away.

Our nest visits to this Great Basin ground nest elicited highly aggressive behavior from both members of the pair. Attacks were in the form of long, shallow dives that brought the hawks to within a few centimeters of us. These were frequent and intense, and continued until we retreated 30 to 40 m from the nest.

On one occasion, while we were banding the three young, the adults failed to initially react with the usual degree of intensity. A few weak passes were made, after which the female soared to a great height and continued to soar in a tight circle overhead. The male flew from view behind a hill. The female then began a vertical descent, falling rapidly for perhaps 100 m. Pulling out of the

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dive, she circled for a few seconds and began a second descent. At this time the male flew in along the face of the rock outcrop adjacent to the nest ledge, striking the investigator at the nest in the back of the head. Turning 90 degrees, he continued his attack, forcing the second investigator to the ground. He then joined the female who had terminated her dive and was circling above us. They then drifted slowly away from the nest site.

One interpretation of this observation is that nest defense behavior may be a plastic

trait and the degree of aggressiveness is related to the security of the nest site. We would encourage others to be alert to this possible relationship between nest defense behavior and nest site security.

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