

FIRST RECORD OF THE WHISKERED OWL IN NEW MEXICO

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At about 20:00 on 19 April 1974, in Clanton Gulch, Peloncillo Mountains, Hidalgo County, New Mexico, we heard a strange call that only vaguely resembled the song of the Whiskered Owl (*Otus trichopsis*). As we played tapes of typical song of that species, the calls changed and became clearly recognizable as those of a Whiskered Owl. Subsequently, the bird was collected (male, left testis 6.7×5.5 mm, No. 3936, Museum of Southwestern Biology, University

of New Mexico). Efforts to locate other individuals on this and the next night were unsuccessful.

Joe T. Marshall, a renowned "owler," did not record Whiskered Owls on any of his numerous avifaunal censuses of Clanton Gulch (Marshall, *Birds of pine-oak woodland in southern Arizona and adjacent México, Pacific Coast Avifauna* 32, 1957). Likewise, one of us (JDL) has played taped calls of various owl species, including those of *O. trichopsis*, here annually in the spring since 1969 and has not previously recorded Whiskered Owls. Thus we conclude that this individual probably was a vagrant, although Whiskered Owls are common in the nearby Chiricahua Mountains of Arizona.

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FIRST BREEDING RECORDS OF THE BARN OWL IN IDAHO

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The Barn Owl (*Tyto alba*) in Idaho is said to be known from one specimen recorded in Latah County, and its status in the State is yet to be determined (Burleigh, *Birds of Idaho*, Caxton Printers Ltd., Caldwell, Idaho, p. 647, 1972). Our records of these owls in Idaho may help to resolve that question.

In November 1969, we discovered the nest of a pair of Barn Owls and their brood of six young approximately 10.5 miles S of Nampa near Highway 45. The nest was situated in a shallow cavity near the top of a large stack of hay bales. Subsequent checks revealed that all six young fledged in early December.

On 5 June 1972, we found a Barn Owl nest in a crevice in a shallow ravine approximately 3 miles N of Holbrook and 1 mile W of Highway 37. The nest

contained two nearly full-grown young. When checked 2 weeks later, both young had left the nest. A search of the vicinity revealed three Barn Owls—two recently fledged juveniles and one adult. This nest was located only a few miles north of Snowville, Utah, near where Platt (*Great Basin Nat.* 31:51, 1971) flushed three immature Barn Owls from along the high dirt banks of Deep Creek in late July 1969.

On 21 December 1973, a dead juvenile (sex undetermined) was found in a barnyard south of Nampa near the site of the 1969 nest. Its state of decomposition indicated a spring or summer fledging time.

Stewart (*Wilson Bull.* 64:164, 1952) summarized the information which suggested that the northern range of Barn Owls may be limited by difficulties in procuring food during severe winter conditions. We believe that these breeding records may help establish the northern limit of the range of this species in the intermountain region.

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FIRST BREEDING RECORDS OF MERLINS IN MONTANA

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Temple (1972a) included Montana within the breeding range of two subspecies of Merlins (*Falco columbarius columbarius* and *F. c. richardsoni*), but to date there has been no published record of eggs or young of either of these races for Montana. In this paper I report eight positive Merlin breeding attempts and additional observations on four probable attempts. Also included are notes on the nesting ecology of the species and organochlorine residues in three addled eggs.

Silloway (1903:302) was first to report seeing Merlins summering in Montana. He collected an adult male at Flathead Lake on 19 July (U.M. No. 15675) and an immature male ("young of the year") at Swan Lake on 26 July (U.M. No. 1617). He iden-

tified the adult as *columbarius* and the immature as *richardsoni*. Saunders (1921:66) listed each race as a "rare summer resident."

During the breeding season in 1970, I first noted adult Merlins on the plains in central Montana. On 17 June 1972, I observed a male calling and apparently defending a territory, but on subsequent visits I found neither the bird nor its nest. In 1973, I located two active nests, and in 1974 three were found. I learned from qualified observers that Merlins were breeding in other counties in Montana. In 1970, P. Byrne (pers. comm.) located four recently fledged young and their parents in Missoula County. According to Temple's (1972a) maps and habitat descriptions, these birds were probably *columbarius*. In 1973 C. Carlson (pers. comm.) found a pair with three young in Valley County. In 1974 M. Arnold (pers. comm.) found a nest with two young in Toole County.

In addition to these positive nesting records (for which eggs or young were observed), several prob-

TABLE 1. Merlin breeding records in Montana.

Record No.	County	Year	Nest site	Habitat	Eggs	Nestlings	Fledglings	Source
1	Missoula	1970	Corvid nest in conifer	Montane parkland	?	?	4	P. Byrne (pers. comm.)
2	Lewis and Clark	1973	Magpie nest in douglas-fir	Conifer grove bordering open prairie	?	5 ^a	0	present study
3	Valley	1973	Crow nest in ponderosa pine	Windbreak near highway on prairie	?	3	3	C. Carlson (pers. comm.)
4	Cascade	1973	Magpie nest in douglas-fir	Conifer grove at cliff base above prairie	? ^b	0	0	present study
5	Lewis and Clark	1974	Magpie nest in douglas-fir	Small dense conifer grove in mesic draw	? ^c	0	0	present study
6	Cascade	1974	Magpie nest in limber pine	Scattered grove on butte slope above open prairie and cultivated fields	5 ^d	1	1	present study
7	Cascade	1974	Magpie nest in douglas-fir	Conifer grove on hillside above prairie	5	5	5	present study
8	Toole	1974	Magpie nest in conifer	Conifer grove	?	2	2	M. Arnold (pers. comm.)

^a Hatchlings, infested with *Simulium* flies, were gone one week later.

^b Eggshell fragments and feathers found in nest; dead female found below.

^c Two broken eggs recovered from abandoned nest.

^d Three nonviable eggs collected for pesticide residue analyses.

able records also deserve mention. K. Walcheck (1970, pers. comm.) located three pairs of Merlins in Choteau County in 1969. All three pairs called and nests were presumed present. I traveled through Walcheck's study area in 1972 and 1973, and in 1974 I visited the places where he found birds in 1969. American Kestrels (*Falco sparverius*) were common in these locations, but I never observed a Merlin. During June and July 1973, L. Thompson (pers. comm.) repeatedly observed a pair of Merlins calling in Toole County. On 3 August 1974, I visited the area with him, and we located one Merlin which, because of its plumage, tameness, noisiness, and ineptness in repeated attacks at approaching Black-billed Magpies (*Pica pica*), we judged to be an immature, fledged that same year.

When an observer approached within 1.0–0.5 km of a nest, both adults usually began calling. Once, an adult male began circling and calling when I flushed him approximately 1.5 km from the nest. In contrast, incubating females at three nests on occasion remained silent on the nest until the observer was within 100 m. One female remained silent in the nest until I began to ascend the nest tree.

Although adults are aerial and highly vociferous when defending a nest, Merlin territories in Montana were difficult to locate, because they were so widely scattered. Eleven of the 12 confirmed or probable Merlin territories that are reported herein were located on chance encounters. After finding two nests in 1973, I searched likely habitat for additional pairs, but I found none. The closest, concurrent, positive

breeding sites in the 2100 square km (800 square mile) area which I searched intensively were 17 km (10.5 miles) apart.

All eight of the positive nesting sites were in conifers (table 1). One nest was in a ponderosa pine (*Pinus ponderosa*) in a windbreak, four were in semi-dense douglas-fir (*Pseudotsuga menziesii*) groves, another was in a row of limber pines (*Pinus flexilis*) in a scattered grove. Walcheck (pers. comm.) believed that two pairs of defending adults which he observed were nesting in limber pines; a third pair was probably using a cavity in a cottonwood (*Populus sargentii*). On the plains of Saskatchewan, where conifers are very rare, Fox (1964) found that most nests were in deciduous trees. However, in situations where both deciduous and coniferous trees were available, the latter were utilized. In Wyoming, Merlins nest in deciduous trees (C. White, pers. comm.).

With the exception of Byrne's observations in the mountains west of the continental divide, all positive and probable nesting records were near flat or rolling grasslands. At three sites the grassland lay below the nest. At two others the grasslands were on the hills above the nest groves. One nest was near cultivated land, another in a shelterbelt near a highway.

In Montana, Merlins use old corvid nests. Six were vacant magpie nests with the canopy at least partially intact, the remaining two were Common Crow (*Corvus brachyrhynchos*) nests. Of the 25 nests reported by Fox (1964), 13 were crow nests, 10 magpie nests, and two were natural cavities.

Most nest locations were checked the year follow-

ing the known breeding attempt. I have no records of the same nest being used in successive years, but in 1974 a pair of Merlins nested 1.8 km from an unsuccessful 1973 nest site. In 1972 I observed an adult male calling and circling at the same location where in 1973 the adult female was found dead by the nest.

In eight breeding attempts (table 1), at least 20 young hatched and 15 fledged. Three nests failed altogether. These productivity figures are relatively low when compared with pre-pesticide estimates for Great Plains Merlins (Fox 1971) and recent data from Newfoundland (Temple 1972b), but they resemble recent data from the Canadian prairies (Fox 1971, pers. comm.).

Three eggs that failed to hatch from a clutch which fledged one young were submitted to the Denver Wildlife Research Center for determination of organochlorine residues. The mean residue levels (wet weight basis) were DDE 9.40 ppm, dieldrin 0.80 ppm, and heptachlorepoxyde 0.56 ppm. Polychlorinated biphenyls and toxaphene were not detected at a 0.05 ppm level of sensitivity. These residues represent moderate contamination and are sufficient to induce significant shell thinning and reduced hatching success (Fox pers. comm.). Fox (1971) and Temple (1972b) reported that Merlins currently lay thinner-shelled eggs, hatch fewer young, and produce fewer fledglings than in the pre-pesticide era.

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THE MISSISSIPPI KITE IN ARIZONA: A SECOND RECORD

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Although the Mississippi Kite (*Ictinia mississippiensis*) is generally considered a resident of the south-central and southeastern United States, there have been two recent records of this species from the Southwest—a casual record for New Mexico (Hubbard, *New Mexico Ornithol. Soc. Publ. No. 3*, 1970) and a breeding locality in Arizona (Levy, *Condor* 73:476, 1971). Levy's record of an estimated 10 nesting pairs in riparian habitat in southeastern Arizona on the San Pedro River, near Winkelman, was the first for the species in Arizona.

On 15 June 1970, along the Verde River near Camp Verde, Yavapai County, Arizona, Bill Burbridge, a ranger at Coconino National Forest, confiscated an adult female kite from a boy who had been shooting. The specimen was deposited in the collection of the Museum of Northern Arizona, Flagstaff (Z8.2949). Dissection indicated that the bird was breeding, for a fully developed egg was found in the lower portion (shell gland) of the oviduct. The ovaries were massive, with the largest single ovum measuring 5 × 5 mm. Total length of the bird was 364 mm and the wing chord was 302 mm. The weight was 307.3 g.

On 21 June 1973, Becky Daltroff and Peggy Whit-

man observed two more adult kites less than 200 m from where the above specimen was confiscated. Again, on 3 July 1973, in the same area, Chris Norman saw one adult kite.

The specimen and the other two sightings were from an area that contains dense stands of cottonwood (*Populus fremontii*). Previous studies (Carothers and Johnson, A summary of the Verde Valley breeding bird survey, 1971. Arizona Game and Fish Dept. Land and Water Project Invest., Verde River, 1972) have shown that the cottonwood stand within which the breeding female was taken contained 95 trees/acre, with an average tree height of 20 ft. The specimen and the sight records reported here suggest the possibility of two pairs of kites nesting in this portion of the Verde River.

Levy (1971) questioned whether kites had always been resident in Arizona but in such low densities as to be overlooked, or whether they were relatively recent immigrants to the State. We believe they are recent immigrant but might become more numerous if there is no further loss of riparian habitat. Since 1968, we have been studying avian populations along the major river drainages in the central and northern portions of Arizona (see Carothers et al., *Am. Zool.* 14:97-108, 1974). We have no records of kites prior to the observations reported here, and although we searched for them during 1974, we saw none in the Verde Valley.

Levy (1971) expressed concern for the survival of the species in Arizona because its preferred nesting habitat along the San Pedro River would have been eliminated by a scheduled phreatophyte control project. Much of the riparian vegetation in the Verde