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FIRST NESTING RECORDS AND CURRENT STATUS OF THE BLACK-SHOULDERED KITE IN ARIZONA

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On 5 August 1983 Gatz and Jakle observed two pairs of Black-shouldered Kites (*Elanus caeruleus*) nesting in a row of Fremont Cottonwoods (*Populus fremontii*) along the Santa Cruz Wash channel on abandoned farmland 11 km south of Casa Grande in Pinal County, Arizona. Although this record is the first documented nesting attempt, previous nesting success in Arizona is evidenced by a juvenal-plumaged kite photographed (Figure 1) in a pecan orchard in Pima County near Pinal Air Park on 19 June 1982 (Seymour and John Levy pers. comm.) and by three fledged kites being fed by two adults in the same orchard near Pinal Air Park on 25 July 1983. A third area of likely nesting is near Elfrida, Cochise County, where two adult and two calling juvenal-plumaged kites were observed from September to November 1983 and where two adults and four immatures were seen from August to October 1984 (Arnold Moorhouse pers. comm.). The Elfrida birds were observed hunting over irrigated alfalfa fields and perching in dead cottonwoods in an area about 3 km from a pecan orchard. This report documents the first observed nesting attempt and summarizes Arizona records of this species.

One week before confirming the nesting attempt, Gatz and Jakle observed two kites mobbing an immature Red-tailed Hawk (*Buteo jamaicensis*). A search of the area defended by the kites revealed a partially constructed nest in the upper branches of a nearby 12 m high cottonwood. A complete kite nest which had probably blown down earlier in the year was on the ground below the nest tree. On 5 August Gatz and Jackle saw a pair of kites at the nest site; a second pair of kites was also nesting in a cottonwood 400 m north of the first nest site. Members of both pairs were gathering nesting material and building their nests. The male at the first nest site was gathering nesting material by perching in the lower portion of a live cottonwood tree and breaking off thin, dead branches with his beak. The first pair copulated three times within a 2.5 hour period. When Glinski and Monson visited the nesting location on 12 August, kites were incubating on both nests.

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Both nests were blown down during a storm in mid-August, ending the nesting attempt. The first nest contained eggshell fragments; Gliniski saw only three kites in the area at this time. On 30 September Gatz and Jakle found only one kite in the area: it did not visit the nest trees nor display any territorial behavior toward other raptors in the area during 1.5 hours of observation. Gatz saw no kites in this area on 8 November 1983. An adult kite was shot by a dove hunter in this area in September 1984. This is the first specimen for Arizona and it is deposited in the University of Arizona collection.

The Black-shouldered Kite is a newcomer to Arizona. The first sighting was of a single bird west of the Dragoon Mountains in Cochise County on 6 November 1972 (Monson 1973). As of September 1984 there have been over 60 sightings involving up to 105 individual kites from 42 different locations in 8 Arizona counties (Cochise, Graham, Maricopa, Pima, Pinal, Santa Cruz, Yavapai and Yuma). All but three of these kite sightings have occurred since 1978 (Figure 2) and all but three of the sightings were made in south-central and southeastern Arizona (Monson 1973; Ellis and Monson 1979; Rosenberg et al. 1980, 1981; Witzeman et al. 1980; Monson and Phillips 1981; Hubbard et al. 1982; Witzeman 1983a, 1983b; Janet Witzeman pers.

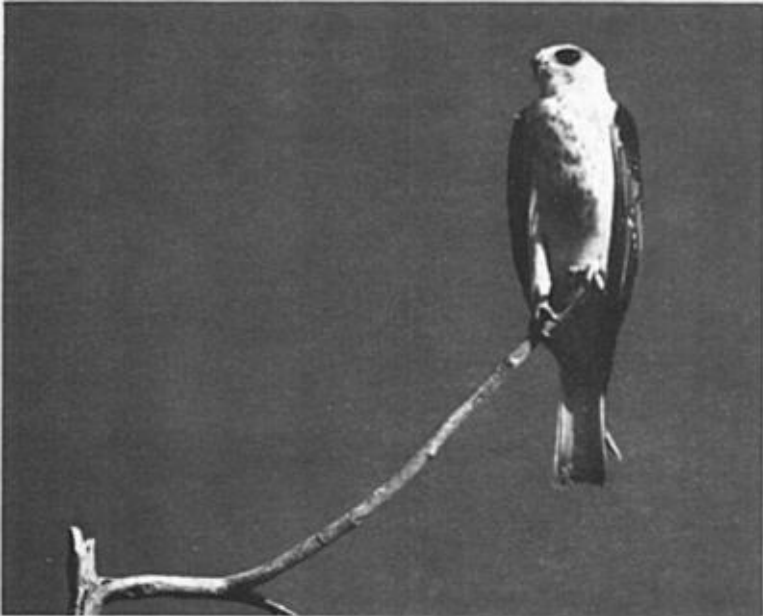


Figure 1. Juvenile Black-shouldered Kite (note streaked breast and dark band on tail). Pima County, Arizona, 19 June 1982.

Photo by John Levy

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comm.). The three Arizona sightings not in the south-central or the southeastern part of the state were of single birds in southwestern Arizona on the Colorado River, Yuma County, in March and November 1980 (Rosenberg et al. 1980, 1981) and in March 1984 (Janet Witzeman pers. comm.).

Although Black-shouldered Kites have been observed in Arizona since 1972, indications of breeding in the state are quite recent. All sightings of kites in Arizona were of single birds until 5 June 1982 when three adults were seen near Pinal Air Park (Witzeman 1983a). Since then, up to five kites, including fledged young, have been observed during the summers of 1982 and 1983 near Pinal Air Park. These sightings were followed by the attempted nesting of the two pairs of kites near Casa Grande in August 1983 and by the fledged kites seen in the Elfrida area in 1983 and 1984 mentioned earlier in this paper. Four additional areas with evidence of nesting were reported in 1984. An active nest was found in oak savannah habitat in the outer crown of a 10 m tall Emory Oak (*Quercus emoryi*) 150 m from a residence near Sonoita, Santa Cruz County (Sidney Franklin pers. comm.). The site was visited by Monson and Jane Church on 15 June 1984, the day after five nestlings had fledged. Transfers of prey from adult to adult and from adult to young were observed. The prey appeared to be cotton rats (*Sigmodon* sp.). Three recently fledged kites and two adults were photographed between

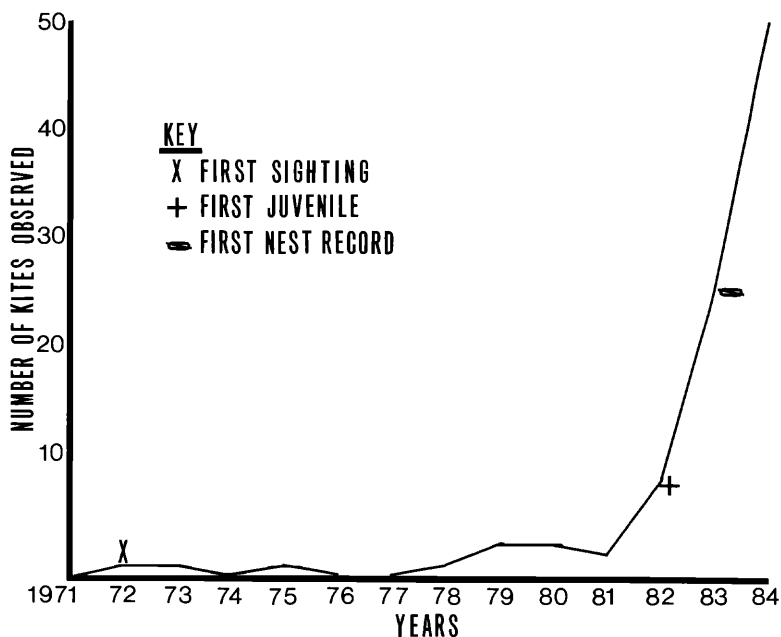


Figure 2. Number of Black-shouldered Kites observed annually in Arizona.

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pecan groves near Green Valley, Pima County, in June 1984 (Don Garver pers. comm.). The young remained in the area into August; only the adults were seen in early September. A third probable nesting area was 5 km southeast of downtown Tucson, Pima County, where a recently fledged young and 2 adults were observed on 14 August (Rick Bowers pers. comm.). The fourth area was on the Buenos Aires Ranch near Sasabe, Pima County, where an immature bird was seen with adults in August 1984 (G. Scott Mills pers. comm.).

The increase of this species in Arizona follows its general population increase and range expansion in other parts of North and Middle America during the last 40 years. This increase is described in detail by Eisenmann (1971) and Pruett-Jones et al. (1980). This species is also expanding its range in Portugal, Europe. Sacarrao (1982) suggests that this increase in Portugal may be related to a rise in mean temperature, but he does not rule out intensification of agriculture and the subsequent increase in rodent populations as contributing factors. Kenn Kaufman and Scott Terrill (pers. comm.) suggest a northward expansion from Central America to explain the sudden appearance of this species in western Mexico in the 1970s and its subsequent invasion of Arizona in the 1980s. The reasons for this recent population increase and expansion are unknown but may be related in part to the increase in suitable foraging habitat created by irrigated agricultural lands (Krebs 1966), retired cropland (Waian 1976), and by grassland succession after brush and tree clearing operations (Webster 1974). In San Diego County, California, Dixon et al. (1957) noted that when former kite habitat of scattered trees, open spaces and dense grass had been cleared for agriculture, the kites moved into nearby orchards where the ground cover was mowed and left as mulch, creating rodent habitat and providing a prey base for the kites. The recent increase in retired cropland and irrigated pecan orchards in southeastern Arizona may provide additional new nesting habitat for kites in this state.

A complete list of Black-shouldered Kite sightings in Arizona through September 1984 is available from the authors.

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Sketch by Keith Hansen