

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Pica hudsonia*
COMMON NAME: Black-billed magpie,
SYNONYMS: *Corvus hudsonicus* Sabine, *Pica pica*
FAMILY: Corvidae

AUTHOR, PLACE OF PUBLICATION: Sabine, in Franklin, Narr. Journ. Polar Sea, 1823, p. 671.

TYPE LOCALITY: Cumberland House, Saskatchewan, Canada.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: “Formerly included within the (now) Eurasian *P. pica*, but split from that species on the basis of a number of morphologic, behavioral, and genetic characters (AOU 2000, Birkhead 1991, Enggist-Dublin and Birkhead 1992, Zink et al. 1995). Considered conspecific with *P. nuttalli* by some authors (e.g. Phillips [1986], who treated *nuttalli* as a subspecies of *P. pica*) and constituting a superspecies with it (AOU 1998).” (NatureServe 2002).

DESCRIPTION: A medium-sized bird with a bold pattern and black bill. Length is 45-60 cm (17.7-23.6 in), average wingspan 63.5 cm (25 in), and mass 145-210 g. The sexes are similar in appearance, and the plumages are similar throughout the year. Adults are largely black, with contrasting white scapulars, white belly, iridescent metallic blue-green wings and tail, and large white markings on primaries, which forms a white patch on the wing when the wing is extended. The tail is long and graduated (wedge-shaped). Sexes are distinguished by differences in size; males are larger and have 16-20% greater mass than females. Juveniles are similar to adults, but duller overall, with less iridescent upperparts, buffier underparts, and rounder (less square) tips on rectrices. (Trost 1999).

AIDS TO IDENTIFICATION: Eurasian black-billed magpies (*Pica pica*) are well known for their ceremonial gatherings in early spring. Interpreted as territorial probings by dominant young birds, these gatherings have never been observed in either of North America’s magpie species (black-billed [*P. hudsonia*] and yellow-billed [*P. nuttalli*]), probably owing to fundamental differences in the types of territories they hold. (Trost 1999). Calls and many behavioral traits resulted in North American Black-billed Magpie being split from Old World

(=Eurasian) populations of magpie, whose calls are faster and lower pitched (National Geographic 2002).

The North American Black-billed Magpie is very similar to the Yellow-billed Magpie, but the Black-billed is noticeably larger, with a longer tail and black (not yellow) bill. These species are also distinguishable by their distributions, which do not normally overlap. The harsh alarm calls of the Black-billed and Yellow-billed magpies – *skaa skaa ka ka ka* – sound similar, but are quite different from the lower-pitched calls of the Eurasian magpies. (Trost 1999).

ILLUSTRATIONS: Color photo and Black & White line drawing (Trost, 1999: p. 1 and 9).
Color drawings (Sibley, 2000: p. 358).
Colored drawing (Peterson, 1961: plate 44)
Color photo (Udvardy and Farrand, Jr., 1994: plate 657)
Color drawing (National Geographic, 2002: p. 317)
Color photo (K. Nickell, 2002:
<http://www.greenbackedheron.com/photo.cfm?photoid=823>)
Color photo (S. Messick,
<http://www.mangoverde.com/birdsound/picpages/pic189-65-2.html>)
Color photo (D. Paul, <http://www.utahcdc.usu.edu/>)
Color photo (K. Johns, www.enature.com/fieldguide/)

TOTAL RANGE: Resident in North America, south-coastal and southern Alaska south through western Canada to eastern California, southern Nevada, southern Utah, extreme northeastern Arizona, northern New Mexico, western and northeastern Oklahoma, and western Kansas. Wanders widely outside of normal breeding range in the winter.

General distribution in the West is thought to be limited by climatic factors such as temperature and humidity (Bock and Lepthien 1975), rather than by food availability; correlates well with cold-type dry-steppe climate (Linsdale 1937). Magpie distribution is restricted to regions west of 100°W (Hayworth and Weathers 1984), which is thought to be due to high temperatures and humidity in the Midwest. According to Root (1988), they are found only at elevations >480 m (1574 ft), in southern portions of their range; in eastern portions, they do not extend to areas with >60 cm (23.6 in) of rain/yr. (Trost 1999).

RANGE WITHIN ARIZONA: Northeastern portion of state, in Apache County. This includes Teec Nos Pos Wash, Chinle Wash, vicinity of Many Farms, Walker Creek, and historically south of Puerco River.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: According to Trost (1999), *Pica hudsonia* is an “opportunistic forager and scatter hoarder (i.e., caches food at scattered locations). They appear to have a symbiotic

relationship with large ungulates, including domestic species, gleaning ticks (*Dermacentor* sp., *Boophilus* sp., *Ixodes* sp.) and other ectoparasites from them (Ryser 1985).” Scatterhoarding of food by magpies is usually only for short term; items are recovered within 1 to 2 days (Birkhead 1991 in Trost 1999). They often cover the cache with a stone or leaf, and apparently remember many cache sites by sight or smell. The choice of foods to cache seems to depend on abundance rather than quality. (Trost 1999).

When in flight, their long tail allows for quick changes in direction. When descending from heights, they often repeat a series of J-shaped swoops, with wings nearly closed in 20- to 30-m dives. Their level flight is labored and slow. Black-billed magpies typically modulate their flight with bounding nonflapping phases, with wings nearly flexed, causing deceleration. (Trost 1999). Vocalization consists of a nasal, rising *jeeeek*; harsher, lower *rek rek rek rek* or *weg weg weg weg weg*; rapid *shek shek shek shek*, three to five notes. Also a high, long, nasal *gway gway* or *gwaaaaay*; rather nasal, hard, querulous *ennk*. (Sibley 2000).

Treetop-sitting is a behavior that denotes ownership of space (territoriality). It is equivalent to song in other songbirds. In North America, magpies defend only the nest tree and in some areas are almost as colonial as Yellow-billed Magpies. Clumping of nests in North America probably reflects resource patchiness in western environments (Stone and Trost 1991a in Trost 1999).

Mean life expectancy is 3.5 years for males, and 2.0 years for females. Nest-predators of Black-billed magpies include American Crows (*Corvus brachyrhynchos*), Fox squirrels (*Sciurus niger*), long-tailed weasel (*Mustela frenata*), mink (*M. vison*), domestic or feral cats (*Felis domesticus*), raccoon (*Procyon lotor*), Northern Harrier (*Circus cyaneus*), Red-tailed and Swainson’s hawks (*Buteo jamaicensis* and *B. swainsoni*), Common Raven (*Corvus corax*), and especially Great Horned Owl (*Bubo virginianus*). The most lethal aerial predators of young and adults include the larger accipiters, namely Northern Goshawks (*Accipiter gentilis*) and Cooper’s Hawks (*A. cooperi*), as well as Merlins (*Falco columbarius*), Prairie Falcons (*F. mexicanus*), and Great Horned Owls. (Trost 1999).

REPRODUCTION: A social species that nests individually or in small colonies, black-billed magpies are monogamous, with some pairs remaining together for life. Courtship consists of the male circling the female with his wings flashing and his flared tail held high, and tilted toward her. Males help build the nests and feed both the female and young; only the female incubates. Nests are domed structures of sticks, with a mud cup and anchor, commonly in trees or bushes. The mud cup is lined with grass. Egg laying ranges from late March to early June, depending on altitude and temperature, and before many other species of birds. No second brood is laid if the first is successful. (Trost 1999). Clutches of 4-9 eggs are often laid in the early morning; 1 egg laid per day. Smooth and glossy eggs have a tan or olive background, with variable quantities of dark brown speckles, sometimes concentrated as a ring on the blunt end. Incubation ranges from 18 days (Linsdale 1946, Buitron 1983b in Trost 1999) to 24-25 days (Trost 1999). Hatching is asynchronous; thus nestling survival is expected to be lower than synchronous hatching. Hatchlings are altricial and nidicolous; skin

pink, naked; eyes remain closed for 7 days. Young fledge 24-30 days after hatching. Young remain near the nest for 3-4 weeks and depend on food from their parents for up to 6-8 weeks. Juveniles will flock during the fall and winter, which allows young to form pair bonds and reciprocal bonds, especially among males who cooperate to rob predators (Scharf and Clover 1983, CHT *in* Trost 1999). Juveniles mature in one year.

FOOD HABITS: Mainly feeds on carrion, seeds, and ground-dwelling arthropods. They are an opportunistic and omnivorous feeder, foraging on the ground in open areas, rarely in trees. Individuals will watch each other, as well as predators with food, and gain information about potential food sources. They eat grain or flip dried cow manure, looking for insects, as do other corvids (Stirling 1968). They will turn over ground litter with either their bill or feet; such scratching behavior with their feet has not been observed in other corvids. (Trost 1999).

HABITAT: Open country with scattered trees, brushy habitats, sagebrush communities, riparian and open woodland, croplands and pastures. During breeding season, they prefer thickets in riparian areas, often associated with open meadows, grasslands, or sagebrush for foraging (Linsdale 1946, Bock and Lepthien 1975). In Arizona, they nest primarily in cottonwoods and Russian olives. In the nonbreeding season, they are less specific in their habitat requirements than during the breeding season, frequently near human habitats. Long tails and slow flight require individuals to keep near cover to avoid raptors, but they do not usually favor dense woods, except to roost (Goodwin 1976). (Trost 1999).

ELEVATION: In Arizona, they have been found at elevations ranging from 4,880 – 5,490 ft (1488-1674 m). Historically in Arizona, they have been found as high as 5,680 ft (1732 m). (HDMS, AGFD unpublished data accessed 2003).

PLANT COMMUNITY: For their range, they can be found in cropland/hedgerow, grassland/herbaceous, old field, savanna, shrubland/chaparral, suburban/orchard, woodland-conifer, woodland-hardwood, and woodland-mixed (NatureServe 2002).

POPULATION TRENDS: *Pica hudsonia* has declined recently throughout much of the West; pesticides and/or habitat changes may be involved (NatureServe 2002). According to Trost (1999), “In general, numbers appear relatively stable throughout North American range of this species...Densest breeding populations are in foothills of central Rockies (Idaho, Utah, Colorado, and n. New Mexico), Columbia River valley (WA), e. Oregon, central Nevada, and s. Alberta and Saskatchewan...Density is strongly influenced by adequate nesting substrate and food availability, as well as by human persecution and nest disturbance.”

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:	None
STATE STATUS:	WSC (AGFD, WSCA in prep)
OTHER STATUS:	None

MANAGEMENT FACTORS: Threats include shooting and trapping, pesticides and other contaminants/toxics, collisions with stationary/moving structures or objects, degradation of habitat (fragmentation due to agricultural developments and urban sprawl), and disturbance at nest and roost sites (birds are highly susceptible from incubation through fledging). (Trost 1999).

In Arizona, the black-billed magpie does not receive much management attention. It is locally common here, and management conflicts are minimal. Because they take advantage of the food sources created by humankind, magpies are reasonably compatible with human habitation. At most, they need a little more protection of the riparian habitats in which they nest. (Sferra, 1995).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA – Navajo Nation.

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

Pica hudsonia is common in folklore. They were first discovered in North America by the Lewis and Clark expedition, which documented magpie's behavior of entering camps and stealing food. In addition, large flocks would follow buffalo hunting parties in the late 1800s, feeding on hunt refuse. (Sferra, 1995).

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