

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

Animal Abstract

Element Code: ABNKD06041

Data Sensitivity: YES

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Falco femoralis septentrionalis*

COMMON NAME: Northern Aplomado Falcon

SYNONYMS:

FAMILY: Falconidae

AUTHOR, PLACE OF PUBLICATION: Species *F. femoralis*: Temminck, 1822. Subspecies *F. f. septentrionalis*: Todd, W.E.C., 1916, Proc. Biol. Soc. Wash., 29:95-98.

TYPE LOCALITY: Collected near Fort Huachuca Military Reservation, Cochise County, Arizona.

TYPE SPECIMEN: USNM 111485 (adult male), collected by H.C. Benson on May 6th, 1887.

TAXONOMIC UNIQUENESS: Three subspecies are recognized within the species, based on differences in size and coloration; *F. f. septentrionalis*, *F. f. femoralis*, and *F. f. pichincae*. The latter two being confined primarily to South America, only *F. f. septentrionalis* is found in the United States.

DESCRIPTION: Medium sized colorful falcon; total length 15-16.5 in (38-43 cm); wingspan 40-48 in (102-122 cm). Clark and Wheeler (1987) reports "lengths of 14-18 inches (35-45 cm); wingspans of 31-40 inches (78-102 cm), and weights of 8.4-16.0 oz (208-460 g)." Upper parts slate to bluish gray, underparts tricolored with whitish to buffy upper breast separated from cinnamon belly and under tail coverts, by blackish belly band that narrows at mid-belly. On the face and head, surrounding the typical falcon dark eye and mustache, parallel white and black stripes connect each eye with the nape. Tail long, blackish, and strikingly marked by six to eight white bars; thighs and undertail coverts orange-brown (distinctive). The fleshy eye ring, cere, and legs are brilliant yellow; iris color is dark brown. Sexes similar in appearance, but females noticeably larger than males.

Juveniles more brownish than adults, with whitish areas from head through breast replaced by cinnamon, and breast with bold dark streaking. Dark tail has 9 or more thinner buffy bands. Cere, eye-ring, and leg colors are pale yellow to yellow.

AIDS TO IDENTIFICATION: Long tailed falcon with long pointed wings intermediate in size between American Kestrel (*Falco sparverius*) and Prairie falcon (*Falco mexicanus*). Extremely graceful and rapid in flight, though more listless than a Merlin (*Falco columbarius*) or Peregrine (*Falco peregrinus*). American Kestrel is smaller, has rufous tail

and back and 2 mustache marks, and lacks dark cummerbund. In flight, tail appears shorter and underwings paler than those of Aplomado. Merlin is smaller, has completely streaked underparts, and lacks distinct facial pattern and dark cummerbund. Peregrine Falcon is larger, has broader wings and a single mustache mark, and lacks dark cummerbund. Prairie Falcon is larger and paler, has broader wings with a black center on underwing, and lacks dark cummerbund. Crested Caracara (*Caracara cheriway*) has similar pattern on body but is much larger and has different head pattern, much longer neck, and different wing shape. Mississippi Kite (*Ictinia mississippiensis*) is similar in size and silhouette and also has light line on trailing edge of wing, but lacks strong face pattern and cummerbund. (Clark and Wheeler 1987).

ILLUSTRATIONS: Color drawing (Peterson, 1990:187)
Color drawing (Birds of North America, 1987:201)
Color drawing (Robbins et al, 1983:81)
Color drawing (National Geographic, 1999: 121)

TOTAL RANGE: Historically: Southwestern United States (Arizona, New Mexico, Texas), Mexico, Guatemala. The species occurs from Mexico through South America to Tierra del Fuego. The subspecies *septentrionalis* occurred from southeast Arizona, south central New Mexico, and west and south Texas through Guatemala and along the Pacific slope, perhaps as far south as Nicaragua. Currently: it is very rare in the United States and extremely uncommon in northern Mexico, but regular from Veracruz southward (Corman 1993).

RANGE WITHIN ARIZONA: Before 1890 a fairly common summer (or permanent?) resident in the southeast; since then virtually extirpated in the state, with only two credible records since about 1910: near McNeal, Cochise County, 13 November 1939, and St. David, 7 October 1940 (Monson & Phillips 1981). Also observed (1977) west of Rodeo, New Mexico in Cochise County, Arizona. Sight records since 1940 are unsubstantiated, and the bird's status in Arizona now must be regarded as questionable.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Aplomados are especially vocal during the courtship period, and both male and female give *chip* calls, sometimes in concert. Hungry young utter tremulous *chitters*. Adults utter a fast-paced *kee-kee-kee* in the presence of territorial intruders and potential predators of eggs and nestlings. (Keddy-Hector 1998). Active flight is rapid and direct, with light, quick wingbeats, but when bird is not pursuing prey, flight is slower, buoyant, and kestrel-like. The Aplomado glides on flat wings or with wrists below body and wingtips curved upward. It soars on flat wings. This falcon hovers when its prey goes under cover. Main prey (birds) are captured after a rapid direct flight from a perch, sometimes including a long tail-chase or pursuit in heavy brush on foot. They hunt from both exposed and inconspicuous perches. Hunting from soar, cooperative hunting by pairs, and pirating from other raptors has been reported. They regularly gather at grassfires to hunt displaced prey. (Clark and Wheeler 1987).

In eastern Mexico, and apparently also in the United States, mated pairs remain together year-round in the same territory. They have a strong fidelity to nesting territories. Mated individuals soar together, hunt together, perch near one another, and feed together throughout the year. Aplomado Falcons probably reach physiological maturity at the end of their first year, but do not form a pair bond until the spring of their second year. (Keddy-Hector 1998).

REPRODUCTION: Eggs are laid in the old nests of other birds or in natural platforms such as bromeliads. In the United States Aplomados have used platforms built by Swainson's hawks (*Buteo swainsoni*) and Chihuahuan ravens (*Corvus cryptoleucus*) atop low tree or yucca. Nests constructed of twigs, lined with bits of grass. Courtship consists of aerial display by the male, and mutual soaring and diving by the pair. Eggs (white/pinkish-white, marked with brown) are laid any time between January and July, but most clutches of around 2-3 eggs laid April or May. Both adults incubate (typically 32 days), but females brood newly hatched nestlings closely, which may be the only time of year that mated males hunt alone. Nestlings fledge at around 35 days after hatching, but remain in the vicinity of the nest for at least a month after leaving the nest. Both adults provide food to the fledged young.

FOOD HABITS: Mostly takes birds and insects, but also bats, small rodents and lizards (Hector 1985). The prey includes such rapid fliers as parrots, snipe (*Gallinago*), doves and even a domestic pigeon. It also snatches food from the ground, including small mammals and reptiles. Even fish were found in the stomach of one; and a fledgling hummingbird in another (Brown et al 1968). Pairs often hunt together, frequently late in the day after sunset. Searches for prey from observation posts in trees, while soaring, or while flying at fast pace just above or through dense shrubs and trees (Wetmore 1926a). Often hunts well before sunrise and well after sunset (Friedman and Smith 1955).

HABITAT: The Aplomado Falcon has extremely broad habitat preferences. Most late nineteenth- and early twentieth-century aplomado records from Arizona, New Mexico, trans-Pecos Texas, and central Mexico, were in Semidesert Grassland or riparian associations with scattered trees and shrubs, from 3,300-4,900 feet above sea level. Most abundant however, in the coastal grasslands of Texas and the savanna country of eastern Mexico. (Keddy-Hector 1998).

ELEVATION: The only reliably documented Arizona observation was made in 1977 at an elevation of 4,180 ft (1275 m). Most records from southwestern United States are from 3,300-4,900 feet (1007-1495 m) above sea level. The full species has been reported from sea level to above 14,100 ft (4300 m) (Johnson 1965).

PLANT COMMUNITY:

POPULATION TRENDS: Though found by most of the early explorers in or near southern Arizona, the Aplomado Falcon disappeared abruptly, for unknown reasons, leaving its seasonal status here in considerable doubt (Philips et al 1964). Despite federal Endangered status, no recent data is available from any comprehensive population monitoring program. No evidence of declines ever documented in any portion of Mexico.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: LE (USDI, FWS 1986)
STATE STATUS: WC (WSCA, AGFD in prep)
[Endangered, TNW, AGFD 1988]
OTHER STATUS: P (MFENSL, 1994)

MANAGEMENT FACTORS: Use of pesticides in Latin America is now considered to be a diminishing threat to the survival of the Northern Aplomado Falcon. Formerly, areas that may have been structurally suitable for the birds might have actually be unsuitable because organochlorine pesticides were applied heavily to agricultural lands where falcons foraged. The birds currently breeding in south Texas are showing a high degree of adaptation with regard to nesting habitat (pers. comm Jenny 2001). This would appear to indicate that the importance of a viable prey base is more significant a factor in the birds return, than the abundance of a particular historical habitat type.

PROTECTIVE MEASURES TAKEN: With the goal of re-introducing the Northern Aplomado Falcon to the south western United States, a captive breeding program initiated by The Peregrine Fund at the World Center for Birds of Prey, Boise, ID in the late 1980s is ongoing. Aplomado Falcon release sites established in south Texas by The Peregrine Fund over the last two decades have produced a core breeding population recently estimated to be 30 pairs (pers. comm Jenny 2001). The Peregrine Fund is also working with the USFWS in Region 2 to develop a mechanism under section 7 of the Endangered Species Act which would permit the release of Aplomado Falcons in New Mexico without causing undo concerns for private sector and military use of public lands. The recovery goal for the US has been set by the USFWS at 60 breeding pairs. An anticipated self-sustaining population is expected in the US southwest by 2005.

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: 1977 record in Arizona on private land.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Arizona Game and Fish Department. 1988. Threatened Native Wildlife in Arizona. Arizona Game and Fish Department, Phoenix. p. 15.
- Arizona Game and Fish Department. In prep. Wildlife of special concern in Arizona. Arizona Game and Fish Department Publication. Phoenix, Arizona. 32 pp.
- Blake, E. R. 1977. Manual of Neotropical Birds. Univ of Chicago Press, Chicago, IL.
- Brown, L., and D. Amadon. 1968. Eagles, Hawks and Falcons of the World. Country Life Books.

- Clark, W. S., and B. K. Wheeler. 1987. The Peterson Field Guide Series: A Field Guide to Hawks, North America. Houghton Mifflin Company, Boston. pp. 103-105.
- Corman, T. 1993. Wildlife Views. 36: 2. p. 16. AGFD, Phoenix, AZ.
- Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1988. The Birders Handbook: A field guide to the natural history of North American Birds, including all species that regularly breed north of Mexico. Simon & Schuster Inc., New York. p. 242.
- Keddy-Hector, D. P. 1998. Aplomado Falcon (*Falco femoralis*), in The Raptors of Arizona. Edited by R.L. Glinski. University of Arizona Press, Tucson, AZ. pp. 124-127.
- Hector, D. P. 1985. The Diet of the Aplomado Falcon in Eastern Mexico. Condor, 87: p. 336-342.
- Johnson, A. W. 1965. The Birds of Chile and Adjacent Regions of Argentina, Bolivia and Peru. Platt Establecimientos Graficos. Buenos Aires.
- Mexican Federal Endangered Species List. 1994. Secretaria de Desarrollo Social, NORMA Oficial Mexicana NOM-059-ECOL-1994.
- National Geographic. 1999. Field Guide to the Birds of North America. Third Edition. National Geographic Society, Washington, D.C. p. 74.
- Peterson, R. T. 1990. Peterson Field Guides: Western Birds. Third Edition. Houghton Mifflin Company, Boston. pp. 42-45
- Phillips, A., J. Marshall, and G. Monson. 1964. The Birds of Arizona. University of Arizona Press, Tucson.
- Robbins, C., B. Bruun, and H. Zim. 1983. Birds of North America. Western Publishing, NY.
- Todd, W.E.C. 1916. Preliminary diagnosis of fifteen apparently new neotropical birds. Proc. Biol. Soc. Wash.,29:95-98.
- Whetmore, A. 1926a. Observations on the Birds of Argentina, Paraguay, Uruguay, and Chile. Bull, U.S. National Museum, 133.
- USDI, Fish and Wildlife Service. 1986. Endangered and Threatened Wildlife and Plants; Northern Aplomado Falcon and Canby's Dropwort, Final Rules. Federal Register 51(37):6686-6689.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

- Dean P Keddy-Hector. National Endangered Species Network, (NESN).
William H Hienrich, The World Center for Birds of Prey, Biose, ID.

ADDITIONAL INFORMATION:

The Aplomado Falcon takes its common name from the Spanish word *aplomado*, which refers to the blue-gray or lead-colored dorsal plumage. The scientific name, meaning literally "femoral falcon," is presumably a reference to its long legs.

Revised: 2001-02-22(JDC)
2001-03-14 (SMS)

To the user of this abstract: you may use the entire abstract or any part of it. We do request, however, that if you make use of this abstract in plans, reports, publications, etc. that you credit the Arizona Game and Fish Department. Please use the following citation:

Arizona Game and Fish Department. 2001. *Falco femoralis septentrionalis*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. 6 pp.