ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract **ElementCode:**ABNJB09010
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Aix sponsa* (Linnaeus, 1758)
COMMON NAME: Wood duck, Pato de charreteras (Spanish), Canard branchu (French)
SYNONYMS: *Anas sponsa* Linnaeus
FAMILY: Anatidae

AUTHOR, PLACE OF PUBLICATION: *Aix sponsa* (Linnaeus), Syst. Nat. ed. 10, vol. 1, 1758, p. 128. Based mainly on The Summer, *Anas americana* Catesby, Carolina, vol. 1, 97. (AOU 1957 [1961]).

TYPE LOCALITY: Unknown

TYPE SPECIMEN: Unknown

TAXONOMIC UNIQUENESS: *Aix sponsa* is one of two species in the Genus *Aix*. The other species is *Aix galericulata* (Mandarin Duck), which is an Asian species sometimes found in a "feral state" in North America (Hepp & Bellrose, 1995). There are no subspecies in *A. sponsa*.

DESCRIPTION: A small to medium-sized highly colorful duck with a crested head, broad wings and a large, rectangularly shaped tail. Adult males range from 48-54 cm in total length, while adult females range from 47-51 cm. The male duck is unmistakable with its brightly colored plumage, including an iridescent blue, green and purple colored head, along with two white parallel lines that run from the base of the bill and from behind the eye to the back of the head. It has a glossy covered plumage with a distinctive sleek rust-colored chest, bronze colored sides with an iridescent blue-green to black back and black tail (Pope, A. 2004). Males also have a distinctive red bill and eyes. The crest of the females is shorter, and their color is browner to grayer than males. Females have a white teardrop shape color around the eyes that ends at the back of the head. They have a gray colored bill, white throat to a gray-brown head, neck, and a white spotted chest. Juvenile males and those males in basic plumage often resemble adult females; however juvenile males have a white patch on the neck. (Hepp and Bellrose 1995, Corman and Wise-Gervais 2005).

AIDS TO IDENTIFICATION: The male Wood Duck (*Aix sponsa*) is the only native duck in North America with a crested head, bright red bill and eyes. In comparison, the male Mandarin Duck (*Aix galericulata*) an Asian species sometimes found in a feral state in North America has a large area of white on the head extending from the bill to the tip of the crest,

along with chestnut cheeks, and several other plumage characters that differ from the Wood Duck. The female Wood Duck is the only duck with a noticeable white teardrop marking around the eyes. When compared in plumage to the female Mandarin Duck, it is easily confused. Female Mandarin Ducks generally have a lighter gray head and less distinctive eye patch.

ILLUSTRATIONS:

Color Photos (A. Pope 2004, accessed 9/24/07)
Color Drawings (R.T. Peterson 1990: P. 47, M36)
Color Drawings (Dunn and Alderter 2005: P 29)
Color Photo (Corman and Wise-Gervais 2005: P. 54)
Color Photo (Terris, 1980. Pp. 204-205)

TOTAL RANGE: The range for *Aix sponsa* can be broken down into Breeding and Wintering distribution. According to NatureServe (2009), this species breeds from "southern British Columbia and Alberta, south to central California, northern Nevada, Idaho, and western Montana, with small numbers farther south to Arizona and New Mexico; also throughout most of the central and eastern U.S. and adjacent southern Canada, from Montana, Manitoba, the Great Lakes region, southern Quebec, and Nova Scotia south to Texas, the Gulf coast, and Florida, east to the Atlantic coast, west to Wyoming and Colorado"; also breeds in Cuba. "The highest breeding densities occur in the Mississippi alluvial valley (Dugger and Fredrickson 1992). In recent decades, the breeding range expanded westward into the Great Plains region after wooded riparian corridors developed (Dugger and Fedrickson 1992)."

The species winters "mostly on the Pacific coast and interior California, and north to Kansas, southern Iowa, Ohio Valley, New England. The highest winter densities occur in the southern states of the Mississippi and Atlantic flyways and in California's Central Valley (Dugger and Fredrickson 1992)." (NatureServe, 2009).

RANGE WITHIN ARIZONA: In Arizona, Wood Ducks are generally a winter visitor, but have been known to breed in central Arizona in Yavapai County from the upper Verde River from Clarkdale downstream towards Camp Verde; along lower Oak Creek from near Sedona and especially near Page Springs and Cornville; and in the Prescott area along Granite Creek near Watson Lake when the water levels are sufficient. They winter in the central to eastern half of the State. A few have been confirmed along the lower Colorado River in the Imperial National Wildlife Refuge area and the Bill Williams River delta. (Corman, *in* Corman and Wise-Gervais 2005).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: The call of the female is a piercing *tereeek*! or *woo-eek* (*oo-eek*), and is the most familiar call of Wood Ducks. It is often given when females take flight after being disturbed,

to determine location of their mate after separation, and to establish contact in flight. The basic call of males is a drawn-out *ji-ihb* or low, squeaky *jeep* or hissing squeal *ter-eee*! It is a prolonged whistle that ascends then ends abruptly as it drops in pitch, and functions primarily a contact call. The burp call of males (short *pfits* often linked together) draws attention during courtship and is used as a warning call. (Hell and Bellrose 1995).

Migration from northern breeding areas southward begins in early fall. "Migratory movements of southern-breeding birds are relatively short (Nichols and Johnson 1990) and depend on local conditions (Hepp and Hines 1991)." (Hepp and Bellrose 1995).

The narrow bill enables Wood Ducks to pick up items from water, land, or vegetation. Their esophagus is extremely distensible, enabling them to swallow acorns up to 1.0 cm wide and 5.7 cm long. These ducks rise quickly from water and maneuver well flying through thick woods. Adults and young are excellent swimmers; young birds escape disturbance and predators by diving. They sleep primarily on water, secondarily on logs, and banks; females with young broods prefer logs (Hepp and Bellrose 1995).

Predators include: On eggs - rat snakes (*Elaphe obsoleta*), raccoons (*Procyon lotor*), fox squirrels (*Sciurus niger*), various woodpeckers, and European Starlings (*Sturnus vulgaris*). On young – Great Horned Owl (*Bubo virginianus*), bullfrog (*Rana catesbeiana*), large predaceous fish (e.g. largemouth bass (*Micropterus salmoides*). On Adults – Great Horned Owls, raccoons, red fox (*Vulpes vulpes*), and gray fox (*Urocyon cineroargenteus*). (Hepp and Bellrose 1995).

REPRODUCTION: The drakes and hens form pair bonds by late winter and usually last until just before the eggs are hatched (Bromley, et. al. 1998). According to NatureServe (2009), "upon arrival in breeding areas, migratory females forage intensively and built up nutrient reserves prior to nesting. Nests are initiated as early as late January in the south, early March in the Midwest, and mid-March to early April in the north." In Arizona, they usually are seen in the fall and winter and remain sparse in their distribution. Near breeding areas, they begin nesting from late March to mid-April. These small ducks are typically tree cavity nesters and males usually accompany females in locating a nest site but have no role in selecting it, per Troy Corman (2005). Tree cavities are found 2-65 ft above ground but 30 ft is more preferred. In Arizona, the few nests discovered have been in Arizona sycamore or Fremont cottonwood. Nests are accumulated with chips of wood, and with the down taken by the female from her breast beginning midway through egg-laying (Harrison 1979, Hepp and Bellrose 1995). Clutch size ranges from 9-15 eggs (incubation by the female lasts 27-37 days), but more than one female may contribute eggs to a nest, resulting in nests with many more eggs (commonly up to 30 for successful nests in nest boxes). This is noted by Hal Harrison (1979) as nest dumping, "4 duck hens have been known to have laid eggs in same nest during 1 day. Involvement of 5 hens at 1 nest has been reported, although it's rare to have 2 females incubating side by side. In some dump nests eggs are never incubated by any of hens involved. In these, nest material includes no down." Eggs are oval shaped, smooth, unmarked and somewhat glossy with a creamy white or pale buff color (Harrison, 1979).

Hatchlings are precocial and downy, generally dark brown above and buffy yellow below and on face. About 24 hours after hatching, chicks leave the nest cavity by using their sharp claws to climb to the opening of the nest cavity, where they leap out as the female calls nearby. The hen stays with her brood until the young can fly which is at about 8-10 weeks of age.

FOOD HABITS: An omnivore with a broad diet. Main food items include seeds (from shrubs and trees such as acorns and beech nuts), fruits (berries, wild grapes, etc.), and aquatic and terrestrial invertebrates (similar to dabbling ducks). However, food items consumed vary seasonally with food availability, and with reproductive status. Generally, breeding females consume more invertebrate foods. Juveniles will usually feed on insects and duckweeds.

HABITAT: According to Corman (2005), across their range *Aix sponsa* prefers wooded, freshwater habitats with an abundance of cover. Hepp and Bellrose (1995) report this species as a common duck of riparian habitats, wooded swamps and freshwater marshes, where its slim body allows of use of Pileated Woodpecker cavities. In Arizona, Wood Ducks are attracted to permanent ponds, marshes, and lakes as well as slower sections of streams and rivers lined by large trees for nesting (Corman 2005).

The microhabitat that Wood Ducks forage in includes areas with flooded timber and shallow wetlands with scrub/shrub and emergent vegetation. Drobney and Fredrickson 1979 (*in* Hepp and Bellrose 1995) reported that this species prefers to forage where the surface zone of shallow water is 18-40 cm deep; along recently flooded areas.

ELEVATION: In Arizona, Wood Ducks have been found nesting mainly from 3,100 – 5,150 ft (945 - 1,570 m), locally down to 2,150 ft (655 m). (Corman, *in* Corman and Wise-Gervais 2005).

PLANT COMMUNITY: Dominant riparian vegetation in Arizona includes cattails, bulrush, watercress, buttonbush, young willows, Arizona sycamore, Fremont cottonwood, velvet ash, Goodding willow, and Arizona alder.

POPULATION TRENDS: The Short-term trend is increasing (>10%), based on past Breeding Bird Surveys and Christmas Bird Counts. According to Corman (in Corman and Wise-Gervais 2005), their population in Arizona has steadily increased and expanded during the past two decades. He also indicates that there are many other appropriate nesting locations in central and southern Arizona that may some day harbor future broods of this duck. The Global Abundance is estimated between 10,000 & >1,000,000 individuals. (NatureServe, 2009).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None (AZGFD, AWCS 2022)

[1B (AGFD SWAP 2012)]

OTHER STATUS: None

MANAGEMENT FACTORS:

According to NatureServe (2009), "Habitat destruction, market hunting, and liberal hunting seasons contributed to drastic declines; subsequent implementation of hunting restrictions, extensive nest box installation, and improved habitat conditions have allowed recovery (Dugger and Fredrickson 1992)."

In 1994, Bellrose and Holm recommended the following habitat management measures: "(1) eliminate stream channelization…; (2) establish greenways of timber and shrubs along stream banks that would reduce erosion and provide food, cover, and nest sites; (3) reduce drainage of wooded wetlands and bottomland forests; (4) control water levels by levees and weirs to enhance food availability of moist soil plants and mast in bottomland hardwoods in fall and winter; (5) encourage development of beaver and farm ponds; and (6) establish predator-resistant nest houses where food and cover resources warrant this approach."

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Effects of forest management practices and tree species composition on cavity abundance needs to be identified.

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

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