

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract

Element Code: ABPAE33043

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Empidonax traillii extimus*
COMMON NAME: Southwestern Willow Flycatcher; Traill's Flycatcher
SYNONYMS: *Empidonax traillii*
FAMILY: Tyrannidae

AUTHOR, PLACE OF PUBLICATION:

TYPE LOCALITY: Dudleyville (formerly Feldman), on the lower San Pedro River.

TYPE SPECIMEN: May 30, 1940. G. Monson (A.R. Phillips collection #707, Phillips 1948).

TAXONOMIC UNIQUENESS: Genus contains 15 species, eleven of which occur in North America. Seven species may be found in Arizona, six of which breed in Arizona. *E. t. extimus* is one of four subspecies of *E. traillii* recognized in North America (*brewsteri*, *extimus*, *adastus*, and *traillii*), and is the only subspecies which occurs in Arizona. Research has indicated that *E.t. extimus* is genetically distinct from other subspecies, and that *E.t. adastus* and *E.t. extimus* each have distinctive songs. The two groups appear to be evolving independently of one another and warrant at least subspecific status (Paxton 2000, Sedwick 2001).

Controversy does exist over subspecies status. Zink (2015) concluded that willow flycatchers of the Southwest do not merit subspecific recognition. This stance was opposed by Theimer et al. (2016), and subspecific status was upheld by the USFWS in a 12-month petition finding (USFWS 2018).

DESCRIPTION: *E. t. extimus* is a small, slender flycatcher, but are one of the larger members of the *Empidonax* genus at 13-17 cm (5.1-6.7 in) long, including tail. Tail and wings are thin and fairly long. Body brownish-olive to grayish-green on upper parts with a slight yellow wash on the belly, a white throat that contrasts with the pale brownish olive breast, and two whitish wing bars. Eye ring may be very thin or nearly absent. Bill relatively large and broad with upper mandible dark and lower mandible usually entirely yellow or pale orange, often with a small dusky tip. Individuals breeding in the Southwest are often paler than those in the East and Pacific Northwest. Both sexes alike. Species best identified by vocalizations (see "Aids to Identification" below) (Cornell University 2019).

AIDS TO IDENTIFICATION: Distinguished from most other *Empidonax* flycatchers by thin to nearly absent white eye ring. *E. traillii* and *E. alnorum* have almost identical appearances but can be distinguished by voice, range, and habitat. Typical call of *E. traillii* is a repeated “whit.” Typical call of *E. alnorum* is a sharp note transcribed as either a “pip”, “peek”, or “bic.” Song of *E. traillii* is a sneezy “fitz-bew” or “fitzi-bew” with accent on first syllable, while that of *E. alnorum* is a falling, buzzing “fee-beo” with an emphasis on the second syllable. Another distinguishing feature of *E. traillii* is the tail, which is wide compared to most *Empidonax*, especially at junction with body (Stallcup 1992). *E. t. extimus* tends to be paler in coloration than other subspecies, particularly in the Southwest. At higher elevations in eastern Arizona, dark individuals have been observed (Cornell University 2019).

ILLUSTRATIONS:

Color drawing (Scott, 1987: 291).

Color drawing (Peterson, 1990: 239).

Photo and map of distribution (Sedgwick, 2000)

TOTAL RANGE: The geographical area known to be occupied by breeding and migrating flycatchers extends from southern Nevada, extreme southern Utah, southern California, Arizona, New Mexico, western Texas, extreme southern Colorado, and extreme northwestern Mexico (Hubbard 1987, Unitt 1987, Browing 1993). Current range is similar to historic range, but the quality and distribution of habitat within that range is reduced (USFWS 2002). Breeding birds from southwestern Colorado show great individual variation and are intermediate between *E. t. extimus* and *E. t. brewsteri*. *E. traillii* is a neotropical migrant and winters in Mexico, Central America, and perhaps northern South America (Ridgely and Gwynne 1989, Stiles and Skutch 1989, Howell and Webb 1995). The Pacific lowlands of Costa Rica appear to be a key winter location for the southwestern willow flycatcher (Paxton et al. 2011).

RANGE WITHIN ARIZONA: In Arizona, most flycatchers are found along the Gila, San Pedro, and Salt rivers. Breeds locally along the Colorado River in the Grand Canyon near mouth of Little Colorado River, and south of Yuma. Also breeds at the headwaters of the Little Colorado River near Greer and Eagar; and upper San Francisco River near Alpine. Arizona accounted for 43.1 percent of total known breeding sites in through the 2007 breeding season (Durst et al. 2008).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Neotropical migrant. *E. t. extimus* migrate in the United States from April to June and July through September. Willow flycatchers require food-rich stop-over areas to complete migrations, and stopover areas are likely critically important for productivity and survival (Finch et al. 2000, Yong and Finch 1997).

Nest is a compact cup built of shredded bark, cattail tufts, and grasses, lined with fine grasses and feathers. Nests are typically placed in trees where the plant growth is most dense, where trees and shrubs have vegetation near ground level, and where there is a low-density canopy. Generally flycatchers are not found nesting in areas absent of willows or tamarisk, though there are exceptions (USFWS 2014). Habitat characteristics vary widely among breeding sites. Flycatchers are believed to exist and interact as groups of metapopulations; geographically separate breeding populations connected through immigration and emigration (USFWS 2002). Flycatchers show a high degree of movement between years, and move among sites within stream drainages and between drainages. They exhibit higher site fidelity than nest fidelity (McLeod 2008, Paxton 2007). Within-drainage movements are more common than between-drainage movements (Kenwood and Paxton 2001).

REPRODUCTION: Males sing repeatedly from exposed perches while on breeding grounds, occasionally during migration. Breeding birds often heavily affected by brood-parasitism by brown-headed cowbirds. Females lay a clutch of 3-4 eggs from May through July. Incubation lasts 12-13 days, and nestlings fledge after 12-14(15) days. Nestling fledging later in the breeding season have been shown to have lower survivorship than those fledged early in the breeding season (Paxton et al. 2007).

FOOD HABITS: *E. t. extimus* is insectivorous, collecting flying insects by sailing (flying out short distances from perch) and, to a lesser extent, hovering and gleaning. It eats a wide range of invertebrate prey including flying, ground-dwelling, and vegetation-dwelling insect species of terrestrial and aquatic origins (Drost et al. 2003).

HABITAT: Riparian obligate, breeds in vegetation along rivers, streams, and other wetlands. Nesting and foraging occur in areas of relatively dense and expansive growths of trees and shrubs, near surface water or saturated soils (USFWS 2018). Breeding sites comprised of spatially complex habitat mosaics, and flycatchers move extensively – within, between, and outside of habitat patches (USFWS 2014).

ELEVATION: In Arizona, found at elevations ranging from 75 to 85,200 feet (23-2,600 m), though most nesting territories occur between sea level and 5,250 feet (0-1600 m).

PLANT COMMUNITY: Willows (*Salix*) or tamarisk (*Tamarix pentandra*) are generally considered most important nesting habitat components. Also found near Cottonwoods (*Populus*), Russian olive (*Eleagnus angustifolia*), and riparian associates.

POPULATION TRENDS: Stable to declining. Extreme population reductions noted rangewide since 1800's due to habitat loss, though quantitative data is lacking. Some specific known flycatcher populations have grown, but declines have occurred across broad portions of the flycatcher's range, and more are anticipated. Survey effort has also declined in the decades since listing, leading to decreased ability to track known breeding sites and detect new breeding sites (USFWS 2018).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: Revised Critical Habitat – Final (USDI, FWS 2013)
 [Critical Habitat Re-designated (USDI, FWS 2005)]
 [Critical Habitat set aside 2001 – Court Order (in USDI, FWS 2002)]
 [Critical Habitat Designated (USDI, FWS 2007)]
 LE (USDI, FWS 1995)
 [PE USDI, FWS 1994]
 [C1 USDI, FWS 1991]
 [C2 USDI, FWS 1989]

STATE STATUS: 1 (AZGFD, AWCS 2022)
 [1A (AGFD SWAP 2012)]
 [WSC (AGFD, WSCA 1996 in prep)]
 [Endangered (AGFD, TNW 1988)]

OTHER STATUS: Bureau of Land Management Sensitive (USDI, BLM Arizona, 2017)
 Not Forest Service Sensitive (USDA, FS Region 3 2013, 2007)
 [Forest Service Sensitive, Apache-Sitgreaves NF (USDA, FS 2000)]
 Group 2 (NNDFW, NESL 2001, 2005, 2008)
 E, Probably Extinct in the wild of Mexico, (NORMA Oficial Mexicana NOM-059-SEMARNAT-2010)

MANAGEMENT FACTORS: Threatened throughout their range. Riparian habitat loss or fragmentation, drought and climate change are major causes of willow flycatcher decline. Other factors include brood-parasitism by brown-headed cowbirds, loss of nesting habitat due to destruction by tamarisk beetle, diversion of water, draining of wetlands, channelization and levying of streambeds, construction of canals, drains and impoundments, livestock grazing, off-road vehicles, and the cutting of woodlands.

Threats: Drought and climate change; dams and reservoirs; water diversions and groundwater pumping; channelization and bank stabilization; tamarisk leaf beetle; urbanization; agricultural development; livestock grazing and management; fire; recreation; phreatophyte (shallow groundwater-supported trees) control; impacts to migration and winter range habitat; and changes in the abundance of other species (tamarisk, Russian olive, giant reed, and cowbirds); small and isolated population sizes; nest predation.

Management needs: Yearly breeding surveys across range; control of spread of tamarisk beetle.

PROTECTIVE MEASURES TAKEN: Critical Habitat initially designated in 1997, identifying 18 critical habitat units totaling 964 river km in Arizona, California, and New Mexico; Critical Habitat re-designated in 2005 after set aside by Ninth Circuit Court order in 2001. Critical habitat revised in 2013.

SUGGESTED PROJECTS: Protection of willow-cottonwood thickets are need, along with restoration where such habitats have been destroyed; including those rivers and streams at middle and lower elevations. Continue and expand statewide monitoring surveys of known and possible breeding sites. Develop recovery implementation subgroups across flycatcher's range. Research to refine northern subspecies boundary. Research of wintering and migratory ecology and species needs.

LAND MANAGEMENT/OWNERSHIP: BIA – Colorado River, Havasupai, and Hualapai Reservations, and Navajo Nation; BLM – Arizona Strip, Safford, Tucson, and Yuma Field Offices; BOR – Phoenix Area; NPS – Glen Canyon National Recreational Area and Grand Canyon National Park; USFS – Apache-Sitgreaves and Tonto National Forests; USFWS – Cibola, Havasu, and Imperial National Wildlife Refuges; State Land Department; Alamo Lake State park; Picacho State Recreation Area; AGFD – Alamo Wildlife Area and Mitty Lake; City of Kearny; TNC – Bingham Cienega and Hassayampa River Preserves, and Cascabel Community Management Area; Private.

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ADDITIONAL INFORMATION:

Field workers should be aware that the subspecies *E. t. brewsteri* is often present in *extimus* range during migration.

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