SOUTHWESTERN WILLOW FLYCATCHER

The **southwestern willow flycatcher** (SWFL) was designated by the U.S. Fish and Wildlife Service as endangered on February 27, 1995. The willow flycatcher is one of 10 subspecies in the genus *Empidonax* (meaning gnat or mosquito king). Willow flycatcher subspecies are distinguished by subtle differences in color, morphology, and genealogy. The SWFL subspecies is generally paler in color and considered grayish olive or pale grayish green. It is approximately 15 cm (5.75 in) long, and weighs approximately 12 g. It has a grayish-green back and wings, whitish throat, light grey-olive breast, and pale yellow belly. Two distinct wing bars are visible on the greater coverts, and an eye-ring is either absent or very faint. The upper mandible is dark, while the lower mandible is pale to yellowish.

The historic breeding range of the SWFL included southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and extreme northwestern Mexico. According to the critical habitat designation for SWFL, the current occupied geographic area crosses six southwestern states including southern California, southern Nevada, southern Utah, southern Colorado, Arizona, and New Mexico. When SWFL was listed as endangered in 1995, populations were estimated at 350 territories. Through an increase in survey effort, that number has increased to over 1000 territories. This neo-tropical migrant travels between breeding areas in the United States to wintering grounds in Central and South America. Migration flyways include major river corridors and their tributaries such as the Gila River, Rio Grande River, and the lower Colorado River.

The southwestern willow flycatcher is a small neotropical migrant that primarily lives along riparian corridors in dense trees and shrubs. These riparian habitats are associated with rivers, wetlands, lakes, and reservoirs. Surface water and/or saturated soil is typically present at least seasonally, and in most cases year round. The SWFL breeds across the lower southwestern United States from May through August. SWFL typically arrive on the breeding grounds between early May and early June. The SWFL breeds in dense riparian vegetation near surface water or saturated soil, across a large elevational and geographic area. The majority of failed nests are due to depredation, and parasitism by brown-headed cowbirds, which increases the stress on a species already endangered. The SWFL is an insectivore that hawks insects while in flight, gleans insects from foliage, and occasionally captures them from the ground. Flycatchers forage from within the habitat or above the canopy, above water, or glean from trees and herbaceous cover. The main diet of the flycatcher consists of small to medium size insects such as true bugs, wasps and bees, flies, beetles, butterflies and caterpillars, and spiders. The flycatcher can exploit a diverse array of insects depending on availability within the habitat.

YELLOW-BILLED CUCKOO

The **yellow-billed cuckoo** (YBCU) is slender, long-tailed (length 26-30 cm, mass 55-65 g) and zygodactylous: two inner toes point forward and two outer toes are reversed. The head and upper parts are plain grayish brown, faintly glossed with olive. Underparts are dull white, faintly shaded with pale bluish gray or pale buff. It has a long, graduated tail (about 15 cm), plain grayish brown above and black below. Tail feathers are broadly tipped with bright white, giving the appearance of 6 large, white spots on the underside. Distinctive tail pattern is noticeable both in flight and when perched. Wings are plain grayish brown above with dull cinnamon-rufous tips, and large rufous wing patches are visible during flight. The moderately long, curved bill has a hooked tip, the upper mandible is black, and the lower mandible is yellow to orange yellow at the base with a dark tip. The legs are blue-gray. Cuckoos are sexually and seasonally monomorphic in plumage. In Utah, western Texas, New Mexico, Arizona, and southern California, the cuckoo prefers desert riparian woodlands composed of willow, Fremont cottonwood, and dense mesquite for breeding habitat. In the arid Southwest, breeding populations of yellow-billed cuckoos are restricted to river bottoms, ponds, swampy places, and damp thickets where humidity is relatively high. On the lower Colorado River, the cuckoo must face extremely high midsummer temperatures that would kill unprotected eggs, and, therefore, is likely a nest-site specialist. Mature cottonwoods, with willows forming a subcanopy layer, provide the best shading of any riparian habitat, and provided the optimal habitat on the lower Colorado River. Standing water in many cottonwood-willow habitats may help lower air temperatures by evaporative cooling. During the nest building and egg-laying stages, cuckoos can be very sensitive to human disturbance. However, population declines are caused primarily by native riparian habitat loss through degradation and fragmentation from lowered water tables, replacement by nonnative trees, grazing practices, and river management. Foraging typically occurred in areas with a greater overall foliage density than in areas where nesting occurs, with an average tree height of 10-15 meters. Yellow-billed cuckoos usually glean prey items from foliage or branches, sometimes while hovering, or sallying from a perch to capture prey on the wing. Yellow-billed cuckoos feed primarily on slow-moving insects, including grasshoppers, crickets, katydids, caterpillars, and various bugs and beetles.

YBCU breeding locations: Beal Lake Restoration Area, Palo Verde Ecological Reserve, Cibola NWR Unit #1, and Cibola Valley Conservation Area.