**BROWN-CRESTED FLYCATCHER**
*Myiarchus tyrannulus*

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**Management Status:** Federal: None
California: Species of Special Concern (CDFG, 1998)

**General Distribution:**

The Brown-crested Flycatcher is one of four *Myiarchus* flycatchers that regularly occur north of Mexico. The breeding range of the *magister* subspecies group, which includes birds occurring in California, extends from southern California, extreme southern Nevada, extreme southwestern Utah, Arizona, and southwestern New Mexico south along Mexico's Pacific slope to Oaxaca, and east to western Durango, Zacatecas, Morelos and southwestern Puebla, and from eastern Coahuila and southern Texas south on the Gulf-Caribbean slope to northern Honduras, and across the Sula Valley of Honduras to the Pacific lowlands of El Salvador and Honduras. It winters from northern Mexico south throughout its breeding range, and casually in southern Florida (AOU, 1998).

In California, Brown-crested Flycatchers of the northwestern-most subspecies (*M.t. magister*) (AOU, 1957) nest along the Colorado River and at a few scattered localities throughout the deserts. They are rarely observed in California during migration away from known breeding areas (Garrett and Dunn, 1981), and are unrecorded in winter in California (K.L. Garrett, pers. comm.).

**Distribution in the West Mojave Planning Area:**

In the WMPA, they nest or have nested at the following localities: the Mojave River at Victorville (1-3 pairs annually, S. Myers, unpub. data), Cushenbury Springs (one pair in 1991), and Morongo Valley (1-2 pairs annually, Garrett and Dunn, 1981; E.A. Cardiff, pers. comm.). They also nest at three localities just outside of the Planning Area: Tecopa (one pair at least three different years), the South Fork Kern River Preserve at Weldon (3-5 pairs annually, *American Birds* and *Field Notes* data), and at Rattlesnake Ranch near Mecca (one pair in recent years, C. McGaugh, pers. comm.). Tecopa is approximately 15 mi. (24 km) northeast, Weldon about 9.5 mi. (15 km) west, and Mecca 15 mi. (24 km) of the WMPA.

**Natural History:**

Brown-crested Flycatchers are similar in appearance to the other *Myiarchus* flycatchers that occur in the United States. In California, only one other *Myiarchus* occurs regularly, the Ash-throated Flycatcher (*M. cinerascens*). The other North American species in the genus, the Dusky-capped Flycatcher (*M. tuberculifer*) and the Great Crested Flycatcher (*M. crinitus*), are casual migrants. The upperparts of the Brown-crested Flycatcher are brownish-olive, the belly and undertail coverts are yellow, and the breast and throat are pale gray. The Brown-crested Flycatcher can be usually separated from the Ash-throated Flycatcher by its larger size,

proportionally larger bill, different pattern of rusty color in the tail feathers (as seen from below), and, especially, by differences in their vocalizations. Overall, the Ash-throated Flycatcher is paler (especially the yellow on the underparts), but age and plumage wear make this character somewhat variable (Phillips et al., 1964; Pyle et al., 1987). Brown-crested Flycatchers are 7.5-9 in. (19-23 cm) long (Lanyon, 1983), and weigh an average of 1.54 oz. (44 grams) (Dunning, 1984). Maximum recorded age for a wild Brown-crested Flycatcher is 8 years (Clapp et al., 1983).

Like most flycatchers, this species primarily eats insects, which it captures by hawking or gleaning (Bent, 1942; Ehrlich et al., 1988). They have also been observed several times capturing and eating hummingbirds (Snider, 1971; Gamboa, 1977), but this behavior may not be common.

In California, Brown-crested Flycatchers usually arrive on their nesting grounds during the first or second week of May, with an early arrival date in the region of 24 April. They normally depart the nesting grounds by mid-August, exceptionally remaining into early September (Garrett and Dunn, 1981).

Like their congeners, Brown-crested Flycatchers nest in cavities. At nesting localities in the California deserts, Fremont Cottonwoods (*Populus fremontii*) and various willows (*Salix* spp.) are probably the most common trees used for nest sites. Saguaros (*Carnegiea gigantea*) are commonly used in Arizona (Bent, 1942). Brown-crested Flycatchers have also been known to nest in utility poles and fence posts (Zeiner et al., 1990). They are secondary cavity nesters, utilizing sites originally excavated by Gila Woodpeckers (*Melanerpes uropygialis*) and Gilded Flickers (*Colaptes chrysoides*) along the Colorado River, and Nuttall's Woodpeckers (*Picoides nuttallii*), Ladder-backed Woodpeckers (*P. scalaris*), and Northern Flickers (*C. auratus*) at other California desert localities. Cavities are usually 10-30 ft. (3-9 m) above ground (Kaufman, 1996). Clutch sizes are from 3-5 eggs (Harrison, 1979). Brood parasitism of Brown-crested Flycatchers by Brown-headed Cowbirds *(Molothrus ater*) is not known. Most cavity nesters are not significantly affected by cowbirds (Friedmann, 1963).

**Habitat Requirements:**

In California, Brown-crested Flycatchers occur in riparian woodland or forest dominated by cottonwoods and willows, usually in a climax stage; along the Colorado River they have also bred in residential areas with tall, planted trees (Garrett and Dunn, 1981; Rosenberg et al., 1991). All southern California breeding localities contain large cottonwoods and/or willows. The presence of woodpeckers or other cavity excavating species is important. No data exist on the minimum areas of riparian habitat required by Brown-crested Flycatchers.

Ash-throated Flycatchers, which are noticeably smaller than Brown-crested Flycatchers, occur in a wider variety of habitats, and are able to use smaller trees for nesting sites. Brown-crested Flycatchers are restricted to areas with large trees, or Saguaros in Arizona (Phillips et al., 1964).

**Population Status:**

Brown-crested Flycatchers have expanded their range in California over the last 35+ years. Banks and McCaskie (1964) summarized all of the specimen records and observations from the Lower Colorado River Valley through the early 1960s. It was first recorded in 1921 from near Bard, Imperial County. As Rosenberg et al. (1991) point out, "the very observant Grinnell (1914) and all previous workers did not detect it" along the Lower Colorado River. By 1964, Banks and

McCaskie considered the Brown-crested Flycatcher "a regular, and probably not uncommon, breeding species in the lower Colorado River Valley." In 1964, the only California location other than the Colorado River that may have supported breeding pairs was Morongo Valley. By 1976, 800 Brown-crested Flycatchers were estimated to occur in the Lower Colorado River Valley. Habitat destruction or alteration has decreased that number significantly (Rosenberg et al., 1991).

Since the 1960s, they have expanded their range westward and northward as far as the South Fork of the Kern River (exceptionally to near Big Pine, as in 1991; Johnson, 1994; *American Birds* and *National Audubon Society Field Notes* data). At all regular breeding localities in the California desert away from the Lower Colorado River Valley, numbers appear to be stable. One to two pairs have been documented during Breeding Bird Censuses conducted at Morongo Valley since 1977 (E.A. Cardiff, pers. comm.). Numbers along the Mojave River at Victorville have remained at 1-3 pairs since it was first observed nesting in 1992 (S.J. Myers, pers. obs.). From 1988 through 1995, the population in the South Fork Kern River Valley has been from 3-5 pairs (*American Birds* and *National Audubon Society Field Notes* data).

**Threats Analysis:**

Habitat destruction is the primary threat to Brown-crested Flycatchers in the WMPA. Habitat destruction can occur in several ways, with the most catastrophic losses resulting from clearing of large tracts of forest or woodland for agriculture, development, or flood control. Activities such as wood cutting for fuel can degrade or destroy suitable breeding habitat for this species.

Remsen (1978) suggested that Brown-crested Flycatchers may be impacted by nest site competition with European Starlings (*Sturnus vulgaris*). Hunter (1984) and Rosenberg et al. (1991) suggested, at least along the Colorado River, that Brown-crested Flycatchers successfully defend their nesting sites, a view that Kaufman (1996) supported. Rosenberg et al. point out that cavities are plentiful along the Colorado River, which may not be the case at other California nesting areas. Even if the flycatchers can successfully defend nest sites, they arrive relatively late in the spring, after many sites have already been occupied by starlings. Other cavity nesting species, especially Northern Flickers, are thought to be impacted by starling nest site competition (E.A. Cardiff, pers. comm.). Starlings are common at Morongo Valley, Victorville, and Cushenbury Springs (S.J. Myers, unpubl. data).

Lowering of ground water has had a significant effect on cottonwood-willow forest along the Mojave River in Victorville. The extent of both marshland and riparian woodland/forest in the Victor Valley has declined markedly in the past 140 years, as a result of well drilling (Torres et al., 1992). Long-time residents have stated that much of the open, dry cottonwood woodland in the area was once similar to the dense, lush cottonwood-willow forest where Brown-crested Flycatchers now occur (Myers, 1992).

Fire can have a devastating effect on Brown-crested Flycatcher nesting habitat. A wildfire at Big Morongo Preserve on 27 April 1992 burned about 50 acres (20 ha), including many large cottonwoods (Cardiff, 1993). This habitat will probably take many years to recover completely. A smaller fire at Mojave Narrows Regional Park in recent years killed several large cottonwoods and willows. Many young cottonwoods (and a few willows and ash) have sprouted in this area, but it will take many years for the area to attain its former structure.

Non-native invasive plants can also degrade habitat. Exotics such as Salt Cedar (*Tamarix ramosissima, T. parviflora*), Giant Reed (*Arundo donax*), and Russian Olive (*Elaeagnus*

*angustifolius*) probably provide little in the way of habitat values for Brown-crested Flycatchers, and reduce regeneration and seedling survival of native plant species. All of these species occur along the Mojave River in the Victorville area; Russian Olive is especially prominent. Some Salt Cedar occurs at Morongo Valley.

Few, if any, data are available on the effects of off-highway vehicles on Brown-crested Flycatchers, but this activity is common at Mojave Narrows Park and other potential flycatcher nesting areas near Victorville.

**Biological Standards:**

The most important measure necessary to protect or enhance Brown-crested Flycatcher populations in the WMPA is to preserve known and potential nesting areas. The known nesting localities are Big Morongo Canyon Preserve ( managed by BLM), Mojave Narrows Regional Park (managed by San Bernardino County Regional Parks Department (the land is owned by the State of California Wildlife Conservation Board), and the oasis at Cushenbury Springs (privately owned). Management of important nesting areas for Brown-crested Flycatcher must include protection from off-highway vehicle degradation and disturbance, wood-cutting, and wildfires. Indiscriminant removal of vegetation for flood control purposes should be monitored and regulated.

Maintenance or enhancement of water sources necessary to preserve or improve riparian habitats should also be a management priority. In some cases, restoration of riparian habitat by removing invasives and planting cottonwoods and willows may be appropriate (such as in Afton Canyon).

Since nest site competition may be a problem, at least at some localities, control of European Starlings may be appropriate in managing for this species. If starling control programs are established, it will be important to monitor populations of Brown-crested Flycatchers, Northern Flickers, and other medium to large cavity nesters.

In order to evaluate the vigor of desert riparian habitats and the viability of bird populations in the WMPA, regular monitoring is necessary. BLM documents such as ACEC Management Plans and Management Plans for Natural Areas prescribe bird monitoring programs. BLM and other participating agencies should assess the effectiveness of current monitoring methods and revise as needed. Annual review of monitoring results can be used to assist in management decisions. Such review should address whether habitats are at carrying capacity for sensitive bird species, and if not, identify corrective measures that can be taken to increase populations.

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