

SUMMER TANAGER

Piranga rubra

Author: Stephen J. Myers, Tierra Madre Consultants, Inc., 1159 Iowa Avenue, Suite D, Riverside, CA 92507

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

General Distribution:

The Summer Tanager is one of four tanagers, all of the genus *Piranga* that regularly occur north of Mexico. Its breeding range extends from southern California, southern Nevada, southwestern Utah, central Arizona, central New Mexico, central Texas, west-central Oklahoma, eastern Kansas, southeastern Nebraska, southern Iowa, central (rarely northern) Illinois, southern Wisconsin (formerly), central Indiana, southern (rarely northern) Ohio, southwestern Pennsylvania, West Virginia, Virginia, eastern Maryland, and New Jersey south to northeastern Baja California, southeastern Sonora, northern Durango, southeastern Coahuila, central Nuevo León, southern Texas, the Gulf Coast, and southern Florida (AOU, 1998). The subspecies breeding in California, *P.r. cooperi*, occurs from southern California east to western Texas and south to Durango and Nuevo León, Mexico. In California, Summer Tanagers nest along the Colorado River and at scattered localities throughout the deserts. *P.r. cooperi* winters from southern Baja California and southern Sinaloa to Michoacán, Morelos, and Guerrero (AOU, 1957).

Summer Tanagers are rare, but regular migrants and winter visitors throughout much of southern California (except the mountains). Based on museum specimens, it is believed that most records of migrants pertain to the nominate *P.r. rubra*. Little is currently known of the status of migrant *P.r. cooperi* in the region (Garrett and Dunn, 1981).

Distribution in the West Mojave Planning Area:

In the WMPA, they nest or have nested at the following localities: Big Rock Creek near Valyermo (1-2 pairs annually, K.L. Garrett), Little Rock Creek (1-2 pairs in the WMPA, and 1-2 pairs on the adjacent Angeles National Forest), the Mojave River at Victorville (10-15 pairs annually, S.J. Myers, unpubl. data), Cushenbury Springs (1 pair, at least sporadically, S.J. Myers, unpubl. data; R.L. McKernan, pers. comm.), Morongo Valley (2-4 pairs annually, Small 1994), and Yucca Valley (1 pair annually; M.A. Patten, pers. comm.). A female or immature was observed at Camp Cady in August 1997, suggesting potential breeding (B. Deppe, pers. comm.). The species also nests at four localities just out of the WMPA: Tecopa (sporadically, Small 1994), Soledad Canyon (2-3 pairs in 1997; K.L. Garrett, unpubl. data), Whitewater Canyon (2-4 pairs annually; D. Hatch, pers. comm.), and South Fork Kern River Preserve at Weldon (30-38 pairs annually, Robinson 1996). Tecopa is approximately 15 mi. (24 km) northeast of the WMPA; Weldon is about 9.5 mi. (15 km) northwest, Whitewater Canyon (trout farm) 3 mi. (5 km) south, and Soledad Canyon 6 mi. (10 km) west of the WMPA.

There are also at least three winter records in the WMPA: one at Twentynine Palms 28 December 1991, another there 2 January - 24 February 1997 (*American Birds* 51:615, 1997; B.

Prescott, unpubl. data), and one near Morongo Valley on 21 December 1991 (*American Birds* 46:984, 1992). The subspecific status of the wintering birds is not known.

Natural History:

Summer Tanager males are easily identified by their bright, all red plumage, which in California distinguishes them from all birds except the Hepatic Tanager (*Piranga flava*) and Northern Cardinal (*Cardinalis cardinalis*). Compared to the Summer Tanager, male Hepatic Tanagers have a duller red plumage often washed with grayish, a dark gray auricular patch, and a darker bill (blackish or bluish). Male Northern Cardinals have a prominent crest and a black face, characters which Summer Tanagers lack. Female and immature Summer Tanagers have yellow underparts with brown to olive upperparts. Their bills are pinkish-tan (juveniles) to bright yellow. Female and immature Hepatic Tanagers are similar to Summer Tanagers, but have darker bills and grayish-tan, rather than cinnamon-buff rumps (Pyle et al., 1987). Female Western Tanagers (*P. ludoviciana*), another *Piranga* commonly occurring in California, have yellowish or whitish wing bars (male Western Tanagers have mostly yellow bodies with red heads and black wings). Second and third year male Summer Tanagers are mostly red, but can be mottled with greenish or yellowish patches.

Summer Tanagers are about 7 in. (18 cm) long, and weigh an average of 1.16 oz. (33 grams); *P.r. cooperi* is larger than *P.r. rubra* (Isler and Isler, 1987; Robinson, 1996). They are primarily insectivorous during the breeding season, specializing on bees and wasps (Skutch, 1989; Robinson, 1996). Wintering and migrating birds regularly feed on fruit (Isler and Isler, 1987). They capture insects both by aerial hawking and gleaning from foliage or bark (Robinson, 1996). On the nesting grounds, Summer Tanagers are known to forage from near the ground to the canopies of tall gallery forest (Robinson, 1996).

In the California deserts, Summer Tanagers arrive each year about 20 April, with an early arrival date in the region of 13 April (Garrett and Dunn, 1981). Males arrive slightly earlier than females (Robinson, 1996). Summer Tanagers generally depart the nesting grounds by mid- or late September, although a few are observed most years in early October. There are at least two records at Morongo Valley in November (20 November 1982, 5 November 1996, C. McGaugh, unpubl. data) that may pertain to breeding *P.r. cooperi*.

Summer Tanager nests are usually placed well out from tree trunks, 4 - >70 ft. (1.2 - >21.4 m) high. Their single clutch contains 3 or 4 eggs, and rarely 5. Incubation, entirely by the female, takes 11-12 days (Bent, 1958; Harrison, 1979). Both parents feed the nestlings.

The rate of brood parasitism of Summer Tanagers by Brown-headed Cowbirds, (*Molothrus ater*) varies geographically. In Illinois, high rates of parasitism have been noted, but only one of 16 nests at Weldon, California was affected (Robinson, 1996). Friedmann (1963) considered Summer Tanagers to be uncommon hosts of Brown-headed Cowbird parasitism. Robinson (1996) points out that there are few data on the success of Brown-headed Cowbird parasitism on Summer Tanagers because nests are generally too high for researchers to access.

Habitat Requirements:

Western populations of the Summer Tanager (*P.r. cooperi*) require riparian woodland or forest dominated by cottonwoods (*Populus* spp.) and willows (*Salix* spp.), usually in a climax stage (Garrett and Dunn, 1981; Robinson, 1996). All southern California breeding localities contain cottonwood and/or willow communities, except the trout farm in Whitewater Canyon (just out of the WMPA), where Summer Tanagers nest in large, planted Siberian Elms (*Ulmus pumila*), other ornamentals, and a few Fremont Cottonwoods (*Populus fremontii*) (S.J. Myers, pers. obs.). They also occur in Athel (*Tamarix aphylla*) along the Colorado River, such as at Topock (Hunter, 1984; Rosenberg et al., 1991).

Studies at the South Fork Kern River Preserve indicate that Summer Tanagers use territories of between 9 and 11 ha (22.5-27.5 ac) (Robinson 1996).

Little quantitative data exist regarding the composition of Summer Tanager habitat in the California deserts. Five vegetation plots conducted within tanager territories at Mojave Narrows Regional Park in 1991 revealed canopy cover between 60 and 85%. The same plots had shrub cover from 1-23%, and herbaceous cover from 25-90% (Myers, 1992).

Population Status:

Summer Tanagers have apparently expanded their range in California over the last 40-50 years (Johnson, 1994; Small, 1994). Grinnell and Miller (1944) reported them as a nesting bird in California only along the Colorado River. They considered them common along the river, but mentioned no other nesting localities. Reports of nesting Summer Tanagers at other localities, especially Morongo Valley, began to appear in *Audubon Field Notes* at the end of the 1950s and early 1960s. Since the 1960s, they have expanded their range westward and northward as far as the South Fork of the Kern River. There is at least one nesting record each for Scotty's Castle in Death Valley National Park and near Big Pine (*American Birds* 45:1162; 1991).

Remsen (1978) and Rosenberg et al. (1991) discussed the Summer Tanager's decline along the Colorado River. It has become a rare to uncommon breeding bird, with greatly reduced numbers (compared to historic times) being documented during an extensive survey in 1986. Habitat destruction, caused by the conversion of riparian forest to agricultural, residential, and recreational areas, is the primary cause of the decline. Brown-headed Cowbird parasitism may have also contributed to the decline.

In most other California desert breeding localities, however, numbers appear to be either stable or increasing. As an example, from 1-4 pairs have been documented during Breeding Bird Censuses conducted at Morongo Valley between 1977 and the present (E.A. Cardiff, pers. comm.). Numbers along the Mojave River at Victorville have increased notably over the past 11 years: from 3 or 4 pairs in 1987 to 12-15 pairs in 1996, and at least 12 pairs in 1997 (S.J. Myers, unpubl. data). The population at Big Rock Creek has remained stable since the early 1980s at 1-2 pairs annually (K.L. Garrett, pers. comm.). Breeding at the golf course at Yucca Valley has been sporadic (Small, 1994; E.A. Cardiff, pers. comm.). Regular field work has not been conducted at Cushenbury Springs, so the Summer Tanager's continuity there is not known.

Threats Analysis:

As demonstrated in the Lower Colorado River Valley, habitat destruction is the primary threat to Summer Tanagers in California (Remsen, 1978; Rosenberg et al., 1991). 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. On a smaller scale, activities such as wood cutting can degrade or destroy suitable breeding habitat for this species. Such wood cutting has occurred historically in Afton Canyon (R.L. McKernan, pers. comm.), where large cottonwoods and willows were removed in the decades leading up to the 1960s. It is not known whether the woodland at Afton Canyon was ever extensive enough to support Summer Tanagers.

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 has declined markedly in the past 140 years, primarily due to the drilling of wells in the Victor Valley (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 Summer Tanagers now occur (Myers, 1992).

Fire can have a devastating effect on Summer Tanager 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 former Summer Tanager habitat may 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 may take many years for the area to attain its former structure. Cottonwoods and willows as tall as 50 feet (15 m) may appear within five years, but only under optimal conditions, including adequate ground water and soil conditions (Rosenberg et al., 1991).

Non-native invasive plant species can also degrade habitat. Although Summer Tanagers have begun nesting in Athel, such as at Topock, other 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, and displace native 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. Big Rock Creek at Valyermo contains a small amount of Salt Cedar.

Few, if any, data are available on the effects of off-highway vehicles on Summer Tanagers, but this activity is common at Mojave Narrows Park and other tanager nesting areas near Victorville.

The severity of Brown-headed Cowbird parasitism on Summer Tanagers is largely unknown in the western U.S., but in areas containing large cowbird populations some adverse effects are likely. Brown-headed Cowbirds are common in Morongo Valley and Victorville during nesting season. Both areas are commonly used for horseback riding, and stables, which provide feeding areas for cowbirds (Laymon, 1987), and are located near tanager habitat. Also, at least at Mojave Narrows Regional Park, equestrians create a myriad of trails through riparian forest and woodland, increasing the amount of edge, which is known to be a favorable condition for the proliferation of Brown-headed Cowbirds (Brittingham and Temple, 1983; Rothstein, 1994).

Another potential threat to Summer Tanagers is direct persecution, such as shooting. On 19 June 1991 in Haskell Canyon, Los Angeles County, a biologist conducting riparian bird surveys witnessed a child shooting a Summer Tanager (K.L. Garrett, pers. comm.).

Biological Standards:

The most important measure necessary to protect or enhance Summer Tanager populations in the WMPA is to preserve known and potential nesting areas. Of the five known nesting localities, only Big Morongo Canyon Preserve is managed by BLM. Mojave Narrows Regional Park is managed by San Bernardino County Regional Parks Department (the land is owned by the State of California Wildlife Conservation Board), Big Rock Creek, the golf course at Yucca Valley, and the oasis at Cushenbury Springs are privately owned.

Management of important nesting areas for the Summer Tanager should 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 is a management consideration. In some cases, restoration of riparian habitat by removing non-native invasive plant species and planting cottonwoods and willows may be appropriate (such as in Afton Canyon).

Control programs for Brown-headed Cowbirds at important riparian nesting areas in the WMPA may benefit the Summer Tanager. Such programs should be long-term, into perpetuity if possible. In order to initiate cowbird control at all important nesting sites in the WMPA, it is necessary for agencies at federal, state, county, and local levels to participate in cooperative plans.

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.

Literature Cited:

- American Ornithologists' Union. 1957. Check-list of North American birds, 5th ed. Am. Ornithol. Union, Washington, D.C.
- American Ornithologists' Union. 1998. Check-list of North American birds, 7th ed. Am. Ornithol. Union, Washington, D.C.
- Bent, A.C. 1958. Life histories of North American blackbirds, orioles, tanagers, and allies. Bull. U.S. Natl. Mus. 211.
- Brittingham, M.C. and S.A. Temple. 1983. Have cowbirds caused forest songbirds to decline? Bio-Science 33:31-35.
- California Department of Fish and Game, Natural Diversity Data Base. 1998. Special Animals. Biannual publication, Mimeo., 44 pp.
- Cardiff, E.A. 1993. Desert riparian-freshwater marsh [Breeding bird census]. Resident bird counts 1992. J. Field Ornithol. 64 (suppl.):92-93.
- Friedmann, H. 1963. Host relations of the parasitic cowbirds. Bull. U.S. Natl. Mus. 233.
- Garrett, K. and J. Dunn. 1981. Birds of southern California: status and distribution. Los Angeles Audubon Society, Los Angeles, California.
- Grinnell, J. and A. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna No. 27. Reprinted by Artemesia Press, Lee Vining, California.

- Harrison, H.H. 1979. A field guide to western birds' nests. Houghton Mifflin Co., Boston, Massachusetts.
- Hunter, W.C. 1984. Status of nine bird species of special concern along the Colorado River. Calif. Dept. Of Fish and Game, Nongame Wildl. Investigations, Wildl. Mgt. Branch Admin. Rep. 84-2, Nongame Bird and Mammal Sec. Rep. 84.09.
- Isler, M.L. and P.R. Isler. 1987. The tanagers, natural history, distribution, and identification. Smithsonian Institution Press, Washington, D.C.
- Johnson, N.K. 1994. Pioneering and natural expansion of breeding distributions in western North American birds. pp. 27-44 *In*: J.R. Jehl, Jr., and N.K. Johnson, (eds.), A century of avifaunal change in western North America. Stud. Avian Biology 15.
- Laymon, S.A. 1987. Brown-headed Cowbirds in California: Historical perspectives and management opportunities in riparian habitats. West. Birds 18:63-70.
- Myers, S.J. 1992. Biological inventory of the Mojave River corridor. *In*: Tierra Madre Consultants, Inc., Natural resources inventory of the Mojave River corridor. Unpubl. report prepared for the Mojave River Corridor Task Force.
- Pyle, P., S.N.G. Howell, R.P. Yunick, and D.F. DeSante. 1987. Identification guide to North American passerines. Slate Creek Press, Bolinas, California.
- Remsen, J.V., Jr. 1978. Bird species of special concern in California. Calif. Dept. Fish and Game, Wildlife Mgt. Branch Admin. Rep. 78-1.
- Robinson, W.D. 1996. Summer Tanager (*Piranga rubra*). *In*: A. Poole and F. Gill (eds.), The birds of North America, No. 248, A. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C.
- Rosenberg, K., R. Ohmart, W. Hunter, and B. Anderson. 1991. Birds of the Lower Colorado River Valley. Univ. Arizona Press, Tucson, Arizona.
- Rothstein, S.I. 1994. The cowbird's invasion of the far west: History, causes and consequences experienced by host species. pp. 301-315 *In*: J.R. Jehl, Jr., and N.K. Johnson, (eds.), A century of avifaunal change in western North America. Stud. Avian Biology 15.
- Skutch, A.F. 1989. Life of the tanager. Comstock Publ. Assoc., Cornell Univ. Press, Ithaca, New York.
- Small, A. 1994. California birds: Their status and distribution. Ibis Publ. Co., Vista, California.
- Torres, J., D. Earle, S. Connell, S. Wells and B. Love. 1992. Cultural resources sensitivity study of the Mojave River corridor, San Bernardino County, California. *In*: Tierra Madre Consultants, Inc., Natural resources inventory of the Mojave River corridor. Unpub. report prepared for the Mojave River Corridor Task Force.
- USDI, Bureau of Land Management, 1997. California Desert District Resource Area files.