

STATUS OF THE SUMMER Tanager
ON THE PACIFIC SLOPEAMADEO M. REA¹St. John's Indian School
Laveen, Arizona 85339

My capture of two specimens of Summer Tanager of the nominate, eastern race, *Piranga rubra rubra*, in southwestern California (Rea 1967) and a third in central Arizona (Phillips et al. 1964:176) has prompted me to investigate at length the status of this interesting species on the Pacific slope and to re-examine all extant coastal specimens.

The present concept of the status of *Piranga rubra* in coastal California is that both the races *P. r. cooperi* and *P. r. rubra* are fairly regular stragglers, occurring in about equal numbers.

The differences between the eastern race, *P. r. rubra*, and the western, *P. r. cooperi*, were clearly pointed out by Ridgway (1869) and the distinctive bill shapes illustrated when he described the latter form. He noted, in addition to the pronounced racial color differences for both sexes, that the bill of *P. r. cooperi* was larger, more swollen, and the wings more pointed. Table 1 presents measurements for both races in fresh plumage. Two color races may be distinguished in the western United States (see Phillips et al. 1964; Phillips 1966:151-153).

The first record of any Summer Tanager on the coast was by Streater (1886:52) who reported two seen and one taken by a Mr. Dodge at Santa Barbara in spring. At that time, as there existed no comparative series of the two subspecies in California, it was natural to assume that the specimen would be of the nearby race, *P. r. cooperi*. The specimen was apparently lost and its identity is uncertain.

The next record was from San Clemente Island where, on 11 October 1907, Linton (1908:85) took a female specimen which he reported as *P. r. cooperi*. Grinnell (1944:441) re-examined the specimen, arriving at the same conclusion. The specimen (now in the Museum of Comparative Zoology, Harvard University) was kindly re-examined at my request by Dr. Raymond A. Paynter, Jr. It actually represents the decidedly smaller and darker *P. r. rubra*. Measurements of this and other specimens taken in coastal California are given in table 2.

Nevertheless, recent literature (Grinnell and Miller 1944:441; A. O. U. Check-list 1957:546) continues to cite both records under *P. r. cooperi*, although Grinnell and Miller admit that Streater's specimen was "not known to have been critically determined."

Only two reports of *P. r. cooperi* have been added. Michener and Michener (1938) reported banding one bird (not "birds" as stated in Grinnell and Miller, loc. cit.) at Pasadena that was "compared with skins."

The only definite remark is, "Bill certainly *cooperi*." This may imply that the bird was not *P. flava*; for that matter, *P. r. rubra* is not even mentioned. The color of this young male (with its faint red spots) is not meaningful. On examining large series of first-year males of both races one can readily appreciate that these incoming reddish feathers are highly variable and are not diagnostic. They frequently range from pale to dark on the same specimen. In the absence of a specimen, or at least measurements, this record is not racially determinable.

The more recent Santa Barbara specimen reported by Rett (1943) as *P. r. cooperi* was definitely not critically determined, as I personally ascertained from its collector, Rev. Fr. Severin A. Baumann, O. F. M. Fortunately this first-year male specimen was mounted by Rett and placed on display in the bird hall of the Santa Barbara Museum of Natural History, thus escaping the recent fire which destroyed the study collection. After 20 years of exposure the color values are no longer of use in racial determination, but measurements and bill shape are definitely of the eastern race, not *P. r. cooperi*. (Mr. Abbott, Curator, kindly allowed me to examine it in detail and make direct comparisons with immature males of both races.)

The first ornithologist critically to compare coastal tanagers was Loye H. Miller. He reported *P. r. rubra* as new to California (1919, 1920) and later carefully identified another of the same race (1932). At no time did he report *P. r. cooperi*. I have re-examined both specimens. Miller's first specimen, a soiled, dark, first-year male, was taken 2 March 1919. (I have a Georgia specimen in my collection in a similar condition.) The second specimen is an adult male, also clearly the color and size of the nominate race, taken 29 August 1919.

Willett (1937) reported another specimen of the eastern race found at Wilmington, Los Angeles County, California, 14 March 1936. I have not personally examined this first-year male, but Mr. James R. Northern has supplied detailed measurements. On the basis of wing length alone it would appear to be *P. r. cooperi*. However, the tail is short and the bill size (length, width, and depth) is that of *P. r. rubra*. The tarsus measures 19.1 mm. Eleven male specimens of *P. r. cooperi* average 20.6 (range, 19.3-22.2); seven male *P. r. rubra* average 18.2 (range 16.0-19.9). The wing tip is very short, unlike the pointed-winged *P. r. cooperi*, a diagnostic character cited by Ridgway (1869:131). The bird conceivably originated in Texas, an intergrading area for the two races in question.

Huey (1933) reported a female of the eastern form taken at Point Loma 19 September 1932. Both wing tips of this dark reddish adult female were shot off. Oberholser reconfirmed Huey's initial identification. Huey (1954) reported another female collected near Pala, San Diego County, California, 9 January 1953. This bird is dark olive dorsally and light greenish yellow ventrally, as in the race *P. r. rubra*. The pointed rectrices indicate a first-year bird.

¹ Present address: Department of Biological Sciences, University of Arizona, Tucson, Arizona 85721.

TABLE 1. Measurements (mm) of *Piranga rubra rubra* and *P. r. cooperi*.^a

	Wing chord	Tail	Bill length (nostril)	Bill width	Bill depth
<i>Piranga rubra rubra</i>					
Adult ♂♂					
(n) range	(13) 91.1–98.2	(12) 63.0–77.0	(12) 12.8–14.7		
$\bar{x} \pm SE$	93.4 \pm 0.89	71.4 \pm 1.05	13.6 \pm 0.17		
Immature ♂♂					
(n) range	(11) 91.1–95.3	(10) 64.5–74.5	(11) 12.0–13.7	(10) 8.0–9.9	(8) 8.5–9.8
$\bar{x} \pm SE$	93.7 \pm 0.38	71.3 \pm 0.94	13.2 \pm 0.20	8.9 \pm 0.19	9.0 \pm 0.17
Adult ♀♀					
(n) range	(11) 88.9–96.2	(12) 64.2–74.9	(12) 12.7–14.7	(11) 8.6–9.1	(9) 8.8–9.4
$\bar{x} \pm SE$	93.0 \pm 0.64	67.5 \pm 1.01	13.6 \pm 0.16	8.9 \pm 0.10	8.97 \pm 0.06
Immature ♀♀					
(n) range	(11) 86.8–94.7	(11) 65.5–74.9	(11) 12.7–14.2	(11) 8.0–9.1	(6) 8.5–9.4
$\bar{x} \pm SE$	90.6 \pm 0.67	69.9 \pm 0.78	13.2 \pm 0.13	8.6 \pm 0.08	8.85 \pm 0.13
<i>Piranga rubra cooperi</i>					
Adult ♂♂					
(n) range	(47) 95.9–107.6	(46) 75.3–86.1	(48) 13.2–16.8		
$\bar{x} \pm SE$	101.35 \pm 0.39	80.87 \pm 0.40	15.3 \pm 0.29		
Immature ♂♂					
(n) range	(12) 94.7–106.5	(12) 76.2–89.9	(12) 14.0–16.0		
$\bar{x} \pm SE$	98.2 \pm 0.95	81.4 \pm 1.07	15.16 \pm 0.20		
Adult ♀♀					
(n) range	(11) 92.8–101.5	(11) 76.0–84.1	(11) 14.0–16.8		
$\bar{x} \pm SE$	97.5 \pm 0.71	78.7 \pm 0.80	15.5 \pm 0.25		
Immature ♀♀					
(n) range	(9) 93.0–100.7	(9) 78.1–82.2	(8) 14.5–15.0		
$\bar{x} \pm SE$	97.0 \pm 0.77	79.7 \pm 0.57	14.6 \pm 0.07		

^a Some measurements by A. R. Phillips (in litt.). No adult specimens included from July or August; wing and tail measurements excluded if feathers worn or broken. Localities for *P. r. r.* include southeastern U. S. (eastern Texas and east), Central America, Colombia, and Venezuela; those for *P. r. c.* include Arizona, New Mexico, Sonora, Chihuahua, and the lower valley of the Colorado River in California and Nevada.

The two specimens of *P. r. rubra* I collected in San Diego County were both taken at Mission San Luis Rey. The first is a first-year male taken 5 March 1963. The second specimen, a female, apparently also first-year, was taken 4 June 1963.

Recently Dr. J. R. Jehl, Jr., of the San Diego Natural History Museum, sent for my examination a Summer Tanager taken 28 May 1968 at Point Loma, San Diego County, by A. and J. Craig. On capture the specimen was caged, preceding preparation as a specimen. Other than the immediate effects of caging, the plumage is relatively unworn and resembles an adult. The above five San Diego County specimens agree fully in size, bill shape, and color with the nominate subspecies.

Another specimen, trapped, banded, and released at Point Loma, San Diego County, 28 October 1968 was identified as the nominate race by Dr. Jehl. He noted that the skull was not ossified and that the plumage was red. Measurements of this bird are included in table 2. This is the sixth specimen of *P. r. rubra* from this county.

Of the various supposed occurrences of *P. r. cooperi* on the Pacific slope cited by Grinnell (1928), Grinnell and Miller (1944), and the 1957 edition of the A. O. U. Check-list, only a single specimen can be substantiated: that found by Miss F. Bolton at Hueneme, Ventura County, California, 23 February 1918. Regarding this, Dr. Kenneth E. Stager (pers. comm.) writes: "I have examined the specimen of *Piranga*

rubra cooperi (LACM 2390) from Hueneme, California, and find that it agrees in color and size with two other [female] specimens of *cooperi*, one from Fort Lowell, Arizona, and one from Potholes, Imperial County, California." Mr. James R. Northern, at my further request, made the following detailed measurements, which all clearly indicate a western race: wing (chord) 100 mm, (flattened) 101.6; bill (from nares) 14.4 mm; width (at nares) 9.3 mm. The specimen is tailless.

There is thus no actual basis for the recent statement (Miller and McMillan 1964), "The Summer Tanager (*Piranga rubra*), both its eastern and western races, is now being detected in increasing numbers as a vagrant to the Pacific coast. . . ." I might add that similar assumptions had been made regarding the species' status in Colorado but were carefully corrected by Alexander (1936); cf. also Oberholser (1917) and Bailey and Niedrach (1965).

Fall stragglers of eastern species and subspecies on the Pacific slope have received considerable recent attention (McCaskie and Banks 1964; McCaskie 1966, 1967a, b; McCaskie et al. 1966; Rea 1967; Tenaza 1967; and others). Fall Summer Tanagers, however, constitute less than a third of the vagrants reported herein. These are evenly distributed (one each for August, September, and October). Interestingly, all four first-year males were taken in the first half of March and are the only spring records. The two late specimens, both females, were taken 28 May and 4

TABLE 2. Summary of Pacific Slope occurrences of *Piranga rubra rubra*.

Location	Age	Sex	Date	Collector	Museum number	Measurements (mm)			
						Wing length	Tail length (nostril)	Bill depth	Bill width
Santa Barbara County									
Mission Santa Barbara	Imm.	♂	7 Mar. 1943	S. A. Baumann	SBMNH 3852	92.2	13.3	9.05	8.95
Los Angeles County									
Los Angeles	Imm.	♂	2 Mar. 1919	L. Miller	MVZ 30692	89.2	69.2	12.2	8.5
Los Angeles	Ad.	♂	29 Aug. 1919	L. Miller	MVZ 40383	91.1	71.0	14.5	8.9
Wilmington	Imm.	♂	14 Mar. 1936	D. Grant and G. Willett	LACM 18655	98.7	70.8	13.0	8.0
San Diego County									
San Clemente Island									
Point Loma	Ad.	♀	11 Oct. 1907	C. B. Linton	MCZ 313660	91.0	70.0	13	9
Point Loma	Ad.	♀	19 Sept. 1932	J. W. Stefton, Jr.	SDNHM 16134	86+	74.9	13.8	9.4
7 mi. E of Pala	Imm.	♀	9 Jan. 1953	L. M. Huey	SDNHM 29921	92.3	69.3	12.8	8.7
Mission San Luis Rey	Imm.	♂	5 Mar. 1963	A. M. Rea	orig. AMR 301 now ARP Coll.	92.2	72.3 ^a	12.0	8.1
Mission San Luis Rey	Imm.	♀	4 June 1963	A. M. Rea	orig. AMR 329 now ARP Coll.	86.8	65.5	13.2	8.0
Point Loma	Ad.	♀	28 May 1968	A. and J. Craig	SDNHM 36611	85.5	65+	14.1	8.8
Point Loma	Imm.	♂	28 Oct. 1968	J. R. Jehl, Jr.	banded, released	89.0	70.0	13.4	

^a New red adult rectrix.

June at a time when the western races are breeding. Huey's 9 January specimen is the only likely wintering bird.

In summary, 11 specimens of Summer Tanagers from eight localities on the coastal slope of southwestern California have been re-examined with reference to their racial status. On the basis of the data presented, *P. r. cooperi* should be considered merely "accidental" in southwestern California, based on a single late February Hueneme specimen. *P. r. rubra* should be considered the "casual" race for the Pacific slope. Even within the normal breeding ranges of *P. r. cooperi* and the recently described *P. r. ochracea* in the Southwest, only the eastern nominate form appears in winter (Phillips et al., loc. cit.). Additionally, all three vagrants (two not examined by me) from northern Baja California are *P. r. rubra* (Grinnell 1928; Friedmann 1957).

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ROOSTING BEHAVIOR OF THREE SPECIES OF WOODCREEPERS (DENDROCOLAPTIDAE) IN BRAZIL

YOSHICA ONIKI

Museum of Natural History
The University of Kansas
Lawrence, Kansas 66044

The roosting behavior of woodcreepers is little known. Skutch (*Condor* 47:85, 1945) found individuals of five species roosting singly in tree cavities. Edwin Willis (pers. comm.) found a Buff-throated Woodcreeper (*Xiphorhynchus guttatus*) roosting alone in a cavity 1 m above the ground on Barro Colorado Island, Panama Canal Zone. Neither author noted the sleeping positions. In Brazil I observed the roosting of three other members of the family.

In the Mocambo Forest Reserve of the IPEAN (Instituto de Pesquisas e Experimentacao Agropecuarias do Norte), Belem, Para, Dr. Charles O. Handley and I observed a Spix's Woodcreeper (*Xiphorhynchus spixii*) roosting. The bird roosted several nights in a cavity about 2 m up in a rotten palm tree stump about 10 cm in diameter, 2.3 m high, and covered with mosses and epiphytes. At 23:00 on 27 March 1968 the bird was perched on the inside wall of the cavity near the entrance hole. When I turned the flashlight on the bird, it was looking at me, moving its head slowly; seconds later it flew to another trunk about 1 m away. Later that evening the Spix's Woodcreeper was seen again roosting in the same hole. Dr. Handley also observed it there on other nights. The Buff-throated Woodcreeper seen by Willis (pers. comm.) behaved in the same way on two different nights.

About 100 m away another rotten stump covered with mosses and epiphytes had a hole about 2.5 m above the ground. A Plain-brown Woodcreeper (*Dendrocincla fuliginosa*) entered the hole several times during the day. At 18:50 on 27 March 1968 it came calling and perched 3 m up on the stump but did not go into the hole, probably because I was nearby.

At 18:30 on 27 April 1968, near a road at Serra do Navio (0°55'N, 52°01'W) in Amapa I observed

another *Dendrocincla fuliginosa* perched on a trunk about 8-10 cm in diameter. The vegetation was dense second-growth forest, very difficult to penetrate. I observed the bird there on subsequent days at about the same time and also later at 20:00. When disturbed by the noise of my approach, it gave short "tcheep-tcheep" calls and moved to another trunk nearby after several seconds.

From April to May 1967, I kept a Straight-billed Woodcreeper (*Xiphorhynchus picus*) in captivity. The bird was captured in a mist net near the edge of the Rio Negro at Pedra do Gaviao, about 1°25'S, 61°15'W (State of Amazonas). Throughout the day it perched on the vertical wall of the cage rather than on horizontal branches in the cage. However, in nature, when looking for food, other woodcreepers such as the Plain-brown Woodcreeper and the Buff-throated Woodcreeper occasionally perch on horizontal branches. At night, *X. picus* perched on the vertical wall and turned its head backward, hiding it in the middle of the fluffed back feathers. According to R. Warner (*Condor* 70:101, 1968), this way of sleeping may keep mosquitoes from biting around the face.

From these observations, it seems that at least one woodcreeper—one inhabiting riverside mosquito-infested habitats—roosts with the head hidden; the others seemed to have their heads out but may have been disturbed by my approach. Unlike other woodcreepers that have been observed, one Plain-brown Woodcreeper roosted outside a cavity on a vertical trunk. This is a species that often follows army ants in forest where tree cavities are scarce. Possibly all these birds are flexible in their roosting requirements. As Skutch (op. cit.) has noted for other woodcreepers, all these birds went to their roosting places late in the afternoon.

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