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A NEW SPECIES OF TANAGER (EMBERIZIDAE: THRAUPINAE, *TANGARA*) FROM SOUTHERN PERU

THOMAS S. SCHULENBERG AND LAURENCE C. BINFORD

The thraupine genus *Tangara* is the largest genus of nine-primaried oscines and, in fact, of strictly New World birds. Thus we find it surprising that no new species of *Tangara* has been reported in over 70 years (see Nelson 1912), especially in view of the flood of avian novelties discovered during the last two decades of intensive ornithological exploration of Andean countries.

During field work in southern Peru for the Louisiana State University Museum of Zoology (LSUMZ) in the fall of 1980, we encountered an Andean population of *Tangara* that somewhat resembled *T. cayana* of the adjacent lowlands. Binford collected two of these birds, a male and a female. Subsequently we learned that Jean Dorst (1961) had collected two *Tangara* specimens in the same area in 1960. Study of these four specimens convinces us that this population represents an undescribed species that we propose to call

Tangara meyerdeschauenseei sp. nov.

GREEN-CAPPED TANAGER

HOLOTYPE.—Louisiana State University Museum of Zoology No. 98917; adult male, 2 km northeast of Sandia, ca. 2175 m, 14°17′S, 69°26′W, Department of Puno, Peru, 2 November 1980; collected by Laurence C. Binford, original number 1495.

DIAGNOSIS.—A large, relatively dull-colored, sexually dimorphic *Tangara*. Most similar to members of the *cayana* group, consisting of *T. cayana, T.* (*cayana*) *flava, T. cucullata,* and *T. vitriolina,* but differs in its greenish-straw, not orange-buff, chestnut, or rufous crown. The male is most similar to the male of *vitriolina* but may be distinguished by the greenish-straw, not rufous, crown; greenish-turquoise, not black, auriculars; greener (less blue) back and scapulars; and more uniform, grayish-buff underparts, lacking whitish on the lower

Selected members of the *Tangara cayana* superspecies,
including (from top to bottom, males on right, females on left)
T. meyerdeschauenseei, sp. nov.; *T. vitriolina;* and *T. cayana.* Painting by John P. O'Neill.

belly. Besides crown color, the male *meyerdeschauenseei* is best separated from the males of *cayana, flava,* and *cucullata* by the blue-green, not buff, straw, or greenish-straw, back and rump. The male further differs from the males of *cayana* and *flava* by the greenish-turquoise, not black, auriculars; by the grayish-buff, not warm buff or orange-buff, underparts; and by lacking the black throat and central belly stripe of *flava.* The male of *meyerdeschauenseei* lacks the extensive purple or blue opalescent colors of the underparts of the male *cucullata.* The female *meyerdeschauenseei* is very similar to females of *cayana, flava,* and nominate *cucullata,* differing primarily by the greenish-gold, not rufous, crown and by the greenish-gray, not dark gray, auriculars. The female is distinguished from females of *T. cucullata versicolor* and *T. vitriolina* by these same two characters, as well as by the generally cinnamon-buff, not deep ochraceous or buffy-white underparts, respectively.

DESCRIPTION OF HOLOTYPE.—The opalescence of the plumage causes some colors of the new species to vary under different viewing conditions. Blues and greens predominate when the light source is directly behind the observer; buff or straw colors predominate at other angles. In the following description, in cases in which the color of a region varies significantly depending upon the position of the light source, the region is first described as it appears when the light is behind the observer. This description is followed by the phrase "varying to . . . ," which describes the colors as they appear at other angles. Unless otherwise specified, this description is based on the colors as seen from a lateral view.

Lores and eye-ring dark gray. Auriculars greenish-turquoise, near Venice Green (capitalized color names from Ridgway [1912]), varying to dusky-gray with violet and gold overtones. Forehead (in frontal view) Light Blue Green, varying to grayish-buff. Crown greenish-straw, near Lumiere Green, varying to near Pale Orange-Yellow, contrasting at all times with color of back. Narrow superciliary, extending from lores to posterior border of eye-ring, blue-green, near Venice Green, varying to black. Center of back and rump Chrysopraise Green; sides of back, near scapulars, somewhat bluer than center; this entire region varying to coppery Cream Buff. Nape slightly bluer than back (including sides) when viewed with light directly behind observer, forming a faint bluish collar, not visible at other angles, at hind edge of crown. Scapulars near Tyrolite Green, varying to grayish-turquoise. Uppertail coverts blue-green, near Viridian Green. Tail, dorsal surface: central rectrices dark gray along shaft, elsewhere glossed with blue-green, brightest along outer edge of outer web; outermost pair of rectrices uniformly gray, very narrowly and faintly edged with blue-green on distal ⅓ of outer web; remaining rectrices gray on inner web and along shaft of outer web, rest of outer web blue-green, near Viridian Green, varying to coppery Cream Buff. Tail, ventral surface: outer rectrices pale gray, inner web and tip of outer web edged with blue-green, near Lumiere Green; remaining rectrices pale gray adjacent to shaft on inner web, elsewhere blue-green, near Deep Bluish Glaucous, varying to violet; the proportion of the inner web that is blue-green increases gradually from the outside in, to the central rectrices, which are almost entirely blue-green below. Wing, dorsal surface: upper wing coverts and remiges black to dark gray on inner web. Outermost primary entirely gray on outer web as well, rest of primaries narrowly edged with Light Oriental Green (varying to grayish-turquoise) on outer web, the extent of green edging present varying from basal ½ of primary (next-to-outermost primary) to almost complete length of outer web (inner primaries); outer web of secondaries and upper wing coverts broadly edged and tipped with Light Oriental Green (varying to grayish-turquoise). Chin pale grayish-turquoise. Throat and center of breast near Lavender Blue. Sides of breast and flanks grayish-buff, overlaid with green, near Lumiere Green. Center of belly Light Pinkish Cinnamon; lower belly nearer Warm Buff. Undertail coverts Warm Buff. Soft-part colors in life: iris brown; maxilla and tip of tomium of mandible black, rest of mandible pale gray; tarsi and toes lead gray.

MEASUREMENTS.—See Table 1 for measurements of the holotype and paratypes.

TABLE 1

RANGES AND MEANS OF MEASUREMENTS OF SELECTED *TANGARA* TANAGERS

	N	Wing chord (mm)	Tail (mm)	Tarsus (mm)	Culmen from base (mm)	N	Weight (g)
T. meyerdeschauenseei	1 ♂	79.1	59.8	18.3	14.3	1	26.5
	3 ♀♀	73.6–76.3 (75.0)	55.5–58.9 (56.9)	17.5–17.9 (17.7)	14.7–15.4 (15.0)[a]	1	25.4
T. vitriolina	5 ♂♂	72.9–77.0 (74.9)	52.1–56.9 (54.0)	16.2–17.9 (17.0)	14.4–14.7 (14.6)	4	20.2–24.6 (22.5)
	4 ♀♀	75.3–76.5 (75.6)	54.6–55.6 (55.0)	16.7–18.8 (17.5)	13.7–15.2 (14.6)	1	21.1
T. cayana	5 ♂♂	70.9–73.8 (72.5)	50.6–53.8 (52.0)	16.5–17.6 (17.1)	13.9–14.6 (14.1)	3	17.0–19.0 (18.0)
	4 ♀♀	68.6–72.7 (70.6)	47.6–52.3 (49.2)	16.7–18.0 (17.2)	13.8–14.3 (14.1)	3	19.0–22.5 (20.3)
T. (cayana) flava	10 ♂♂	70.0–77.0 (73.5)	47.6–57.2 (51.7)	15.7–18.3 (16.5)	13.3–14.8 (14.2)	—	—
	3 ♀♀	71.0–72.7 (71.7)	49.0–53.3 (51.3)	15.5–18.9 (17.4)	14.5–14.9 (14.7)	—	—
T. cucullata	10 ♂♂	72.9–78.5 (75.4)	50.1–54.6 (52.4)	17.7–20.0 (18.9)	14.7–16.7 (15.7)	—	—
	10 ♀♀	69.6–77.0 (73.3)	49.5–53.5 (51.2)	17.1–19.3 (18.3)	14.5–16.1 (15.3)	—	—

[a] N = 2.

DISTRIBUTION.—Known only from the Department of Puno, Peru, at Sandia (type locality); Asalay, ca. 13 km north of Sandia; and the west side of Abra de Maruncunca, ca. 14°14'S, 69°17'W, ca. 2000 m, ca. 20 km east of Sandia (sight records only). All localities are at the head of the Río Inambari, a tributary of the Río Madre de Dios (Fig. 1).

SPECIMENS EXAMINED.—In the following section, all unmodified locality names refer to departments, states, or provinces, and not to any cities that may bear similar names. *Tangara meyerdeschauenseei*: Sandia, Dept. Puno, Peru (type locality),1 ♂ (LSUMZ 98917; holotype), 2 ♀♀ (LSUMZ 98918; Muséum National D'Histoire Naturelle [=MNHN] C. G. 1962 No. 3263; paratypes); Asalay, ca. 13 km north of Sandia, Dept. Puno, Peru, 1 ♀ (MNHN C. G. 1962 No. 3262; paratype). *T. vitriolina* (all LSUMZ): Santander, Colombia, 2 ♀♀; Cauca, Colombia, 2 ♂♂, 1 ♀; Imbabura, Ecuador, 4 ♂♂, 1 ♀. *T. cayana* (all LSUMZ): Aragua, Venezuela, 1 ♂; Santander, Colombia, 1 ♂; San Martín, Peru, 2 ♂♂, 2 ♀♀; Madre de Dios, Peru, 1 ♂, 2 ♀♀. *T. (cayana) flava* (all LSUMZ): Pará, Brazil, 2 ♂♂; Goiás, Brazil, 5 ♂♂, 1 ♀; São Paulo, Brazil, 3 ♂♂, 2 ♀♀. *T. cucullata*: St. Vincent, Lesser Antilles, 4 ♂♂, 2 ♀♀ (collection of Albert Schwartz); and Grenada, Lesser Antilles, 1 ♂, 1 ♀ (LSUMZ), 5 ♂♂, 7 ♀♀ (Schwartz).

ETYMOLOGY.—We are pleased to name this new species after the late Rodolphe Meyer de Schauensee in recognition of his many contributions to Neotropical ornithology. In particular, his two books, *The species of birds of South America* (1966) and *A guide to the birds of South America* (1970), helped introduce a new generation of field ornithologists to the South American avifauna.

REMARKS

Description of female.—Dorst (1961) considered his two female specimens to be juvenile *Tangara cayana.* This is understandable, because they resemble dull-color adult female *T. cayana.* Nothing about the shape or texture of the feathers of these specimens, however, suggests immaturity and, because they are identical in plumage to the adult (based on skull ossification) female collected by Binford, they clearly also represent the new species.

The plumage of the female is similar in pattern to that of the male, but the green colors are more drab and the lavender of the chest is replaced with light green. Following is a description of the female: Lores and eye-ring dark gray. Auriculars dull green, near Peacock Green, mixed with light gray, varying to dusky-gray with gold overtones. Forehead (in frontal view) grayish-green, near Kildare Green. Crown yellow-olive, near Citron Green; hind edge of crown slightly greener, near Malachite Green; forehead and crown together varying to coppery gold, near Honey Yellow. Narrow superciliary, extending from lores to posterior border of eye-ring, slightly greener than crown, varying to dark gray. Back dull green, near Biscay Green, varying to near coppery Citrine Drab. Nape slightly bluer than back when viewed with light directly behind observer, forming a faint bluish-green collar, not visible at other angles, at hind edge of crown. Scapulars near Peacock Green, varying to dark gray. Rump paler than the back, near Malachite Green, varying to near Citrine Drab. Uppertail coverts blue-green, near French Green, varying to dark blue-green, near

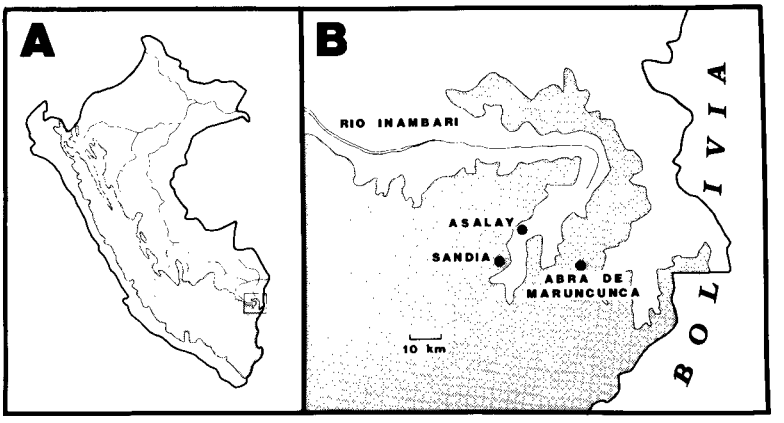

FIG. 1. A. The Andes Mountains of Peru (shaded within the 2000 m contour); the box at lower right encloses the headwaters of the Río Inambari. B. The headwaters of the Río Inambari, showing localities mentioned in the text.

Myrtle Green. Color pattern of rectrices similar to male, but green color of dorsal surface near French Green, varying to dark blue-green, near Myrtle Green. Underside of tail pale gray, faintly glossed with light green, varying to blue-green. Wing, dorsal surface: similar to male, but upper wing coverts edged with Peacock Green, varying to near Myrtle Green, and remiges (except for all-gray outer primary) edged with brighter green, near Calliste Green, varying to near Malachite Green. Chin pale whitish-gray. Throat and center of breast light green, near Light Cendre Green. Sides of breast and flanks buff, overlaid with green, near Light Cendre Green. Belly near Light Ochraceous-Buff. Undertail coverts Warm Buff. Soft-part colors of LSUMZ 98918 as in male. Bill of MNHN C. G. No. 3263 described as "gris plombé," with no mention of black (description probably incomplete).

Molt and breeding condition.—All four specimens were collected during the month of November. They show no excessive feather wear or molt other than the replacement of one rectrix (presumably lost accidentally) of the holotype. Gonad data are available for only two specimens, the male and female collected by Binford. The testes measured 9 × 6 mm each; the ovary measured 7 × 5 mm, with the largest ovum 1 mm. Although these data are not conclusive evidence of breeding, we suspect that *Tangara meyerdeschauenseei* might breed at this time of year because several forest-inhabiting *Tangara,* e.g., *xanthocephala* (Saffron-crowned Tanager), *vassorii* (Blue-and-black Tanager), and *viridicollis* (Silvery Tanager), were breeding in November 1980 at Abra de Maruncunca.

Systematic relationships.—To date, no systematist has formally proposed a phylogeny for *Tangara,* but several groups of species are generally regarded as natural. One such assemblage, the *cayana* group, consists of *T. cucullata* (Lesser Antillean Tanager), *T. vitriolina* (Scrub Tanager), and *T. cayana* (Burnished-buff Tanager; including the well-differentiated semispecies *flava,* the Stripe-bellied Tanager, which contains the taxa *huberi, flava, sincipitalis, chloroptera,* and *margaritae*). These taxa are characterized by relatively drab plumage, with buff or bluish-green colors predominating, a small degree of sexual dimorphism, and the presence of an orange-buff, chestnut, or rufous crown that contrasts somewhat with the color of the back. Members of the *cayana* group also share a greater affinity for semiopen habitats than do most of their congeners (Isler and Isler, in press).

The plumage, size (Table 1), and habitat (see below) of *Tangara meyerdeschauenseei* clearly mark it as belonging to the *cayana* group. Although the crown is not predominately orange-buff, chestnut, or rufous in color, buff tones do appear in certain lights. Furthermore, the crown of *meyerdeschauenseei* is somewhat set off from the color of the back, imparting a "capped" appearance, much as in other species of the *cayana* group.

The relationship of *Tangara meyerdeschauenseei* to other species within the *cayana* group is not clear. Both *meyerdeschauenseei* and *vitriolina* occur in the Andean highlands at similar elevations and in similar habitats. These two species are similar in size, averaging larger in wing and tail length and in weight (Table 1) than *cayana,* geographically the closest member of the *cayana* group to both species. That both species are larger than *cayana* is not necessarily indicative of close relationship between them because montane Andean taxa tend to be larger than related taxa of lower elevations (Traylor 1950). The evidence from plumage pattern is also equivocal. Although the male plumages of *meyerdeschauenseei* and *vitriolina* are similar, the female of *meyerdeschauenseei* is more like the female of *cayana.* Furthermore, the male of *meyerdeschauenseei* (as well as of *vitriolina*) basically resembles the female of *cayana,* with the female *cayana*'s dull green colors replaced by shiny opalescent green (*meyerdeschauenseei*) or blue (*vitriolina*). We conclude that *meyerdeschauenseei* shares many similarities with, and appears to be closely related to, both *vitriolina* and *cayana.*

Regardless of whether *Tangara meyerdeschauenseei* and *vitriolina* are more closely related to each other than to other members of the *cayana* group, we believe that recognition of *meyerdeschauenseei* as a distinct species is warranted. We base this conclusion on its unique plumages in both sexes, which render it as distinct from *vitriolina* as the latter is from

cayana, and on the similarity of the female to *cayana* rather than to *vitriolina.*

Habitat and distribution.—We made most of our limited observations of the new species near Sandia, in the deep valley of the upper Río Inambari. The narrow floor and steep sides of the valley are extensively farmed. Where not cleared or too rocky, the slopes are covered with dense evergreen shrubs 2–3 m tall. Whether this scrub habitat is a consequence of prolonged human disturbance or of the rain shadow effect of the high valley walls, we cannot be certain, although the latter seems more likely. Here we found *Tangara meyerdeschauenseei,* typically in pairs or singly, to be fairly common in fruiting trees in small *chacras* (garden plots) or in semiarid scrub along the small river flowing past the village. The stomachs of the two birds collected by Binford contained fruit pulp and seeds as large as 8 × 4 mm.

Disturbance of the natural vegetation is more recent and complete in the vicinity of Abra de Maruncunca. The pass (*abra*) is crossed by the road running from Sandia east to San Juan del Oro. North of the road the pass remains covered with tall cloud forest, which, at the time of our visit, was being subjected to selective logging by the local people. Extensive areas south of the road at the pass, and along the road east and west of the pass, however, are almost completely clear-cut; the remaining forest is restricted to gullies and very steep slopes. On 5 November 1980, Schulenberg found *Tangara meyerdeschauenseei* to be fairly common along the edge of these cleared areas west of the pass.

The avifauna currently associated with *Tangara meyerdeschauenseei* in the Sandia area contains at least two elements. Some species, in the Peruvian portions of their ranges, are typical of montane scrub zones, e.g., *Synallaxis azarae* (Azara's Spinetail), *Myiotheretes striaticollis* (Streak-throated Bush-Tyrant), *Turdus chiguanco* (Chiguanco Thrush), *Thraupis bonariensis* (Blue-and-yellow Tanager), and *Saltator aurantiirostris* (Golden-billed Saltator). Other species are inhabitants primarily of lowland open areas, e.g., *Tyrannus melancholicus* (Tropical Kingbird) and *Thraupis episcopus* (Blue-gray Tanager), having invaded the Sandia valley as it has been opened for agriculture. We believe that *Tangara meyerdeschauenseei* is a true montane form and not simply another recent invader from lower elevations. *Tangara cayana* has been collected (LSUMZ) at the Pampas de Heath (ca. 13°00′S, 69°00′W, Dept. Madre de Dios, Peru, a large area of savannah at 160 m only 150 km NNE of Sandia) (see Graham et al. 1980). We presume that if *meyerdeschauenseei* were truly a lowland form, it too would have been found on the Pampas de Heath. In this part of Peru, we know of no other extensive areas of open or semiopen habitats such as those frequented by this species.

The elevational distribution and habitat of *Tangara meyerdeschauenseei* are probably similar to those of *vitriolina,* which is found in semiarid intermontane valleys of western Colombia and Ecuador between 1100 and 2400 m (occasionally as low as 500 m). We suspect that *meyerdeschauenseei* eventually will be found in other such valleys in southern Peru and northern Bolivia. Despite the small extent of its known range, we doubt that this species is in any immediate danger of extinction. Because it appears to inhabit semiopen rather than forested regions, continued clearing of forests may actually favor this species.

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