A second probable hybrid between the Scarlet and Western Tanagers.—In 1950, I had the pleasure of figuring an unusual male tanager in postnuptial molt taken in Anoka County, Minnesota, on 17 August 1949. Subsequently, H. B. Tordoff (1950. *Wilson Bull.*, 62:3-4) indicated that the bird probably was a hybrid between the Scarlet (*Piranga olivacea*) and Western (*Piranga ludoviciana*) Tanagers. On 18 September 1951, Burt L. Monroe, Sr., took another unusual male tanager (Fig. 1) at Anchorage,

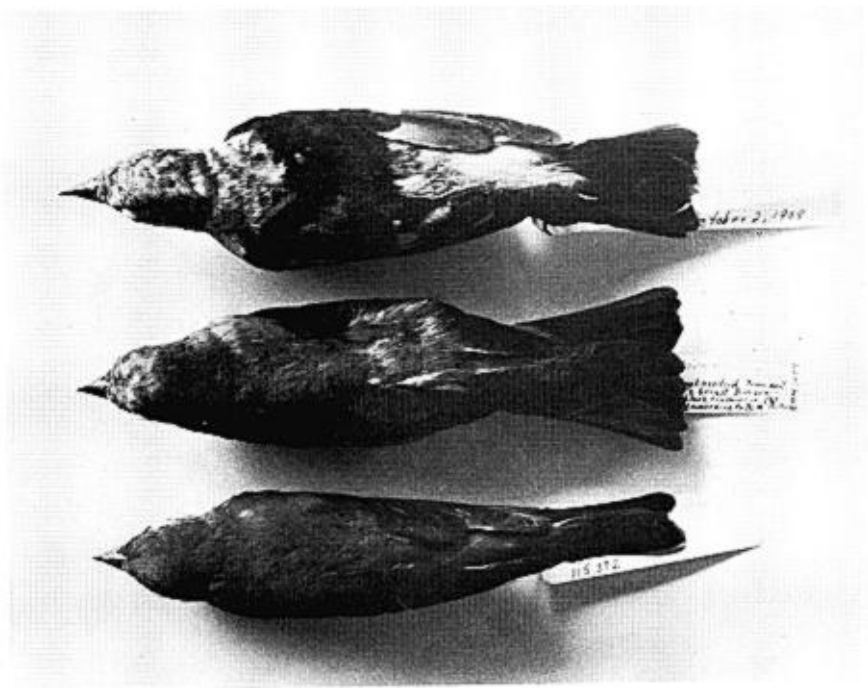

FIG. 1. Dorsal aspect of three adult male tanagers in fresh autumn plumage: from bottom to top, Scarlet Tanager; probable Scarlet × Western Tanager; Western Tanager.

Jefferson County, Kentucky, and kindly turned the bird over to me for preparation and study (R. M. M. original field catalogue No. 1409; specimen ultimately to reside in The University of Michigan Museum of Zoology). This specimen weighed 31.7 grams, was moderately fat, had the skull fully ossified, and showed some traces of molt (evident from inside the fresh skin) on the crown, upper back, and breast. Unlike those of the Minnesota specimen, the fresh flight feathers were all fully grown, and the contour feathers, whether or not quite full grown, were entirely fresh and of the incoming, or adult winter plumage (= definitive basic plumage of Humphrey and Parkes, 1959. *Auk*, 76:16). The testes were small, measuring approximately 2 × 1 mm.

As does the Minnesota bird, the Kentucky specimen resembles the Western Tanager in certain respects, although both clearly show more resemblance to the Scarlet Tanager. The pertinent points of difference between the (presumed) parent species in fresh autumn plumage, with the condition of the corresponding characters in the two specimens here discussed, are shown in Table 1.

TABLE 1

CERTAIN DIFFERENCES BETWEEN SCARLET AND WESTERN TANAGERS, WITH INDICATION OF INTERMEDIACY SHOWN BY TWO PUZZLING SPECIMENS

Region	*Piranga olivacea*	*Piranga ludoviciana*	Minnesota male	Kentucky male
Crown	Uniformly olive or olive-gray	Clear yellow, tinged anteriorly with orange-red; feathers sometimes tipped with blackish or dusky	Indications of incoming feathers are that the crown would have been uniformly olivaceous, but with some dusky-tipped feathers	Olive-gray blotched anteriorly with orange-yellow; faint traces of dusky tips on some feathers
Interscapular area and rump	Uniformly olive or olive-gray	Black, from near bend of wing to upper rump; rump clear yellow	Olivaceous, broadly blotched with black; rump yellowish	Olivaceous, some feathers lightly tipped with scattered black; rump blotched with light orange-yellow
Underparts	Pale lemon yellow, tinged with olive on flanks and sides of breast; dull olivaceous band across breast	Bright cadmium yellow, tinged on throat, jugular area, and upper breast with orange; no breastband	Incoming feathers indicate pale yellow; breastband indistinct if present	As in *olivacea*, but with blotches of orange-yellow on throat, breast, and flanks; breastband obsolete
Inner secondaries (tertials)	Black	Black, broadly tipped with white	Outermost tertial (only) with narrow white tip	Black
Middle secondary coverts	Black*	Entirely bright yellow	Narrowly tipped with olive-yellow	Black
Tip of tail	Black	Narrowly tipped with white	Black	Black
Depth of bill at base	8.9–9.7 mm (avg. of 14, 9.4 mm)**	7.0–8.6 mm (avg. of 12, 8.1 mm)**	8.1 mm	9.0 mm

* Occasional specimens have these feathers narrowly tipped with cadmium yellow (such are University of Kansas Museum of Natural History No. 16765, Douglas County, Kansas, 9 May 1927; and K.U. 12498, "Yucatan, G. F. Gaumer," no other data). It is commonly stated that the occasional occurrence of this character is "normal" for the species, but I am not aware that its geographic distribution or frequency of occurrence has been ascertained.

** Ridgway, *U.S. Nat. Mus. Bull.* 50, Pt. 2, 1902, pp. 89, 93.

Considering the points of the table where either bird shows intermediacy, we see that the Minnesota specimen more nearly approaches the Western Tanager in the interscapular area and in depth of bill, whereas the Kentucky bird more nearly resembles it in the condition of the crown and underparts. The Minnesota bird, additionally, shows some approach to *P. ludoviciana* in the marking of the tertials and middle coverts, where the Kentucky bird does not. The specimen from Kentucky is intermediate, therefore, in three characters, while the Minnesota bird, being intermediate in five, must be adjudged as morphologically somewhat closer to *P. ludoviciana*. An additional point concerning the Kentucky bird is that, according to Monroe, its call notes were distinctly odd for a Scarlet Tanager. Although the songs of the Scarlet and Western Tanagers are rather similar, the call notes, as rendered by Peterson (1960. "A Field Guide to the Birds of Texas," Boston; pp. 235–236), differ, being *pi-tac* or *pit-i-tic* in the Western Tanager, and the familiar *chip-burr* well known to most eastern ornithologists (including Monroe) in the Scarlet Tanager.

No further reports of this presumed cross have come to my attention, and only the above-mentioned published record was listed by A. P. Gray (1958. "Bird Hybrids," Bucks, England, Commonwealth Agric. Bur.; p. 243).

We can, of course, only guess at the events resulting in the two birds discussed. The totality of their characters suggests to me that, if resulting from hybridization, which I think probable, they are not first-generation hybrids. It is more probable that they resulted from backcrossing or even more remote genetic interchange. Taken together, they reinforce the obvious probability that, like various other North American east–west allopatric pairs of species, the Scarlet and Western Tanagers are descendants from a common ancestor of the not-too-distant past. It is therefore possible not only that occasional hybrids occur, but also that random mutations of appropriate alleles could produce phenotypes in either species resembling the other in various characters.—ROBERT M. MENGEL, *Museum of Natural History, University of Kansas, Lawrence, Kansas, 18 February 1963.*

Interspecific relations among Red-bellied and Hairy Woodpeckers and a flying squirrel.—While watching a pair of nesting Red-bellied Woodpeckers (*Centurus carolinus*) during May and June 1962, about 2 miles south of Carbondale, Illinois, conflict between them and a southern flying squirrel (*Glaucomys volans*) was observed. Concurrent with this conflict but also considered important was continual competition between this pair and a pair of Hairy Woodpeckers (*Dendrocopos villosus*).

The pair of Red-bellied Woodpeckers had completed excavation and had laid their eggs before the Hairy Woodpeckers showed an interest in nesting in the same snag (about 10 feet above the cavity of the former pair). During subsequent observations (covering a span of 38 days) of the incubation and nesting periods of both species, the Red-bellied Woodpeckers were subject to constant harassment by the Hairy Woodpeckers, but did not respond similarly. Grimes (1947. *Fla. Nat.*, 21:1–13), however, has reported a probable case of destruction of nestling Hairy Woodpeckers by a male Red-bellied Woodpecker.

One morning halfway through the nestling period of the Red-bellied Woodpeckers, the male, after feeding the young, moved up the trunk and midway between his cavity and that of the Hairy Woodpeckers began to pull dead grass and leaves from an old excavation that had been broken through at the bottom. Immediately, he was attacked by a flying squirrel roosting there. The bird, however, returned to his young when the squirrel started down the tree in that direction. When the female came to feed the young, the male again attacked the squirrel at its cavity. At one point, he grabbed the mammal