Field Identification of the Flicker Forms and Their Hybrids in North America

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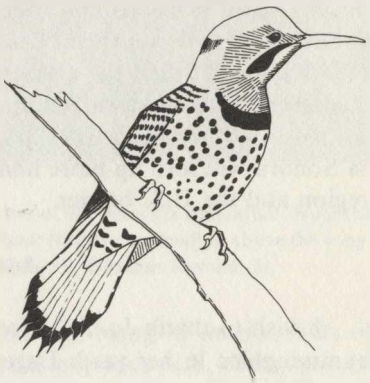


Although it has taken a few lumps recently, the Common Flicker is still worth a closer look: it can provide us with some unique challenges in identification.

The flickers of North America north of Mexico were long regarded as comprising three species: the Yellow-shafted Flicker *Colaptes auratus* of the North and East, the Red-shafted Flicker *C. cafer* of the West, and the Gilded Flicker *C. chrysoides* of the Southwest. Although these three forms appear superficially very distinctive, they interbreed freely wherever they come in contact (Phillips *et al.* 1964, Short 1965, Bock 1971). In 1973 the A.O.U. Committee on Taxonomy and Nomenclature formally combined all the North American forms under the name *Colaptes auratus,* Common Flicker.

Coincident with this move (and, perhaps, partly as a result of such 'lumpings'), North American observers were beginning to revive an interest in identifying forms below the species level. The optimistic observer could contemplate the fact that rather than just three species, or now one species, there were actually *five* "kinds" of flickers to be identified: Yellow-shafted, Red-shafted, Gilded, Yellow-shafted X Red-shafted hybrids, and Red-shafted X Gilded hybrids. [All of these names are still applicable, and I will continue to use them, without quotes, in this article. This usage is entirely for the sake of convenience: I am not suggesting that any of these forms might be distinct species.]

But if we continue to enter the various flicker forms separately in our daily notes, and attempt to identify all individuals, we encounter some identification problems which are not adequately addressed in any of the popular bird guides. For example, field guides would be of little aid in distinguishing some Red-shafted X Gilded hybrids from "pure" Red-shafteds. The standard bird-guide treatment would lead one to believe that some Yellow-shafted X Red-shafted hybrids could be exact duplicates of typical Gildeds; one source (Lane & Holt 1973) goes so far as to say, "If you see a Gilded Flicker in Colorado, forget it" — as if the identification would be impossible. And none of the guides discusses the subject of introgression, or the thorny problem of distinguishing introgressant individuals from true hybrids.

The determined observer with access to a good library could glean the answers

to all these questions from a careful reading of various technical publications. Indeed, anyone with a serious interest in flickers should read Lester L. Short's (1965) landmark paper on "Hybridization in the flickers (*Colaptes*) of North America." But since this and other technical publications may be unavailable to many birders, and since I have not seen any papers which discussed the subject from the viewpoint of field identification, it is hoped that the present article will prove useful.

Distribution, Hybrid Zones, Migrations, Potential for Vagrancy

The general distribution patterns of the three flicker forms are indicated accurately enough in the standard field guides. However, a few additional comments are in order here.

The northern populations of the Yellow-shafted (which breed north to about treeline across northern Canada and west into Alaska) are the most migratory, most of the birds vacating Canada entirely in winter. The majority of the northwesternmost breeders seem to migrate a considerable distance eastward before turning south (many of these birds probably contribute to the great fall flights down the middle Atlantic coast of the U.S.), but a scattering of "pure" Yellow-shafteds occurs almost throughout the western U.S. in migration and winter. The migration terminates in the southern latitudes of the United States: this form has been practically unrecorded in the West Indies (aside from the endemic resident races on Cuba and Grand Cayman) and Mexico, although a few "overshoots" would be expected in both areas.

Throughout most of its breeding range in the U.S. and Canada (except in the arid Southwest) the Red-shafted occupies a wide altitudinal range, from sea level to high elevations in the mountains, wherever trees large enough to support nest cavities are found near open areas. Seasonal movement is less pronounced than in the northern Yellow-shafteds. There is a general autumn movement away from the coldest parts of the breeding range, which results in a withdrawal of most individuals from the northern end of the range in western Canada and from higher elevations in the western United States, and a corresponding invasion of more low-lying southerly areas. Birds evidently from the Rocky Mountains states move eastward onto the Great Plains in winter, regularly reaching the eastern borders of Kansas and Texas. Records have been claimed considerably farther east, even to the Atlantic seaboard (e.g., Leck 1975); I have not looked into the validity of these records (the possibility of hybrids and introgressants clouds the picture), but I would expect that essentially "pure" Red-shafteds (from west of the hybrid zone) would occasionally appear in the East.

It must be mentioned that there is a fairly broad zone of contact in which there are *no* Yellow-shafted or Red-shafted Flickers breeding . . . *only* hybrids. This hybrid zone stretches from the Texas panhandle north along the western edge of the Great Plains: through eastern Colorado and extreme western Kansas, western Nebraska and eastern Wyoming, the western Dakotas; from this point, the orientation of the hybrid zone swings to west-northwest, and the zone crosses Montana, southwestern Saskatchewan and Alberta, and most of British Columbia.

Most studies on hybridization between Yellow-shafteds and Red-shafteds have been carried out on the western Great Plains. Flicker habitat in this area is largely limited to rivercourses; rivers running west to east have proven convenient for

of the species — even the Central American *C. a. mexicanoides* and *C. a. pinicolus,* which are completely separated geographically from the Yellow-shafted Flicker (Short 1965) and thus unlikely to be receiving genes from that form through introgression. The implication is that all flicker forms have the innate potential to produce occasional individuals with red in the nape. If this is true, then the presence of red nuchal traces in otherwise "pure" Red-shafteds or Gildeds may not *necessarily* indicate hybridization or even introgression, although the latter is by far the most likely cause in any given case. For some reason, among Red-shafted and Gilded Flickers, red nuchal traces occur more often in males than in females.

The opposite phenomenon — restriction or partial lack of the red nape patch in Yellow-shafteds — is noted so rarely east of the hybrid zone that its occurrence is a good indication of hybrid influence (Short 1971). It should be mentioned that molting Yellow-shafteds in fall may appear to have the nape patch restricted.

Wing- and Tail-linings: The shafts of the flight feathers (primaries, secondaries, rectrices), and the paler areas of the undersides of these feathers, are bright yellow in the Yellow-shafted and Gilded Flickers, salmon pink in the Red-shafted.

Some authors (e.g., Grinnell 1914, Peterson 1961, Phillips *et al.* 1964) have stated that the Gilded Flicker has an occasional "red variant" with salmon pink wing- and tail-linings, occurring mainly in the lower Colorado River Valley. However, Short (1965) considered the population in the lower Colorado Valley to represent a hybrid swarm, with the occurrence of red or orange in the flight feathers attributable to the genetic influence of the Red-shafted Flicker. All of the Gilded types with reddish linings that I have been able to study closely have shown, on detailed inspection, some other traces of Red-shafted Flicker pattern, so I can see no reason to argue with Short's conclusion.

Red-shafted X Yellow-shafted hybrids may have flight feather colors resembling those of either parent form or, perhaps more commonly, some shade of orange. The color in the tail is usually a close match for that in the wings. I have never personally seen a hybrid which had salmon pink wing-linings and bright yellow tail-lining, or *vice versa,* and I don't know if such individuals exist.

About one-third of all flickers in the eastern U.S. show at least a trace of orange or red in the linings. No other "Red-shaft-like" character appears nearly so often in the eastern Yellow-shafted population, and its high incidence may not be due entirely to introgression from Red-shafted Flickers; the reader is referred to Short's 1965 paper for a thorough discussion.

Red-shafted Flickers may show traces of orange or yellow in the flight feathers as a result of introgression from Yellow-shafted or Gilded Flickers. According to experiments by F.H. Test (1969), Red-shafteds that are suffering certain types of dietary deficiencies (i.e., shortage of carotenoid pigments) at the time of the annual molt (or when feathers are accidentally lost at other seasons) may also grow in flight feathers that are orange or yellowish in color.

Malar Stripe: Males of the three North American flickers (as well as juvenile females of the Yellow-shafted) possess contrastingly colored malar stripes or "moustache marks;" these are black in the Yellow-shafted and red in the Red-shafted and Gilded. Juvenile male Red-shafteds usually have at least a trace of black visible in their red malar stripes.

Male Red-shafted X Yellow-shafted hybrids have malar stripes that may be either red or black or, frequently, a combination of the two colors. Introgression also affects this character. In the Yellow-shafted Flicker population of eastern Nebraska, just east of the hybrid zone, over a third of the adult males show visible traces of red in the malar stripe; even as far east as the Atlantic seaboard, nearly a tenth of the adult males show this condition (Short 1965, Table 24). Red traces in the black malar stripe usually occur around the outside edge, and are often difficult to see in the field without a special effort.

According to F.H. Test (quoted in Short 1965, p. 364), male Yellow-shafteds have both red and black pigments in their malar stripes, with the red usually masked by black. It is possible that the "unmasking" of the red in Yellow-shafted malars might not always be due to introgression, although this is certainly a likely cause.

Crown Color: In the Yellow-shafted Flicker the crown and nape are gray, contrasting with the buffy-tan of the face and with the brown of the back. The Red-shafted Flicker has the crown and nape brown, contrasting with the gray of the face but blending evenly into the color of the back. There is some geographic variation in this character among Red-shafted populations. The race *C. a. cafer* (of the northwestern coastal belt) has the crown very dark brown, while *C. a. collaris* (of most of the western U.S.) has the crown medium brown, usually with a small area of warmer cinnamon-brown immediately above and before the eye. Birds from the eastern part of the range of *collaris* (proposed by Brodkorb, 1935, as the race *"canescens"*) have somewhat grayer crowns, undoubtedly due to introgression from Yellow-shafteds; the small race *nanus* of the Big Bend region of Texas also has a grayish cast to the crown; these birds should not be mistakenly called "hybrids." The Gilded Flicker has the crown rather bright cinnamon-brown, often somewhat less bright on the nape; it is thus distinctly different from the Red-shafted.

Red-shafted X Yellow-shafted hybrids may have the crown and nape either brown or gray, or a combination of the two colors. When both colors are present, there is a tendency for brown to be more strongly expressed on the forehead and center crown, and gray on the nape. Red-shafted X Gilded hybrids may have the crown either medium brown, cinnamon-buff, or a combination of the two colors.

It should be noted that Yellow-shafted Flickers in fall, after the annual molt, appear to have brownish-gray crowns. This is because the freshly-grown crown feathers have brown tips, which gradually wear away during the winter, producing a clean gray crown by spring. Traces of this brownish crown color remain in many spring Yellow-shafteds, but not usually to a degree visible in the field; spring birds with obvious, extensive brown in the crown feathers probably show the effects of introgression.

Face Color: The auricular and throat regions are buffy-tan in the Yellow-shafted Flicker, gray in the Red-shafted and Gilded Flickers. These statements apply only to adults, as juvenile Yellow-shafteds and Red-shafteds usually have both buffy and gray in the face. Red-shafted X Yellow-shafted hybrids may have facial coloring resembling that of either parent form; or they may have buffy and gray feathering mixed on the throat, the auricular region, or both. It is not unusual for a hybrid to have the throat predominantly buffy and the auriculars predominantly gray, or *vice versa,* as these two areas seem to vary somewhat

independently.

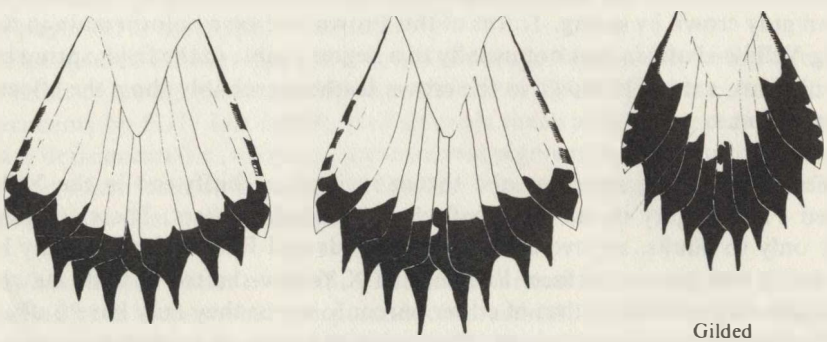
It should be noted that Yellow-shafteds often show some gray at the rear edge of the auriculars, and this may not necessarily indicate the effects of introgression or hybridization (Short 1971). Also, freshly molted Yellow-shafteds may have narrow grayish-white edgings to the throat feathers, but the grayish tinge which this lends to the *entire* throat looks quite different from the patchy mixture of buffy and clear gray found in hybrid or strongly introgressant individuals.

Under-tail Pattern: The three North American flicker forms differ in the amount of black at the tips of the undersides of the rectrices, as indicated in Figure 1. The Red-shafted shows slightly more black than the Yellow-shafted, but the Gilded has much more black than either of the other two — fully half of the visible undersurface. Hybrids have tail-patterns resembling those of either of their parent forms, or intermediate between them.

Chest Patch: All three flickers possess a black patch crossing the upper chest, separating the gray or buffy color of the throat from the paler, black-spotted breast. However, the shape of this chest patch differs between forms, as indicated in Figure 2. The patch is a rather narrow crescent in the Yellow-shafted, and a slightly thicker crescent in the Red-shafted; but in the Gilded the patch is shorter laterally (side to side) and deeper longitudinally, looking more like an oblong or rough rectangle than a crescent.

Breast Spots: Yellow-shafted and Red-shafted Flickers are patterned below with a profusion of roundish black spots. Gilded Flickers are similarly spotted, but they have a tendency for the spots to be elongated laterally — from side to side — forming small crescents or short oblong bars. The difference is probably most noticeable on the flanks, which in Yellow-shafteds and Red-shafteds are marked with a few relatively large round spots; the flanks of the Gilded have a series of wide spots, roughly crescent-shaped. The Gilded's spots are also usually widened at the sides of the upper breast, just below the black chest patch. All three flicker forms

FIGURE 1. TAIL PATTERNS OF FLICKERS
(FROM BELOW)



Yellow-shafted Red-shafted Gilded

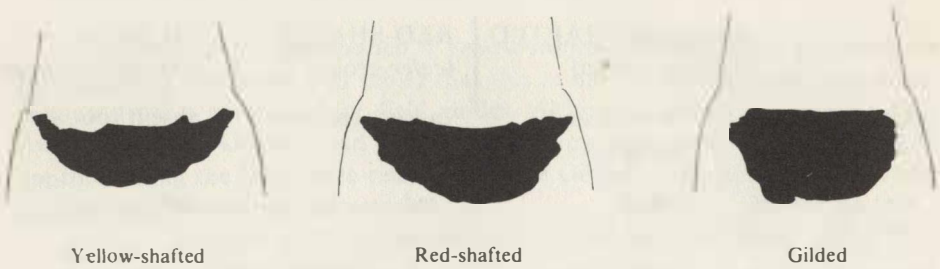


FIGURE 2. CHEST PATTERNS OF FLICKERS

have the spots at the center of the lower breast rather small and round, and all three tend to have broad black barring on the under-tail coverts.

Back Barring: Red-shafted and Yellow-shafted Flickers are quite similar in the degree of black barring on the back. However, the Gilded Flicker tends to have much narrower back bars (width of these bars 0.9 to 2.3 mm. in Gildeds, 2.0 to 3.5 mm. in Arizona Red-shafteds — Short, 1965, pp. 379-380), which are also more widely spaced. The difference is usually evident with either direct comparison or sufficient comparative experience.

Back Color: The ground color of the back differs among the three forms. Although written descriptions of nuances in color may not be very informative, I would characterise the ground color of the back as warm medium brown in the Yellow-shafted Flicker, grayish brown in the Red-shafted, and paler sandy-brown in the Gilded. The difference is relatively slight, and might not be noticeable in the field without good light and direct comparison.

Breast Color: The ground color of the underparts of the Yellow-shafted Flicker is usually a warm buffy-brown. This area is variable in color in Gilded and Red-shafted Flickers (particularly the latter), but it is usually dull whitish to grayish- or brownish-white; Red-shafteds often have a strong suffusion of pinkish-brown on the sides and upper chest.

Size: Size differences are of relatively little aid in the field identification of flickers. There is some geographic variation — for example, Yellow-shafteds increase in average size from south to north; and at any given latitude in the Great Plains region, Red-shafteds are slightly larger than Yellow-shafteds. For field purposes, it is adequate to say that Yellow-shafteds and Red-shafteds are approximately the same size, while Gildeds average roughly 10% smaller. It should be noted that the race of Red-shafted inhabiting the Big Bend region of Texas, *C. a. nanus,* is also small — about the size of the Gilded Flicker.

TABLE 1 SUMMARY OF CHARACTERISTICS OF ADULT FLICKERS

	YELLOW-SHAFTED (*auratus* group)	RED-SHAFTED (*cafer* group)	GILDED (*chrysoides* group)
RED NUCHAL PATCH	present and complete	absent (but see text)	absent (but see text)
MALAR STRIPE (MALES)	black	red	red
WING AND TAIL COLOR	yellow (often with traces of red or orange; not always due to introgression?)	red (can be affected by dietary deficiencies; see text)	yellow (apparently always yellow in "pure" birds; no "red variant;" see text)
CROWN AND NAPE	gray (with brownish cast in fall)	medium brown (deeper brown in Pacific Northwest, grayer in Rockies and western Texas; see text)	cinnamon-brown
FACE AND THROAT	buffy-brown (throat sometimes "frosted" with grayish-white)	gray	gray
BLACK ON UNDERSIDE OF TAIL	narrow tipping	slightly broader tipping	half of visible surface
CHEST PATCH	narrow crescent	slightly broader crescent	deep oblong blotch
SPOTS ON FLANKS	large and round	large and round	short bars or rough crescents
BACK BARS	as Red-shafted	as Yellow-shafted	more narrow and farther apart
GROUND COLOR OF BACK	warm medium brown	grayish brown	pale sandy-brown
GROUND COLOR OF BREAST	washed with warm buffy	variable, but not warm buffy	variable, but not warm buffy

A REVIEW OF THE POSSIBLE IDENTIFICATION PROBLEMS

Gilded Flicker vs. Red-shafted X Yellow-shafted Hybrids: It will be seen (from the foregoing discussion and table) that this is not the problem that one might suppose from a perusal of the field guides. Although hybrids may occur which combine the Red-shafted head pattern with yellow wing- and tail-linings — thus approximating the field-guide rendition of the Gilded — genuine Gildeds would display these additional characters:

1. *More black* in the tail (more than half the visible undersurface)
2. *Cinnamon* crown
3. *Deeper, oblong* chest patch
4. Spots on underparts tending toward short bars or crescents
5. Back bars narrower and more widely spaced
6. Size slightly smaller
7. Virtually never any visible red on nape (although many Red-shafted X Yellow-shafted hybrids also lack nuchal red)
8. Ground color of back paler sandy-brown

Since many of these are relative characters — easily seen for an experienced observer, but not easily proven by simple description — any purported out-of-range Gilded Flicker should at least be photographed, preferably in color and from all angles.

Red-shafted X Gilded Hybrids vs. Either Parental Form: This hybrid combination seems to be overlooked most of the time, even by experienced Southwestern birders. This is probably because Red-shafted and Gilded Flickers are superficially quite similar except for wing- and tail-lining colors, so that most hybrids (depending on their lining colors) will appear at first glance to be one or the other of the parental forms. A closer look will often reveal that the linings are rather orange; but in the case of hybrids with the flight feathers quite yellow or quite salmon pink, one must look for either *intermediacy* in certain characters, or *combinations* of characters, indicating hybridity. Points to check here are:

1. Amount of black in tail
2. Color of crown (brown vs. cinnamon)
3. Shape of chest patch
4. Shape of spots on flanks
5. Width of back bars
6. Size (if comparison with other flickers of known identity is possible)

Hybrids vs. Introgressants: As noted earlier, it will be impossible in some cases to make this identification. Probability of occurrence is one of the factors to be considered. Thus, since small numbers of Red-shafted X Yellow-shafted hybrids invade much of the West in winter, I feel no qualms about identifying birds as such at that season if they appear more or less intermediate between the two forms. But in summer, hybrids of this combination are most unlikely to occur in the West away

from the hybrid zone — in summer, even a bird showing strong Yellow-shaft influences is more likely to be an introgressant than a hybrid. East of the Mississippi, hybrids are quite unlikely to occur at any season; but any that did stray far eastward would probably do so in fall or early winter.

Dr. Short (1971) has set forth some guidelines (for east-coast banders) which could apply in any area or season where hybrids are not to be expected. Briefly stated, a bird which shows "hybrid tendencies" in only *one* character is likely an introgressant; a bird which has "hybrid tendencies" only weakly developed in more characters than one is also likely to be an introgressant; a bird which has "hybrid tendencies" strongly developed in several characters is probably a true hybrid. In borderline cases, particularly at times and places where hybrids are unlikely, it is safer to identify doubtful birds as introgressants.

Some Final Comments

As a closing note, I would like to point out that there are undoubtedly other useful field characters which I haven't brought out here. I have purposely avoided discussing vocalizations — partly because describing bird voices in print is a perilous task, and partly because many of my conclusions on the subject are still tentative. For example: it is true in a general way that the calls of the Gilded Flicker, while similar to those of the Red-shafted, are noticeably higher-pitched. On Sonoita Creek, Arizona (breeding site for a Red-shafted X Gilded hybrid population), one spring morning when the flickers were loudly proclaiming their territories, we noticed much variation in their voices; on tracking down several calling males, we found that the birds with lower-pitched voices had plumage patterns predominated by Red-shafted characteristics, while the higher-pitched birds were more similar in plumage to Gildeds. Although this suggested an interesting correlation, the sample was much too small for any definite conclusions to be drawn. Clearly there is room for more work on this subject.

In the introduction to this article I commented that there were five "kinds" of flickers to be identified in North America (three main forms or subspecies groups, and two hybrid combinations). We might raise that number to eight or nine by counting individuals that display the effects of introgression from the next adjacent form. Although the great majority of all flickers on the continent north of Mexico are, no doubt, typical-appearing examples of one of the three subspecies groups, there is certainly enough potential variation to keep things interesting. I hope that this article will stimulate more observers to take on the identification challenge that can be posed by a single common species.

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SUMMARY

This paper discusses the plumage pattern characters of the three North American subspecies groups of the Common Flicker *Colaptes auratus:* the "Yellow-shafted Flicker" (*auratus* group), "Red-shafted Flicker" (*cafer* group), and "Gilded Flicker" (*chrysoides* group), as well as Yellow-shafted X Red-shafted and Red-shafted X Gilded hybrids. Since a great amount of introgression occurs between adjacent subspecies groups, the effects of introgression on plumage pattern are also discussed. Special attention is given to the criteria useful for distinguishing Gilded Flickers from Yellow-shafted X Red-shafted hybrids; Red-shafted X Gilded hybrids from either of their two parental forms; and hybrids of either combination from introgressants.

In addition to the plumage characters mentioned in the popular bird-identification guides (wing and tail colors, malar stripe color, crown and face color, and presence or absence of red nuchal patch), the following characters are shown to be of critical importance in some identifications: amount of black in tail, exact color of crown, shape of black patch on chest and spots on flanks, width and spacing of black bars on back, and ground color of back and underparts.

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