

## Nutting's Flycatcher (*Myiarchus nuttingi*) from Arizona

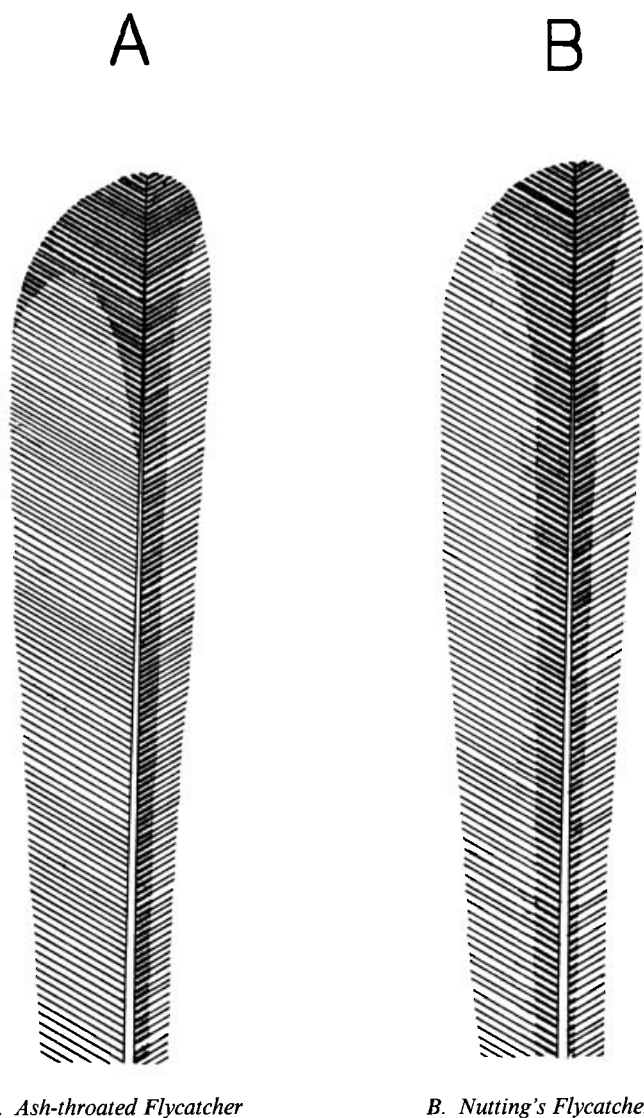


**Figure 1.** Back of the Nutting's Flycatcher captured at The Research Ranch, Elgin, Arizona. Note the brown on both sides of the shaft on the outermost rectrices. Photo/R.K. Bowers, Jr. (VIREO B13/1/004).

**A regular breeder close to the Arizona-Sonora border, the lack of U.S. records for this species may stem from the difficulty in distinguishing it in the field.**

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**N**UTTING'S FLYCATCHER (*MYIARCHUS nuttingi*) is a common inhabitant of thornscrub and open forest from central Sonora south along the west coast of Mexico and Central America as far as Honduras (A.O.U. 1983). Its closest breeding locality to the United States is near Ures, Sonora, 215 kilometers from the Arizona border (Dickerman and Phillips 1953). The only specimen of this flycatcher from the United States was from Roosevelt Lake, Gila County, Arizona, on January 8, 1952 (Dickerman and Phillips 1953). Another probable sight record of *nuttingi* was carefully documented from the Gila River Valley, Grant County, New Mexico, on December 18, 1976 (Zimmerman 1978). Possible *nuttingi* have been seen in Arizona at Sonoita Creek, Sycamore Canyon, and Guadalupe Canyon, but details were inadequate for positive identification.



A. Ash-throated Flycatcher

B. Nutting's Flycatcher

Figure 2. Typical 6th rectrix pattern on birds in fresh plumage.

On July 15, 1985, we netted and banded a single Nutting's Flycatcher (U.S.F. & W.S. band #971-12018) at the Appleton-Whittell National Audubon Society Research Ranch, 8.3 kilometers southeast of Elgin, Santa Cruz County, Arizona (Figs. 1, 3, 8). The first indication that the bird was not an Ash-throated Flycatcher (*Myiarchus cinerascens*) was its bright orange mouth lining (color was Spectrum Orange, #17 of Smithe 1975), seen when the bird called as it was being removed from the net. Ash-throated Flycatchers have a pink mouth lining (Light Russett Vinaceous, #221D of Smithe 1975). Lanyon (1961:424) states that the mouth lining is the "most reliable morphological criterion for the specific identification" of these two species.

We have handled both species during

banding studies in Arizona and Sonora, Mexico. Since we were aware that the orange mouth lining indicated *nuttingi*, we photographed and measured the bird, and kept the tail feathers that the bird had shed while in the net. The bird was then banded and released. The bird was not collected because it was netted on a private nature sanctuary. The series of photographs have been deposited in the American Birding Association Records File at VIREO (Academy of Natural Sciences, Philadelphia) under the accession numbers B13/1/001 to B13/1/006.

The Nutting's Flycatcher was in very worn plumage (Figs. 1 and 3). The central rectrices were brown and heavily worn, indicating that the bird was an adult (Lanyon 1961). There was no brood patch present. The crown was

brown, and the sides of the face were gray with a brownish wash on some feathers. The belly was light yellow. The wings and tail showed the rufous color typical of the genus *Myiarchus*. The outermost (5th and 6th) rectrices had a brown streak running along the shaft on both the outer and inner vanes (Figs. 1 and 2). Measurements of the bird were: wing chord 95 mm, tail 83 mm, exposed culmen 16 mm, width of upper mandible at nostrils 7 mm, weight 24.2 g.

No vocalizations were heard other than the initial calling while the bird was being removed from the net. After measuring and photographing the flycatcher, it was placed in a large flight cage in an effort to obtain recordings of any vocalizations. The bird did not call, even when recordings of *cinerascens* were played. No vocalizations of *nuttingi* were available for playback to the bird.

The heavily worn condition of the plumage complicated the identification of the bird. Wear is an important contributing factor in a bird's appearance (Viet & Jonsson 1984, Whitney and Kaufman 1985). Lanyon (1961) concluded that plumage colors are of "no value" in identifying worn individuals of these two species. For instance, he states that the side of the face is gray in *cinerascens* and brown in *nuttingi*. Specimens at the University of Arizona support this statement. All nine *nuttingi* specimens there are in fresh plumage and have brown cheeks. However, Nutting's largely lose the brown facial coloration by late spring/early summer owing to the combined effects of wear and fading (K. Kaufman *pers. comm.*) The Elgin bird showed a faint brown wash on some of the facial feathers, especially around the eye. Thus, the gray face at first made us suspect the bird might be *cinerascens* but was not inconsistent with *nuttingi*.

Rectrix pattern is an important supporting character in distinguishing between the two species (Dickerman and Phillips 1953, Lanyon 1961). The second and sixth rectrices of the Elgin bird did not match any of the diagrams in Lanyon (1961). This was not unexpected as the diagrams are of fresh-plumaged or slightly-worn birds (Fig. 2), while the Elgin bird's rectrices were all very heavily worn. There is also great variation in rectrix pattern. The fifth and sixth rectrices of the Elgin bird clearly show brown along the shaft in



mouth lining color was noted. On one recent *nuttingi* specimen prepared at the University of Arizona, the orange mouth lining had faded to yellow after being frozen. This indicates that mouth lining colors must be taken on live or very recently-dead birds to be of use. Dusky-capped Flycatchers (*Myiarchus tuberculifer*) also have an orange mouth lining, but are much smaller and have a very different rectrix pattern (Suffel 1970).

Wing, tail, and weight measurements of the two species show wide overlap (Table 1). None of the measurements usually taken by banders can clearly discriminate between the two species. Compared to the two sets of data available to us, it seems that the bird was not a male *cinerascens*. Tail length and weight suggest the bird was a female *nuttingi*, but the wing chord is outside of the female Nutting's range. Wing chord was consistent with either female *cinerascens* or male *nuttingi*.

**Figure 3.** Nutting's Flycatcher from The Research Ranch, Elgin, Arizona. Note the heavily worn plumage. Photo/R.K. Bowers, Jr. (VIREO B13/1/002).

both the inner and outer vanes (Fig. 1), a condition typical of *nuttingi* (Dickerman and Phillips 1953).

Lanyon (1961) states that there is "no evidence that [mouth lining] varies geographically or sexually in either species," from the series of 50 fresh birds he collected. We have noted no variation in mouth lining colors of the two species, nor have any researchers we know who have experience with the birds in the field (A. Rea *pers. comm.*). However, there are several *cinerascens* in the University of Arizona collection which have mouth linings labeled yellow (UA #5544), white (#10433), yellow-white (#10430), gray (#4321), and even orange (#5543) on the specimen tags. Only one of 56 *cinerascens* in the University of Arizona collection has the normal "flesh" or pink color noted on the tag. The remaining specimens have no notation indicating mouth lining color. None of the tags on these birds indicate how long after collection the



**Figure 4.** In fresh plumage, Ash-throated Flycatchers are gray-brown above the eye and on top of the head, but the side of the face is distinctly gray. The pale gray throat fades to white, then yellow. Photo/E.F. Knights (VIREO K05/1/017).



Figure 5. The back color of the Ash-throated Flycatcher ranges from gray-brown to olive brown. Photo/G.W. Lasley (VIREO L07/1/057).



Figure 6. Comparing the mouth lining color is the most accurate way of distinguishing between the two flycatchers. Above: Ash-throated Flycatcher with pink mouth lining. Photo/R.K. Bowers, Jr.

Nutting's Flycatcher regularly breeds close to the Arizona-Sonora border, and probably straggles across the border more frequently than the two United States records would indicate (Devillers 1971). The lack of records probably stems from the difficulty with which *cinerascens* and *nuttingi* can be distinguished in the field. We believe that field identification of Nutting's Flycatcher is possible under the proper conditions. *Myiarchus* flycatchers are very vocal and frequently call from perches low enough so that the mouth lining color can be seen when the birds call. Also, mouth lining can sometimes be seen when a flycatcher catches prey. We have successfully used this technique in Mexico to separate the species. Mouth lining is by far the most accurate method of field identification, but it takes patience and luck to see (Figs. 6 and 7).

The best supporting plumage character is the presence of brown along the shaft of both vanes of the outer tail feathers (Figs. 1 and 2). This is visible when the bird is perched facing the observer, or when a bird spreads its tail as it approaches a perch. Some *cinerascens* have brown on the inner vane of the outermost tail feathers, however the brown usually sweeps across the vane in a wide arc (Fig. 2A). In *nuttingi*, the brown cuts straight down the inner vane (Fig. 2B). This subtle difference is variable and so cannot safely be used by itself to separate the two species.

We agree with Lanyon (1961) that all plumage characters can be useful in the field only when birds are in fresh plumage. Since *cinerascens* molt in August and September (and presumably

Table 1. Measurements of Ash-throated and Nutting's flycatchers

	Tail (mm)			N	Wing (mm)			N	Weight (g)		
	$\bar{x}$	s.d.	range		$\bar{x}$	s.d.	range		$\bar{x}$	range	N
Elgin bird	83				95				24.2		
<i>M. cinerascens</i> *											
male	91.4	2.50	86-99	257	99.9	2.04	94-105	260	27.8	24.0-31.0	22
female	86.0	2.55	81-93	177	94.2	2.21	88-99	181	25.8	24.5-27.8	10
<i>M. cinerascens</i> #											
unsexed	87.7	4.09	80-100	80	94.2	3.94	85-101	80	26.2	22.2-32.0	80
<i>M. nuttingi</i> *											
male	86.7	3.20	80-98	170	92.2	2.59	87-99	175	25.8	23.8-28.2	13
female	82.1	2.75	76-90	124	87.0	2.14	83-93	126	26.0	22.9-29.5	11
<i>M. nuttingi</i> #											
unsexed	83.6		82-85	5	85.4		80-90	5	23.0	21.0-23.7	5

\*—Lanyon 1961, #—S. Russell unpublished data

*nuttingi* are on the same schedule), the following plumage characters can be useful in confirming identification of post-breeding flycatchers. At other times of the year the plumage will be worn and color comparisons are unreliable. Coloration of the side of the face in comparison to the area above the eye can be a useful character. Nutting's Flycatcher has a distinct brown-olive top of the head and a lighter brown side of the face (Figs. 3 and 8). In *cinerascens*, the top of the head and area above the eye are gray-brown while the side of the face is a definite gray, thus there is more contrast between the face and the area above the eye (Fig. 4). Feather wear will limit the usefulness of this character as in the Elgin bird.

Some other plumage characters can be used to support the identification once mouth color has been determined. The color of the underparts and back can be useful if seen in good light. *Nuttingi* has a yellower belly in all plumages than *cinerascens*. In *cinerascens*, the pale gray throat fades to white and then to yellow (Fig. 4). *Nuttingi* shows a more even gray without the white border between the gray and yellow (Lanyon 1961, K. Kaufman *pers. comm.*). This is a very subtle character that is only evident in birds with fresh plumage. The back color of *cinerascens* ranges from gray-brown to olive-brown (Fig. 5), while *nuttingi* has an olive-brown back. Thus, some *cinerascens* have the same back color as *nuttingi*, while other fresh-plumaged *cinerascens* are grayer. We used this difference to eliminate *nuttingi* on a gray-backed *Myiarchus* we found in Buenos Aires National Wildlife Refuge, Arizona, in late November (a late date for any *Myiarchus* in extreme southeastern Arizona). These minor plumage characters are only useful with experience, thus careful examination of museum specimens and field familiarity are valuable.

Vocalizations are characteristics that are useful in separating these species in the field. Tape recordings of the Ash-throated Flycatcher can be heard on the Peterson Field Guide to Western Bird Songs (1961), and Borror's Songs of Western Birds (1971). We do not know of any published recordings of Nutting's Flycatcher. Both *nuttingi* and *cinerascens* have large vocal repertoires and share numerous calls. The most common vocalization of *nuttingi* is a smooth, rising, single-syllable "wheep"



Figure 7. Nutting's Flycatcher (above) has an orange mouth lining. Photo/R.K. Bowers, Jr. (VIREO B13/1/001).



Figure 8. Nutting's Flycatcher banded at The Research Ranch, Elgin, Arizona. Note brown feathers against gray face near eye. Photo/R. K. Bowers, Jr. (VIREO B13/1/003).

or "cheep." The most common *cinerascens* vocalization is a two syllable trill "peer-reer" that is given on a single constant pitch. Both species give a single "bick" note. Gaining familiarity with the vocalizations of these two species is another difficult task, as recordings of *nuttingi* are not published.

All sightings of Nutting's Flycatcher in the United States must be carefully documented. A photograph of the mouth lining of any suspected *nuttingi* would be ideal, but is probably impractical except on birds examined in the hand. Documentation could be achieved with a recording of calls and a detailed description of plumage, feather wear, and soft part colors. Drawings of the outer rectrices showing the pattern of brown and rufous will also aid in documentation.

We wish to thank the Directors of the Research Ranch for allowing work there. Steve Russell provided unpublished banding data and tapes of vocalizations. Kenn Kaufman, Amadeo Rea,

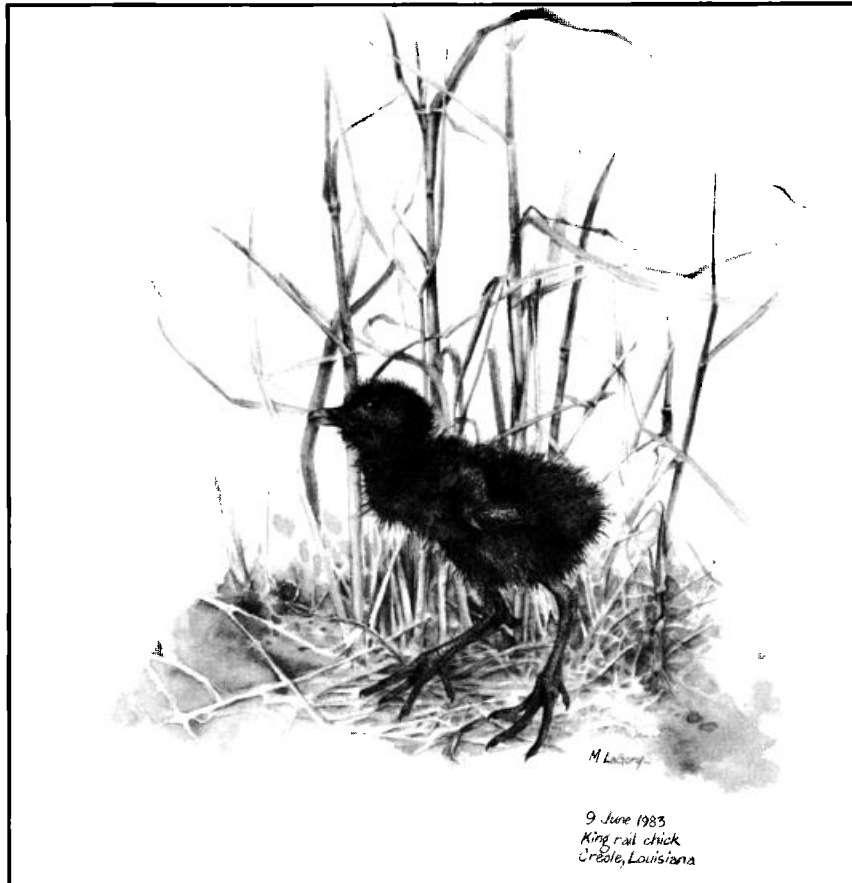
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#### LITERATURE CITED

- AMERICAN ORNITHOLOGISTS' UNION. 1983. Check-list of North American birds. 6th ed. American Ornithologists' Union, Lawrence, Kansas.
- BORROR, D. J. 1971. Songs of western birds. Dover Publications Inc., New York.
- DEVILLERS, P. 1971. The alleged occurrence of Nutting's Flycatcher in Baja California. *Calif. Birds* 2:140.
- DICKERMAN, R. W. and A. R. PHILLIPS. 1953. First United States record of *Myiarchus nuttingi*. *Condor* 55:101-102.

- LANYON, W. E. 1961. Specific limits and distribution of Ash-throated and Nutting's Flycatchers. *Condor* 63:421-449
- PETERSON, R. T. 1961. A Field Guide to Western Bird Songs. Houghton Mifflin Co., New York.
- SMITHE, F. B. 1975. Naturalist's color guide. American Museum of Natural History, New York.
- SUFFEL, G. S. 1970. An Olivaceous Flycatcher in California. *Calif. Birds* 1:79-80.
- VIET, R. R. and L. JONSSON. 1984. Field identification of small sandpipers of the genus *Calidris*. *Am. Birds* 38:853-876.
- WHITNEY, B. and K. KAUFMAN. 1985. The *Empidonax* challenge. *Birding* 17 151-158.
- ZIMMERMAN, D. A. 1978. A probable Nutting's Flycatcher in southwestern New Mexico. *Western Birds* 9:135-136

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9 June 1983  
King rail chick  
Orbale, Louisiana

King Rail (*Rallus elegans*) chick. Illustration/Michelle LaGory.