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## A NEW RED-TAILED HAWK FROM TEXAS

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IN the course of our study of the birds of Brewster County, southwestern Texas, it has become apparent that the Red-tailed Hawk breeding in this and certain adjacent areas represents a very distinct but hitherto overlooked subspecies. We therefore propose the name:

*Buteo jamaicensis fuertesi*, new subspecies

TYPE.—University of Michigan Museum of Zoology, No. 86400; adult female; Calamity Creek Bridge, 22 miles south of Alpine, Brewster County, Texas; March 8, 1935; collected by Josselyn Van Tyne.

CHARACTERS.—Similar to the light phase of *Buteo jamaicensis calurus* Cassin, but underparts, including underside of wing, much paler. Band of dark streaks across the lower breast and flanks greatly reduced, the streaks being much attenuated or even reduced to a mere hair line along the shaft of the feather. Thighs pale, immaculate, or but slightly barred with buff. Chin and throat usually sharply demarked from the breast. Barring on the tail and upper tail coverts much reduced. Crown more uniform in coloration. Less rufous on upper back and nape. Apparently there is in this new sub-

species no dark phase such as occurs regularly in the range of *calurus* (dark phase specimens of *calurus* examined from southern California, North Dakota, Kansas, and Arkansas).

From *Buteo jamaicensis krideri* Hoopes, which *fuertesi* much resembles in the paleness of the underparts, it is readily separable by its dark upperparts and the lack of white on the base of the tail. From *Buteo j. borealis* (Gmelin) the new form differs in being larger and in having the black marking of the breast band and flanks much reduced and more attenuate. In some specimens of *borealis* these markings are much reduced, but they are never as attenuate as in *fuertesi*. The black subterminal tail band of *fuertesi* averages much narrower and the color of the tail in fresh plumage is brighter, less dusky. In *fuertesi* the rufous areas of the lower neck and upper breast are much reduced and more restricted to the side. From the other, more distant forms of the species, *fuertesi* differs as follows: from *Buteo j. alascensis* Grinnell, by its larger size and pale, relatively unmarked underparts; from *Buteo j. jamaicensis* (Gmelin) and *Buteo j. umbrinus* Bangs, by its larger size and little marked underparts; from *Buteo j. costaricensis* Ridgway, in its larger size and lighter upperparts with more rufous spotting. We have not had an opportunity of examining the two Pacific insular forms, *fumosus* and *socorroensis* Nelson, but they apparently may be recognized by their much darker upperparts and by the larger, stouter feet of the latter.

The two immature specimens of *Buteo jamaicensis fuertesi* which we collected in Brewster County, Texas, are distinguishable from immature specimens of *borealis* and *calurus* by the reduction in the spotting of the underparts. The upperparts and tails of these two specimens are also very rufescent.

William Brewster<sup>1</sup> and other later writers have definitely shown that the form *lucasanus* described by Ridgway from Lower California cannot be distinguished from *calurus*. There

<sup>1</sup> "Birds of the Cape Region of Lower California," *Bull. Mus. Comp. Zool.*, 41, No. 1, 1902: 83-87.

remained, however, the possibility that the type specimen of *lucasanus*, which was never adequately described, might be a stray individual of the present form. We are therefore greatly indebted to Dr. Alexander Wetmore and Dr. Herbert Friedmann who generously loaned us the type of *lucasanus*. On examination it proves to be like other richly colored, light-phase specimens of *calurus* and quite unlike any example of *fuertesi* in the darkness of the crown and of the throat, the amount of black streaking on the lower breast, and the dark rufous color of the underparts. From a careful study of the other names available for North American Red-tailed Hawks it is apparent that none of them are applicable to the new form here described.

Variation in plumage color in our series of twelve adult specimens is surprisingly small. The subterminal black bar on the tail ranges from three to six millimeters in width. The barring on the rest of the tail is usually greatly reduced or lacking. In one specimen there are about a dozen narrow bars, faint on the central feathers but well developed on the outer ones. Most of our specimens and sight records are of birds very pale or nearly white on the underparts. One specimen (Sutton, No. 6084), however, is strongly buffy below, much as in the average specimen of *calurus*, from which it differs in the almost complete lack of the band of black streaks on the lower breast.

We have recorded the colors of the soft parts of our Brewster County specimens as follows: iris, Verona Brown<sup>2</sup> to Warm Sepia; eyelid and supraorbital shield, gray; cere and corners of mouth, Deep Olive-Buff to Reed Yellow; bill, black at tip to Deep Green-Blue Gray or Russian Blue at base of maxilla below cere; tarsi and feet, Deep Olive-Buff to dull yellow.

MEASUREMENTS.—Type: wing, 428; tail, 228; tarsus, 94; middle toe without claw, 49; culmen from cere, 28 mm. Weight, 1282 gms. (some fat).

<sup>2</sup> When capitalized the color names are those of Robert Ridgway, *Color Standards and Color Nomenclature*. Washington, D. C.: published by the author, 1912. Pp. 1-44, 53 color plates.

The other eleven adult specimens of *fuertesi* measure respectively (in the order listed beyond): males—wing, 395, 397, 390, 389, 393, 395, 385, 402 mm.; tail, 208, 207, 213, 205, 218, 214, 208, 224 mm.; culmen from cere, 26, 27, 25.5, 27, 26, 25.5,—(broken), 26 mm.; tarsus, 89, 90.5, 90, 88, 86, 87, 78, 91 mm.; middle toe without claw, 46, 46.5, 43.5, 47, 47, 46, 47, 46 mm.; females—wing, 425, 431, 436 mm.; tail, 220, 228, 220 mm.; culmen, 28.5, 28, 26 mm.; tarsus, 94, 91, 94 mm.; middle toe, 48, 50, 52 mm.

The above measurements were made with a meter stick along the chord of the naturally curved wing. The tails were measured with dividers from the point of insertion of the central tail feathers. In measuring the "tarsus" we endeavored to secure the length of the tarsometatarsal bone but, since variations in the method of taxidermy rather effectively obscure the proximal end of that bone in specimens of this genus, we do not place much confidence in these particular tarsal measurements.

RANGE.—Southwestern Texas; probably also southern New Mexico, and at least northern Chihuahua and Coahuila. Breeding birds from Prescott, Arizona, we consider *calurus*, although in the coloration of the underparts they show an approach to the characters of *fuertesi*. We have not been able to determine the eastern extent of the range of *fuertesi* in Texas, but breeding specimens from Brownsville are not this form. On January 26, 1935, Van Tyne saw a Fuertes' Red-tailed Hawk five miles west of Uvalde. N. C. Brown<sup>3</sup> reported that his two specimens of the resident Red-tailed Hawk of Boerne, Kendall County, seemed to approach *kriderii* but were dark above. Doubtless his specimens, which we have not seen, are referable to *fuertesi*.

Specimens of *Buteo jamaicensis fuertesi* examined:

Texas, Valverde County—1903: 1 ♀, Samuels, April 15.

Texas, Brewster County—1928: 2 im. ♂, Glenn Spring, July 3 and August 5.

<sup>3</sup> N. C. Brown, "A Second Season In Texas," *Auk*. 1, No. 2, April, 1884: 123.

1933 : 1 ♂, 4 mi. S. of Marathon, May 6; 2 ♂, 10 and 12 mi. S. of Marathon, May 23 and May 4; 1 ♂, Hot Springs, May 8.  
1935 : 1 ♂, Paisano Peak, 5000 feet, February 6; 1 ♂, 12 mi. E. of Alpine, 4500 feet, March 31; 1 ♀ (type), 22 mi. S. of Alpine, Calamity Creek Bridge, 4500 feet, March 8; 1 ♂, 15 mi. SW. of Marathon, Maravillas Creek, 3690 feet, February 28; 1 ♂, 4 mi. SW of Marathon, Peña Creek, April 13; 1 ♀, 13 mi. S. of Marathon, Combs Ranch, April 17; 1 ♀, Santiago Mountains, Persimmon Gap, May 22.

These specimens belong to the following collections: University of Michigan Museum of Zoology (six), Carnegie Museum (four), Cornell University (three), U. S. Biological Survey (one).

The name *fuertesi* is in honor of the late Louis Agassiz Fuertes, the world-renowned bird artist, who nineteen years ago was gracious enough to take the senior author under his tutelage, to help him in his problems of bird portraiture, to give him a lifetime's inspiration. Fuertes visited Brewster County, Texas, in 1901. He doubtless saw Red-tailed Hawks at that time without realizing that they were of an undescribed form. We take pleasure in thus honoring Fuertes not alone because of his genius as an artist, but because of his interest in the birds of the Big Bend country.

During late April, May, and early June of 1933, and April and May of 1935, Sutton had abundant opportunity to study *fuertesi* in the field; he encountered several nesting pairs, and found along the roadsides of Brewster County, Texas, many carcasses of Red-tailed Hawks *all of which* had comparatively unmarked underparts. Equipped with high-power binoculars, he was able to perceive without difficulty this outstanding sub-specific character at two hundred yards and more. Among individuals of *fuertesi* found dead along the roads may be mentioned specifically a male, just assuming the high plumage of the adult, not far from the Maravillas Creek, seventeen miles southwest of Marathon on May 6, 1933; a large bird, probably a female, with wholly unmarked but strongly buffy underparts, fifty-one miles south of Marathon along the road to Hot Springs on May 8, 1933; a very white-bellied bird, thought to be a male, in the Chisos Mountains, in Juniper

Canyon on May 17, 1933; and a female, with very narrowly and faintly streaked breast, just north of Persimmon Gap on May 22, 1935. While collecting in Brewster County in February, March, and early April, 1935, Van Tyne noted nineteen adults which were observed at sufficiently close range to permit of their identification as *fuertesii*. The localities were widely distributed from the northern boundary of Brewster County south to the Rio Grande.

For the loan of important comparative material we are indebted to the following institutions: University of Arizona (fourteen specimens), National Museum (thirteen specimens), U. S. Biological Survey (twelve specimens), American Museum of Natural History (three specimens), Field Museum of Natural History (three specimens), Carnegie Museum (one specimen). For valuable advice on important points in this study we wish to express our appreciation to Dr. Harry C. Oberholser and Dr. Herbert Friedmann, and especially do we wish to thank our friend, Mr. John Bonner Semple, of Sewickley, Pennsylvania, whose interest in our study of the several Red-tailed Hawk specimens taken on his Brewster County Expedition of 1933 led him to sponsor another trip in 1935, and whose expert marksmanship was so important in securing our series of these hawks.



