

TAXONOMIC PROBLEMS OF THE RED-TAILED HAWK AND NOTES ON OTHER RELATED SPECIES

The highly variable Red-tailed Hawk *Buteo jamaicensis* (Gmelin) of North America has been a thorn in the side of many taxonomists. The Red-tail in North America is divided into six subspecies of races, three color phases, and is very susceptible to albinism and melanism. Measurements vary by age, sex, and race, and immature and subadult plumages vary in a gradual or prolonged change from juvenile to adult. These factors, plus the individuals from the zones of intergradation, impose a very trying problem of identification. However, the principal factor involved is in the plumage characteristics and variation of the geographical races.

The following table of identification of the races is presented on the assumption that the average bird student is familiar to a basic degree with the characteristics of the *Buteo jamaicensis borealis* (Gmelin), which is the common Red-tail of Alabama. These identifications are of typical plumages and it should be understood that individual variation is frequent in the races. The succeeding races described, in general, vary from *B. j. borealis* either in being progressively darker or lighter, smaller or larger. However, other distinctive marks of the race are mentioned.

- (1) *Buteo jamaicensis borealis* (Gmelin). Breeds from southern Canada, west to eastern Nebraska, south to eastern Texas, and northern Florida. Winters from Maine, New York, Michigan, and eastern Nebraska south to probably central Florida. This is the breeding bird in Alabama.
- (2) *B. j. umbrinus* (Bangs). Resident in south Florida, north to Kissimmee prairie and Tampa. Adults: Darker than *B. j. borealis* with subterminal black tail band wider (1 inch), usually with several incomplete dark bands. Immature: probably indistinguishable from that of *B. j. borealis*.
- (3) *B. j. kriderii* (Hoopes). Breeds from southern Alberta and western Ontario to Wyoming, Montana, western Nebraska, and western Minnesota. Winters in South Dakota and southern Minnesota to Arizona, New Mexico, Texas, and Louisiana—and casually in Mississippi, Alabama, Georgia, South Carolina, and Kentucky. Adults: Similar to *B. j. borealis* except upper parts much whiter, head, back, upper tail coverts and scapulars very noticeably spotted or streaked with white. Head sometimes almost immaculate, underparts sometimes immaculate, belly band faint or absent, thighs usually immaculate, tail occasionally pure white, sometimes with narrow dark subterminal band, some specimens with pinkish cast (variable). Immature: Similar to immature *B. j. borealis*, in general more spotted with white on head and upper portions, tail barred as in immature *B. j. borealis*, but light areas usually lighter (variable).
- (4) *B. j. fuertesi* (Sutton and Van Tyne). Breeds in southern Texas (Kerr County, Brewster County, and Corpus Christi); other records: southwestern Arizona, New Mexico, southern Louisiana. Adults: Similar to light phase *B. j. calurus*, except paler underparts, belly band almost lacking, thighs immaculate, tail usually unbarred or bars much reduced. Immature: Similar to light phase immature *B. j. calurus*—but less spotted below.
- (5) *B. j. calurus* (Cassin). Breeds from central Alaska, Yukon, Mackenzie, and Saskatchewan, south to Baja, California, and western New Mexico, east to Colorado, Wyoming, Montana, into Manitoba, Ontario, and Quebec. Winters from southern British Columbia to southern Minnesota, southeast to Guatemala, east to Louisiana, and casually in Mississippi. Adult Melanistic Phase: Entire body and wings, except remiges, uniform fuscous, remiges as in normal phase *B. j. calurus* or *B. j. borealis* except the white areas grayer. Rectrices as in normal phase. Immature Melanistic Phase: Similar to adult, with the exception of the dark gray tail banded with blackish. Adult Red Phase: Similar to the melanistic phase, but with orangeish-edged feathers on the crown, nape, and interscapulars, scapular feathers with some buff, sides of head and throat fuscous, breast and abdomen dark hazel with black shaft streaks, under tail coverts lighter, under wing coverts cinnamon-buff barred with fuscous. Remiges as in adult *B. j. borealis*. Tail, reddish-cinnamon and barred subterminally with black, some incomplete black bars along the shaft. Adult Pale (Normal) Phase: Similar to adult *B. j. borealis* but with the back darker, underparts with a definite wash of pale buff or tawny, thighs barred with cinnamon. Rectrices usually with incomplete bands along the shaft. Immature Pale Phase: Similar to immature *B. j. borealis* but with more fuscous brown on throat and breast, thighs heavily barred with fuscous brown; immature *B. j. borealis* is generally barred on thighs, but to a lesser degree.
- (6) *B. j. alascensis* (Grinnel). Breeds from southeastern coastal Alaska to Queen Charlotte Islands and Vancouver Islands, British Columbia. Winter range unknown, probably resident. Adults: Similar to *B. j. borealis* but smaller, abdomen marked chiefly with reddish brown, rectrices with several narrow bars. Immature: Similar to immature *B. j. borealis* but smaller.

Buteo j. borealis, the dominant race in Alabama which breeds here in moderate numbers, is augmented in the winter by migrants of the same race from the North. *B. j. calurus* and *B. j. kriderii* as determined so far, are the other two races most likely to occur in the state during winter. To date, very little data is available from Alabama concerning these two subspecies. A specimen of *B. j. kriderii* was collected in Montgomery County in the winter of 1951. Other records are mostly from the Black Belt, but also are well scattered from Huntsville, Birmingham, Clarke County, and Mobile County, by reliable observers. Several sight records of what was con-

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sidered to be *B. j. calurus* in the adult melanistic phase were made in the winter of 1958-59, and one in the winter of 1959-60. Two other birds seen in the winter of 1958-59 were believed to be immature melanistic *B. j. calurus*. It is assumed that the melanistic phase is *B. j. calurus*, for Friedmann (1950) describes no melanistic phase for *B. j. borealis*. However, melanism could occur in any race, but is common in *B. j. calurus*. These birds could very easily be confused with the immature black phase Harlan's Hawk. Therefore, the status of *B. j. calurus* in Alabama remains hypothetical until a specimen is collected or other proof is presented. Because of its similarity to *B. j. borealis*, the pale phase western bird is less likely to be identified as a western bird than would the black phase. It is highly probable that the western race occurs in Alabama and is frequently overlooked.

The probability that other races occur in Alabama is reasonable because of the tendency of western birds, at times, to migrate diagonally across the country to the southeastern states; however, we have as yet no records of any type to indicate their presence in Alabama. *B. j. umbrinus* of Florida has been recorded north of its range only once (in North Carolina).

Three other western hawks of the genus *Buteo* might be confused with the Red-tailed Hawk. All have been recorded in this state:

- (1) Rough-legged hawk, *Buteo lagopus* (Pontoppidan). (Two color phases). Sight records only, Tennessee Valley, Black Belt, and Mobile.
- (2) Harlan's hawk, *Buteo harlani* (Audubon). (Three color phases). Sight records only, Birmingham and the Black Belt.
- (3) Swainson's hawk, *Buteo swainsoni* (Bonaparte). (Three color phases). Specimen from Selma.

The Rough-legged Hawk has the general *buteo* shape but with longer wings and tail than the other *buteos*. The light phase bird, although variable, should not be confused with any previously-mentioned species. The melanistic phase is fuscous black. The tail is dark brown, basal one-third or less, whitish, with a wide subterminal black band, and several narrower black bars anterior to this. The immature bird is similar to the adult, but has a dark mottled tail, unbarred.

Harlan's Hawk has the same shape as the Red-tailed Hawk. Three color phases occur: light, intermediate, and melanistic. Although varying rather widely, the usual tail pattern is white to grayish, mottled along edge of feathers, chiefly towards the end, and forming an indefinite dusky mottled band. In the melanistic phase, the ground color may be shaded darker with a definite subterminal band of fuscous black.

Swainson's Hawk migrates in flocks, an unusual habit shared only by our eastern Broad-winged Hawk. The Swainson's Hawk is similar in size to the Red-tailed Hawk. The wings are more pointed and held at a slight dihedral when soaring. Three color phases occur with every possible combination between any two of them. They vary from pale, very light birds to the very dark ones. The normal or "typical" bird can best be identified by the wide dark breast band. Tail pattern: rectrices, mouse gray with a tinge of brownish (ground color) tipped with buff white, banded subterminally with blackish, and barred (9-10) narrow dark bars, whitish basally. Rectrices of the melanistic phase, similar, but bars wider.

In trying to identify the melanistic *buteos*, especially in the field, the main point should be the tail, even though this is highly variable within individuals, subspecies, and species. If one can get a mental picture of the typical species' tail pattern, it should aid greatly in identification, or at least, eliminate other species. Sometimes, of course, the tail pattern cannot be observed and the observer must rely on other characteristics which may be more difficult to determine.

Literature cited:

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