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## BIOLOGICAL ABSTRACES

The Eastern Red-tailed Hawk is most numerous in the eastern and southeastern portions of the state and less abundant in the northwest. However, this is the breeding form throughout the state. The only constant color characteristics differentiating <u>Buteo b. calurus</u> from the typical <u>B.b.borealis</u> are the much darker underparts of the former with a heavy buffy wash on the breast; the factors of barred rectrices and barring on the tibial plumes carrying no weight as subspecific characters. Both normal plumaged Western Red-tails and ones in the dark phase are found occasionaly in any part of Iowa as a migrant.

The Krider's Hawk is at best a poor subspecies, and would better be considered a light color phase as in the case of the Roughlegged Hawks and the Swainson's Hawk. A number of examples have been taken, as migrants, in Iowa and a series shows perfect intergradiation with <u>Buteo b. borealis</u>.

The Harlan's Hawk is found in all sections of the state, as a migrant, and typical examples are found in five collections of Iowa birds. Certain characteristically plumaged <u>harlani</u>, with motteled gray and rusty tails and spotted black and white underparts, are sufficiently different from <u>Buteo b. borealis</u> as to be accorded full specific rank. However, several intermediate specimens justify its allocation as a subspecies of <u>Buteo borealis</u>.

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