



First-year Male, 4 Sept/09, Whitehorse, S. Cannings

Age Determination in Rusty Blackbirds

P. H. Sinclair¹, Jukka Jantunen², Jillian Johnston³

1. Environment Canada, Canadian Wildlife Service, 91780 Alaska Highway, Whitehorse, YT, Y1A 5B7, pam.sinclair@ec.gc.ca
2. Teslin Lake Bird Observatory, Yukon
3. Albert Creek Bird Observatory, Yukon



Adult Male, 11 Sept/09 Albert Creek, J. Johnston

The Problem

Rusty Blackbirds have suffered a precipitous population decline over the past several decades (Greenberg and Droege 1999), the causes of which remain unclear. In order to investigate the mechanisms of the decline – for example, to measure survivorship of first year birds over the winter – it is necessary to be able to determine the age of birds in the hand. Unfortunately, age determination is difficult in Rusty Blackbirds, because plumage and moult patterns are almost identical for both immature (first year) and adult birds. Our objective in this study was to identify consistent plumage differences between first-year and older birds.

An Opportunity

Rusty Blackbirds migrate through southern Yukon Territory, Canada (approx. 60°N/132°W) in August-September, when they are completing their annual moult. During this period, first-year birds in the hand can easily be distinguished from adult birds by the incomplete ossification of their skulls, visible through the skin (Pyle 1997). Later in fall, the skulls of first-year and adult birds become indistinguishable. We have had good success capturing Rusty Blackbirds at three sites in southern Yukon. Thus we had an opportunity to examine plumage characteristics of birds of known age.

Methods

We determined the age of each bird (first-year versus adult) using the degree of skull ossification, viewed through the skin of the head between parted feathers. We also recorded the sex of each bird, which is easily determined by the base colour of the plumage (black in males, grey in females). We then compared plumage features of first-year versus adult birds, particularly on the head and underwing.

Conclusions

First-year Rusty Blackbirds can be distinguished from adults by plumage, at least from late August through September. Immature birds have pale eye-rings and chins, while adults generally lack the pale eye-ring and may have dark feathering in the chin. Age-related differences in the under-wing coverts appear clear and consistent in males, but absent or more difficult to see in females (see illustrations). Further work is needed to determine how long into winter and spring the distinguishing plumage characteristics persist.

Females



Adult Females

- little or no pale eye-ring
- grey face mask can extend around behind eye
- Underwing coverts uniform dark grey, somewhat glossy



24 Aug/06 W

Immature Females

- pale broken eye-ring
- pale feathering behind eye
- underwing coverts dull grey, sometimes with a few browner contrasting feathers



9 Sept/08 A

Males



Adult Males

- black face mask all around eye
- black feathering in chin
- underwing coverts uniform glossy black



9 Sept/08 A

Immature Males

- pale broken eye-ring
- pale chin
- underwing coverts black with a few duller greyer ones; may be white barring on leading edge of wing



1 Sept/05 W

Underwing coverts: what to look for

- examine the middle tract (horizontal row) of coverts
- look for a few duller feathers within this tract, near the bend in the wing
- the contrast is subtle, and may not be visible in females



Literature Cited

Greenberg, R. and S. Droege. 1999. On the decline of the rusty blackbird and the use of ornithological literature to document long-term population trends. Conservation Biology 13: 553–559.
Pyle, P. 1997. Identification guide to North American birds. Part 1. Slate Creek Press, Bolinas, CA.

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