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DIFFERENCES BETWEEN THE WINTER PLUMAGES OF THE BLACK AND GRAY-CROWNED ROSY-FINCHES IN NEW MEXICO

STEPHEN M. FETTIG, 947 Quartz St., Los Alamos, New Mexico 87544;
osprey@cybermesa.com

NANCY S. COX and STEVEN W. COX, 4426 San Isidro St. NW, Albuquerque, New Mexico 87107

RAYMOND L. VANBUSKIRK, 1801 Kirby Ct. NE, Albuquerque, New Mexico 87112

MICHAEL O. HILCHEY, 4805 McKnight Ave., NE, Albuquerque, New Mexico 87110

Many observers find the identification of rosy-finches (*Leucosticte* spp.) difficult, in part because the birds' high-elevation and remote breeding habitats provide few opportunities for comparison of the three North American species. In winter, distinguishing the rosy-finches in mixed flocks can be a further challenge because the birds' seemingly restless nature often permits only brief views of individuals. Here we address differences between the wide-ranging interior form of the Gray-crowned Rosy-Finch (*L. tephrocotis tephrocotis*) and the Black Rosy-Finch (*L. atrata*), which can be difficult to distinguish because both typically have broad silver-gray supercilary stripes and hind crowns. The Brown-capped Rosy-Finch (*L. australis*) and the Gray-crowned can also be confused when the former shows some silver-gray above and behind the eyes, but that is a subject for another paper.

The Gray-crowned Rosy-Finch is easily divided into the gray-cheeked subspecies and the brown-cheeked subspecies (MacDougall-Shackleton et al. 2000). The gray-cheeked subspecies breed in the Pribilof (*L. t. umbrina*) and Aleutian Islands (*L. t. griseonucha*) and in the mountains from south-central Alaska and southwestern Yukon south to Mount Shasta, California (*L. t. littoralis*) (MacDougall-Shackleton et al. 2000). The brown-cheeked or interior forms breed above tree line primarily in rocky habitats of the intermountain West, including the Willowa Mountains of Oregon, the Sierra Nevada of California, and the Brooks Range of northern Alaska (MacDougall-Shackleton et al. 2000, Kessel and Gibson 1978). The Black Rosy-Finch is monotypic and breeds in areas of cliffs and rock slides above tree line from central Idaho and Montana to northeastern Nevada and southern Utah (Johnson 2002). The Gray-crowned and the Black Rosy-Finches join mixed flocks wintering from the east sides of the southern Cascade Range and Sierra Nevada east to southwestern Montana, western Wyoming, and Colorado (French 1959a, b, King and Wales 1964, Johnson 2002). The monotypic Brown-capped Rosy-Finch joins these mixed winter flocks only in Colorado and New Mexico (French 1959a, Bailey 1928, Johnson et al. 2000, Williams 2000-2007, Truan and Percival 2001, Wood et al. 2005).

At the crest of the Sandia Mountains above 3250 m (10,670 ft) east of Albuquerque, New Mexico, we have banded over 2000 wintering rosy-finches from January 2004 through December 2009. The project is an attempt to study winter site fidelity, annual variation in flock composition, and variations in winter plumages.

We recaptured and photographed an adult (fourth-year) male Black Rosy-Finch on 16 March 2008 (this issue's inside back cover, upper photo), originally banded on 22 January 2006. In 2006, we aged it as a first-winter bird in formative plumage (Pyle 2008) on the basis of a retained juvenile uppertail covert, little or no pink in the edging of the greater coverts, and outer primary coverts with relatively narrow pink edging (Pyle 1997). For species identification, note that the back and scapular feathers are black or nearly black with white or pale buff edges. In a closer look, the

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broad core of each back feather along its rachis is mostly black. Toward the edge of each feather, the vane is only somewhat less black than near the rachis. The outermost edges of many feathers (not just at the tips) are nearly white to cream color with some light brown or buff. The buff-colored feather edges contribute a slight brown cast to the upper back. Also, in the upper back of the photographed bird (inside back cover, upper), the feather edges are starting to show signs of wear and have a ragged or uneven look. The white or silvery edges to the nape, auricular, cheek, and posterior scapular feathers give a gray cast to those areas. For sex identification, note the mostly pink lesser and median wing coverts, wide pink edging on most of the greater coverts, and pink edging on all primary coverts, characteristic of the adult male Black Rosy-Finch; females of that species show less extensive pink (Fettig 2009). The bird's identification as a male was also supported by pink in the underwing coverts (not visible in the photographs printed here). All the primaries have pink edges as do a few outermost secondaries.

On 9 March 2008 we recaptured and photographed an adult female Black Rosy-Finch (inside back cover, lower) originally banded on 25 November 2007. For species identification, note that the back and scapular feathers have relatively dark to nearly black centers, similar to the centers of the back feathers of the photographed male (inside back cover, upper). The outer portions of the webs of each feather, however, are rather brown not black, with pale brown to buff edges. These colors should be contrasted with the black of the background in the photos as well as the black in the throat of the female Black Rosy-Finch. This same relatively brownish color of back feathers was pictured by Fettig (2009). The female Black Rosy-Finch (inside back cover, lower) also shows pale brown edging on the auriculars and cheek feathers. On the female Black Rosy-Finch these auriculars and cheek feathers are typically browner and less black than the same feathers on the male. For sex identification, note that the lesser and median coverts are more orange and white with less pink than on the male in the upper photo. In adult (after-second-year) female Black Rosy-Finches such as the one illustrated in the lower photo, the lesser and median coverts can be pale pink to salmon colored with substantial amounts of white (Fettig 2009). The middle greater coverts have wide white edging, and a few outer greater coverts have some orange to pink color, overall markedly less pink than in the photographed male (inside back cover, upper). Note that the edging on the female's primary coverts is more orange than the male's. All primaries are edged in pale orange to pink, but in the photographed female only the outer two or three secondaries are edged in orange to pink.

On 23 March 2008 we banded and photographed an adult (after-second-year) female Gray-crowned Rosy-Finch (this issue's outside back cover, upper photo). For species identification, note the back and scapular feathers are a light cinnamon-like brown with much less black color than the same feathers of the adult (after-second-year) female Black Rosy-Finch (inside back cover, lower). The Gray-crowned's back feathers are dark or nearly black only narrowly along the rachis with most of each feather away from the rachis being brown and specifically much closer to a cinnamon-brown color than to anything near black (outside back cover, upper), and distinctly browner than in either male or female Black Rosy-Finches. For sex identification, note the lesser and median coverts have broad orange to pink tips. The greater coverts have wide white edging with some orange to pink color. All the primary coverts have orange to pink edges. All the primaries are edged thinly in orange to pink, but only the outer two secondaries are edged in orange to pink. Adult (after-second-year) male Gray-crowned Rosy-Finches typically have little if any orange and more extensive pink in the coverts and along the edges of the primaries and secondaries, compared to adult females.

There are three brown-cheeked subspecies of the Gray-crowned Rosy-Finch, all with brown auriculars. The bird in the upper photo on this issue's back cover is a Cassin's Gray-crowned Rosy-Finch (*L. t. tephrocotis*), which MacDougall-Shackleton et al. (2000) described as having "bright" brown upperparts with minimal or no dusky

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feather centers. This form is known to winter from British Columbia south through northeastern California and as far south as New Mexico. Miller (1939) reported the underparts of the Wallowa Gray-crowned Rosy-Finch (*L. t. wallowa*) to be duller and more sooty than those of nominate *tephrocotis*, with the streaks on the back darker and broader with feather margins distinctly less yellow and red-brown, giving the back a distinctly more neutral brown appearance. The Wallowa form breeds in northeastern Oregon and winters south to central eastern California and western Nevada. The Sierra Nevada Gray-crowned Rosy-Finch (*L. t. dawsoni*) is resident in the Sierra Nevada and White Mountains of California. MacDougall-Shackleton et al. (2000) describes its upperparts as tawnier with feather centers narrower and paler than in the Wallowa form.

In our experience in New Mexico in winter, the male Black Rosy-Finch and the Gray-crowned Rosy-Finch are not difficult to distinguish when the observer has a good view because of the brown auriculars, cheeks, and backs of the latter. What seems to confuse some observers is how gray or somewhat dark brown female Black Rosy-Finches can appear, especially in early winter when many of the back feathers have fresh white edges, leading misidentifications of female Black Rosy-Finches as the Gray-crowned Rosy-Finch. Female Black Rosy-Finches (outside back cover, lower photo, left side) typically have dark gray to nearly black backs and breasts with white edging on many feathers that is most prominent in fall and early winter. Some of their upper-back feathers have distinct brown edges (outside back cover, lower photo, right side) typically has a light slightly reddish brown (more or less cinnamon) color to the back and breast not found in the female Black Rosy-Finch. This slightly-reddish brown of the Gray-crowned Rosy-Finch is much lighter brown than the dark gray-brown of the female Black Rosy-Finch. In our experience, this color difference makes the two species readily distinguishable. We are aware of the reported mixing of characters of interior Gray-crowned and Black Rosy-Finches breeding in the mountains of Idaho and Montana (French 1959a, Johnson 2002), so we are vigilant for such individuals. Observers should be cautious about assigning ages to rosy-finches on the basis of pink in the plumage, unless the bird is viewed at very close range with experience. The pink changes with wear, its intensity increases with feather wear and exposure to the sun, though the shade does not change (French 1959b).

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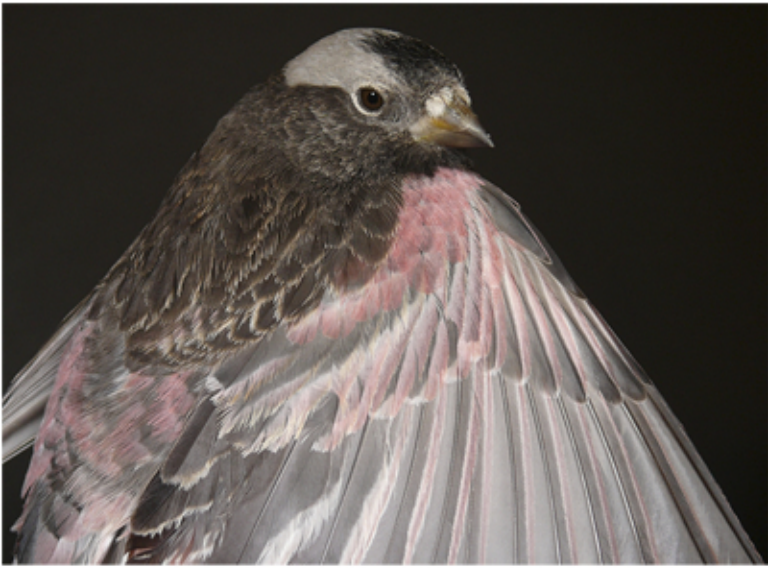
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Inside back cover



Fourth-year male Black Rosy-Finch (*Leucosticte atrata*) originally banded in its first winter and recaptured on 16 March 2008 in the Sandia Mountains of north-central New Mexico. Note the black on the bird's back and compare it to the black of the background and crown and to the birds below and in the upper photo on the back cover.



Adult (after-second-year) female Black Rosy-Finch recaptured on 9 March 2008 in the Sandia Mountains of north-central New Mexico. Note the dark back feathers with buff or brown edges and the darkest feathers around the neck, blackest on the throat. Compare the brown of the back to the black background and the black of the crown. In early winter, female Black Rosy-Finches in formative (first-winter) plumage can be very silver-gray on the upperparts before wear removes most of the pale feather edges; see lower photo on the back cover.

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