

## Notes on Rosy-Finch Taxonomy, Distribution, and Identification

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The genus *Leucosticte* is currently understood as comprising 27 species and subspecies of Rosy-Finches and Mountain-Finches. Most of these taxa occur in northern Asia, but eight (or, according to some authorities, nine) are found in North America, and four—two monotypic species and two well-marked subspecies of a third—could conceivably be expected in Arizona.



Species: Black Rosy-Finch *Leucosticte atrata*  
Subspecies: none recognized

Species: Brown-capped Rosy-Finch *Leucosticte australis*  
Subspecies: none recognized

Species: Gray-crowned Rosy-Finch *Leucosticte tephrocotis*  
Subspecies: brown-cheeked *tephrocotis* (“Gray-crowned Rosy-Finch”)  
Subspecies: gray-cheeked *littoralis* (“Hepburn’s Rosy-Finch,” “Gray-headed Rosy-Finch”)

The Black Rosy-Finch *L. atrata* and the Brown-capped Rosy-Finch *L. australis* are relatively southern in their breeding distributions, summering in the Great Basin and in Colorado and New Mexico, respectively. The two races of Gray-crowned Rosy-Finch *L. tephrocotis* that could be expected in winter in Arizona breed farther north and west; *tephrocotis*, a “brown-cheeked” race (traditionally known simply as the Gray-crowned Rosy-Finch) summers from Montana to the Yukon, while the “gray-cheeked”

Black Rosy-Finch  
Photo Jim Burns

*littoralis* (Hepburn’s Rosy-Finch, or Gray-headed Rosy-Finch) breeds closer to the coast, from northern California to west-central Alaska.

Black Rosy-Finch has been the most frequently reported in Arizona; there are records, too, of both Gray-crowned and Hepburn’s Rosy Finch, though there are as yet no acceptable reports of Brown-capped Rosy-Finch in the state.

The composition of mixed flocks just to the east, in New Mexico and southern Colorado,

appears to be quite variable. In general, banding results show Black and Brown-capped Rosy-Finches to be most frequent; these are the species that breed nearest to Arizona. Gray-crowned (*L. t. tephrocotis*) Rosy-Finches seem to be somewhat less common; Hepburn's Rosy-Finch is the scarcest in most of the interior west, although, interestingly, this is the rosy-finch most likely to wander and the one responsible for most vagrant records in the Midwest (and as far east as Maine).

Well-marked individuals (typically adult males) of all four Rosy-Finches should, given reasonable views, be easy to identify on gross plumage characters. Brown-capped Rosy-Finch is the palest species and the most extensively pink beneath; almost all males apparently lack the obvious gray "scarf" shown by the other species. Black Rosy-Finch is the darkest, with extensive pink on the belly and rump and a silvery hindcrown. Gray-crowned Rosy-Finch shares the silvery crown pattern but has on average less pink beneath than Black Rosy-Finch, and the ground color of the body plumage is rich brown. Hepburn's Rosy-Finch resembles Gray-crowned but is silver not only on the crown but on the sides of the head as well, creating a hooded appearance that distinctly sets off the black chin and throat.

The other age- and sex-classes appear to be more challenging. Females and first-winter birds are traditionally distinguished by the general color of the body plumage (brownish in Brown-capped, Gray-crowned, and Hepburn's, dusky in Black); the presence or absence of gray on the nape (present on Gray-crowned, Hepburn's, and Black, but usually absent on Brown-capped) and on the supercilium (most distinct on Gray-crowned and Hepburn's, and least distinct on Brown-capped); and the extent of pink on the underparts, particularly the belly (most pink on Brown-capped, and least pink on Black). Note that while most of these characteristics are merely relative, in combination they should permit the correct identification of most individuals

See Pyle	Body plumage	Nape	Supercilium	Pink on belly
<b>Black</b>	dusky	gray	indistinct or absent	none to some, dull
<b>Gray-crowned</b>	brownish	gray	indistinct to distinct	little to moderate, dull
<b>Brown-capped</b>	brownish	brownish	usually absent	moderate to extensive, bright
<b>Hepburn's</b>	brownish	gray	indistinct to distinct	little to moderate, dull

Unfortunately, as a review of published photographs and the identification literature reveals, there are individuals—probably mostly birds in their first winter—that present a confusing mixture of plumage characters. A Gray-crowned Rosy-Finch, for example, with a dull head pattern but moderate amounts of pink beneath might be misidentified as a Brown-capped, while the reverse might be true of a Brown-capped Rosy-Finch showing a brighter supercilium than normal. In poor light, the "cold" dusky ground color of a Black Rosy-Finch could be difficult to distinguish from the warm, deep brown of Gray-crowned, which in turn could be confused with the paler, brighter golden coloration of a Brown-capped. The existence of hybrids between Black and Gray-crowned Rosy-Finches, and of introgressants between Gray-crowned and Hepburn's, further complicates the field situation.

There seem to be some structural clues, however, that might prove useful, particularly in

mixed flocks. Black and Brown-capped Rosy-Finches are slightly longer and heavier than Gray-crowned Rosy-Finches of the races *tephrocotis* and *littoralis*. At the same time, however, Gray-crowned (in the strict sense) has in absolute measurements the longest and thickest bill of any of Arizona's possible four Rosy-Finches; coupled with the bird's smaller overall size, this should make most Gray-crowned Rosy-Finches appear distinctly front-heavy. The bill of Hepburn's Rosy-Finch is shorter, but still stouter and longer than that of Black or, especially, of Brown-capped, which is obviously the smallest-billed taxon found in the interior west.

See Pyle	Wing chord	Tail length	Tail as percent of wing chord
Hepburn's ♀	96-106 mm	56-66 mm	58-62 %
Hepburn's ♂	100-110 mm	59-69 mm	59-63 %
Black ♀	96-106 mm	57-65 mm	59-61 %
Black ♂	100-111 mm	62-70 mm	62-63 %
Brown-capped ♀	97-108 mm	61-70 mm	63-65 %
Brown-capped ♂	100-112 mm	62-71 mm	62-63 %
Gray-crowned ♀	97-106 mm	62-71 mm	64-67 %
Gray-crowned ♂	102-111 mm	64-74 mm	63-67 %

Published measurements suggest that there may also be slight differences in the "tail extension" shown by the four Rosy-Finches. Black and Hepburn's Rosy-Finches (especially females) have the shortest tails, whereas the wing-lengths of each sex are essentially identical to those of Brown-capped and Gray-crowned; this makes it seem likely that the folded wing on at least some Black and Hepburn's Rosy-Finches will reach closer to the tip of the tail. The specimens available at the University of Arizona do not bear this out, possibly as a result of differing preparation techniques; see, however, the photographs in Kaufman (2004), which do appear to show the predicted proportions at least for Black (short tail-extension) and Gray-crowned (long tail-extension) Rosy-Finches.

There is little information available about any vocal differences among the rosy-finches. All four taxa one can hope for in Arizona appear to share a chattering that recalls the chirping of House Sparrows; it has been suggested (T. Floyd, *pers. comm.*) that Brown-capped may have a distinctively squeaky contact note reminiscent of the chip of a Canada Warbler.

Careful observation should allow us to test many of these field characters, and to make real progress in understanding the identification of these birds whenever they occur in Arizona.

### These notes are based principally on

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Internet images of variable quality are found at

<http://images.com/images?q=rosy+finch&ie=ISO-8859-1&hl=en&btnG=Google+Search>