

Winter range expansion and identification of the Lesser Goldfinch (*Carduelis psaltria*)

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The face of the American West is changing. Areas that were sparsely populated or devoid of human population as recently as one or two generations ago now support burgeoning cities. Away from the cities, agricultural and riparian habitats continue to undergo significant modification. And all across the region, strong evidence suggests that recent weather patterns have departed from their historical norms. With all these changes, it should not surprise us to find that bird distributions are changing as well. A case in point is the change in the winter distribution of the Lesser Goldfinch. This article describes the change in their distribution, as well as important clues for identifying these birds in their winter plumages.

I. Distribution.

Regrettably, many of the changes in the landscape and climate have been deleterious. Species that were once fairly common in pockets of the West have disappeared from local and regional landscapes. Other species, however, have benefited from the changes and have expanded their ranges into areas previously ill-suited for their survival. Among these, perhaps no species has undergone so dramatic a range expansion as the Lesser Goldfinch (*Carduelis psaltria*). By studying data from the Christmas Bird Count (Cornell Laboratory of Ornithology 2000a), the Great Backyard Bird Count (Cornell Laboratory of Ornithology 2000b), and various Rare Bird Alerts, it is apparent that this diminutive bird is rapidly expanding its winter range throughout Nevada, Utah, and Colorado.

The historic winter range of the Lesser Goldfinch extended through western Oregon, California, across the southern halves of Arizona and New Mexico (but extending up the Colorado River Valley as far as St. George, Utah), and across much of Texas and Mexico. While Reno and Carson City have enjoyed long histories of wintering

Lesser Goldfinches, the proximity of these communities to California and the Sierra Nevada argue that these goldfinches represent, for all practical purposes, the outer fringes of California's wintering population.

Although even very recent standard references of North American ornithology still reflect the winter distribution outlined above (Watt and Willoughby 1999), the winter range of the Lesser Goldfinch has expanded dramatically across much of the Western interior in the last ten years. The earliest reports of this phenomenon appear to have emerged from Salt Lake City and Moab, Utah, in the early 1990s. Colorado's first recorded over-wintering individuals were reported from the Grand Junction area in 1993-1994. During the past two winters (1998-1999 and 1999-2000), areas with over-wintering individuals have expanded nearly to the northern borders of Colorado and Utah. Substantially larger populations have established winter ranges in Salt Lake City and Provo, Utah, and in Grand Junction and Colorado Springs, Colorado (Versaw 2000).

More interesting yet are the sudden, and repeated, appearances of Lesser Goldfinches in Elko, Nevada, during the winter months. Here, in an area surrounded in every direction by many miles of emptiness and devoid of abundant food and shelter for Lesser Goldfinches, these birds have appeared for three consecutive winters (Cornell Laboratory of Ornithology 2000a, Cornell Laboratory of Ornithology 2000b).

The concentration of wintering populations identified to date in urban areas suggests that feeders are the primary factor driving the range expansion. Niger seed ranks as the goldfinch's favorite feeder offering, but black oil sunflower is also readily accepted, particularly where the competition for the sunflower seed is not too intense. Also, while the recent spate of milder-than-average winters cannot be overlooked, it is difficult to argue that the mere addition of a few degrees of warmth to Elko's normally bitterly cold winters adequately accounts for the goldfinches' presence.

The winter range of the Lesser Goldfinch has become largely coincident with its breeding range, but it is important to note that the situation on the breeding range is complex and dynamic, too. Lesser Goldfinches have clearly increased during the past 10+ years in southern Idaho, and there has even been a small increase in the number and frequency of sightings in extreme southwestern South Dakota (where still rare) during this period as well (P. Lehman pers. comm.). Numbers in extreme southern Washington state also seem to have increased a bit, and there was a slight expansion of the species' limited

range in that state during the early 1990s (P. Lehman pers. comm.). Wyoming, Idaho, and parts of eastern Oregon, areas formerly on the periphery of the species' breeding range (Watt and Willoughby 1999), represent the most likely candidates for additional expansion.

Colorado observers already have witnessed changes in breeding phenology. In Grand Junction, dependent fledglings have been observed as early as the end of April (Versaw 2000). While April fledglings would raise no eyebrows in California, where seed crops ripen with the end of the winter rainy season, this early date advances the breeding timetable in Colorado by a minimum of two months. Although not proven, the most obvious explanation for this advanced breeding timetable is the regular and plentiful supply of seed dispensed through feeding stations.

II. Identification.

Documenting any expansions of the breeding range of the Lesser Goldfinch should be as simple as putting eyes into the field. In summer, Lesser Goldfinches are easily identified, bearing only the faintest resemblance to any other species likely to be breeding within their range. Documenting winter range expansion presents greater difficulties. Although adult Lesser Goldfinches undergo only very slight changes in plumage with each molt, both male and female American Goldfinches change to a winter plumage that allows them to be easily mistaken for female Lesser Goldfinches. Fortunately, separating winter Lesser and American Goldfinches is relatively simple if the observer focuses carefully on a few important features of plumage, voice, and size.

Perhaps the most easily seen and reliable discriminator concerns the backs of the two species. Female Lesser Goldfinches invariably have an olive-green cast to their backs. American Goldfinches, on the other hand, exhibit a warm brownish-gray (female) or yellowish-brown (male) cast to their backs during winter. American Goldfinches do not have greenish tones on their backs. Additionally, the backs of Lesser Goldfinches show a fine, longitudinal streaking, whereas the back of a winter American Goldfinch is unstreaked. At the lower end of the back, the uppertail coverts of the American Goldfinch are whitish or grayish and paler than the back. In contrast, the uppertail coverts of female and immature Lesser Goldfinches are greenish and only slightly, if at all, lighter than the back itself.

Underpart patterns and plumages differ between the two species. The throat of a male American Goldfinch may be tinged with

warm yellow feathers during winter, but this yellowish color does not extend across the breast into the belly. Female winter American Goldfinches show no yellowish color in either the throat or belly. In both the male and female American Goldfinch, the chest and belly area is “clean” and free of streaking. Feathering on the upper portion of the legs is light and similar to the color of the uppertail coverts. Female and immature Lesser Goldfinches, on the other hand, wear a muted greenish-yellow color on their chests and bellies, often extending down to the feathering on the legs. The undertail coverts are usually a good point of separation, too: yellowish on the Lesser Goldfinch, and whitish on the American Goldfinch. Additionally, the chests of female Lesser Goldfinches show a faint and highly diffused streaking. Although this streaking usually is visible only at very close range, birds coming in to feeding stations often are close enough to see the faint, diffused streaking in the chest.

Edgings of the tail feathers provide a somewhat more difficult point of differentiation. The tail feathers of winter American Goldfinches typically have fairly broad lighter edges, often resulting in the appearance of a longitudinal streak down the center of the folded tail. However, feather wear may reduce the visibility of this streak. The outer edges of the tail feathers of Lesser Goldfinches are also lighter, but they do not produce the same appearance of a longitudinal streak through the tail.

For those who are familiar with goldfinch vocalizations, the Lesser Goldfinch’s plaintive call notes can also be used for winter identification.

Most other differences between the two species revolve around size and the somewhat variable wing and tail markings. Although American Goldfinches are invariably larger than Lesser Goldfinches, this size difference usually is difficult to judge except when individuals of both species perch in close proximity. American Goldfinches are typically 10-20 percent larger than Lesser Goldfinches in all single-dimensional measures (Middleton 1993, Watt and Willoughby 1999).

Unfortunately, most field guides provide little, if any, discussion about separating winter goldfinches. As a result, casual birdwatchers in the West have a long history of misidentifying winter American Goldfinches as Lessers. The points of differentiation detailed above, however, should enable any reasonably careful and patient observer to distinguish between the two species in winter. It should be noted, though, that some points of differentiation between the two species that can be used in summer cannot be used in winter. Perhaps most important of these differences are the leg and bill colors. While the

legs and bills of American Goldfinches change to a pinkish color during breeding season, they revert to a color nearly as dark as those of Lesser Goldfinches in winter. Only under the most ideal lighting conditions can leg and bill color be used to distinguish goldfinches in winter. Even then, there are more reliable discriminating features, and they should be given priority of usage.

The expected race of Lesser Goldfinch throughout the Great Basin is *C. p. hesperophila* (the green-backed race). It is likely, however, that some intergrades with *C. p. psaltria* (the black-backed race) will appear from time to time, particularly in the more eastern parts of the region. An interesting complication is that some Lesser Goldfinches in coastal California are quite dark-backed (P. Lehman pers. comm.). Introgression with *C. p. psaltria* seems unlikely in a region so far to the west of the zone of overlap, so a more likely explanation is that *C. p. hesperophila* exhibits strong variability in coastal California and perhaps elsewhere in its range. Despite the suggestion of the “green-backed” and “black-backed” names, then, field identification of individual males can be difficult, and females are entirely indistinguishable (Watt and Willoughby 1999). Thus, while female winter Lesser Goldfinches cannot be separated by race, observers can draw some comfort from knowing that the females of both races can be distinguished from female winter American Goldfinches.

Any winter Lesser Goldfinches north of Lincoln County, Nevada, east of Churchill County, Nevada, and west of the Wasatch Front, Utah, should be reported, preferably with complete documentation. Although we may expect the species to continue its winter expansion into the Great Basin, especially in areas of relatively high human population density, our understanding of the dynamics of the expansion will be greatly enhanced by regular, and careful, reporting.

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