

**New breeding localities for *Leucosticte* in the contiguous western United States.**—Those members of the genus *Leucosticte* (rosy finches) found south of the 49th parallel are restricted to the highest reaches of the mountains in alpine habitat. Usually this habitat occurs above timberline, but it also is found in cirques on the north and east faces of certain peaks that are timbered to their summits, but where deep snow accumulation and shade combine to produce an alpine climate at lower elevations. Most of the new records reported in this paper are from alpine enclaves of this sort, either in small isolated mountain ranges or in outlying portions of major ranges. In nearly every place where rosy finches were sought under such conditions they were found. An important exception is the Warner Mountains in northeastern California where ample alpine habitat as well as apparently favorable nesting cliffs occur on the east face of Mt. Warren, yet during 2 days (18–19 June 1967) there I was unable to locate any rosy finches. Possibly where enclaves are small these birds may be present only sporadically, and then only in the most favorable years.

The records reported here were obtained during the course of an extensive systematic review of the genus, the results of which will be presented later. The work was supported by Frank M. Chapman Grants in 1967 and 1969, a Josselyn Van Tyne Grant in 1970, a Louis Agassiz Fuertes Grant in 1969, National Science Foundation Traineeships in 1968 and 1971, travel money from the Museum of Vertebrate Zoology in 1967, and travel funds from Washington State University in 1973. Barbara A. Barr and Ned K. Johnson read the manuscript and offered helpful suggestions. Gene M. Christman prepared the map.

The following abbreviations are used when reference is made to specific specimens or collections: MVZ, Museum of Vertebrate Zoology; SD, San Diego Museum of Natural History; UBC, University of British Columbia; USNM, National Museum of Natural History, Smithsonian Institution; WSU, Conner Museum, Washington State University.

*Leucosticte tephrocotis littoralis*.—All previous records of this race south of the 49th parallel are from the Cascade Range (A.O.U. 1957). On 8 July 1967 I located a new breeding station 120 miles east of the Cascades in the Strawberry Mountains of Oregon. I saw several birds and collected one male (MVZ 159081) in breeding condition (testes 9 mm) in a small patch of alpine habitat on the north slope of Strawberry Mountain, 8400 feet, Grant County. Additional occupiable habitat, but at a lower elevation, may occur 2 miles to the southeast above Little Strawberry Lake.

On 10 July 1967 another alpine enclave with breeding birds was found 45 miles northeast of the preceding location and 180 miles east of the Cascade Range on the north face of Rock Creek Butte, 9000 feet, Baker County. Four birds were collected including one female (MVZ 159083) containing a fully formed egg, and three males (MVZ 159082, 159084, 159085) with testes 8 to 12 mm long. The female was typical *L. t. littoralis*, but each of the males had small amounts of brown on the otherwise gray cheeks suggesting various degrees of intermediacy with *L. t. wallowa*, a brown-cheeked form known only from the Wallowa Mountains 40 miles to the east. These specimens suggest some degree of interchange and interbreeding between populations of *L. t. littoralis* and *L. t. wallowa*, and it is interesting to note that several specimens from the Wallowa Mountains collected by Stanley G. Jewett from 1923 through 1926 (SD) and by Alden H. Miller and Frederick M. Test in 1938 (MVZ) show signs of interbreeding.

*Leucosticte tephrocotis dawsoni*.—The recognized range of this race lies entirely within California and includes the White and Inyo Mountains east of the Sierra

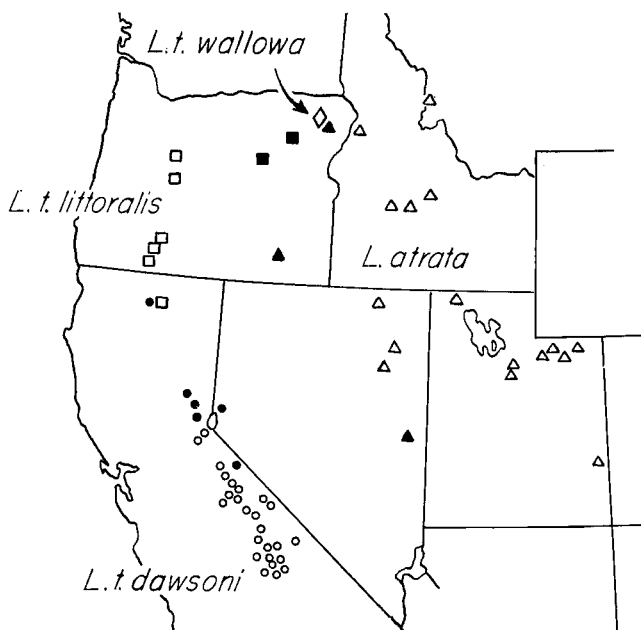


Fig. 1. Breeding localities for *Leucosticte* in five western states. New localities: solid symbols. Previously known localities: open symbols. Circles: *L. t. dawsoni*. Squares: *L. t. littoralis*. Diamond: *L. t. wallowa*. Triangles: *L. t. atrata*.

Nevada and the Sierra Nevada north to Pyramid Peak and Mt. Tallac at the southeast corner of Lake Tahoe in Eldorado County (Grinnell and Miller 1944, A.O.U. 1957).

In 1946 a new breeding locality 20 miles east of the crest of the Sierra Nevada was found by a field party from the Museum of Vertebrate Zoology consisting of S. B. Benson, W. C. Russell, and J. H. Severaid. They obtained 22 specimens (MVZ 98415-98431, UBC 2301, USNM 424109) between 2 June and 18 July at elevations above 10,900 feet on Mt. Patterson in the Sweetwater Mountains of Mono County, California. Testes of 14 males measured from 6 to 11 mm in length. One of five females was laying and all had brood patches. Three fledged young also were obtained.

In 1967 I found several new breeding locations in patches of alpine habitat on mountains in the Sierra Nevada well north of the known distribution. The first of these, Emigrant Peak above Squaw Valley in Placer County, I visited on 21 May and 27 May. On both occasions I saw many finches and on the latter trip collected five males and one female, all entering breeding condition (MVZ 159032-159037). Testes of the males measured 7 to 9 mm. The ovary of the female was 6 mm long with the largest ovum 1.5 mm in diameter.

On 29 May I saw several on Basin and Castle Peaks in Nevada County 13 miles north of Emigrant Peak and obtained one male (MVZ 159042) approaching breeding condition (testes 8 mm) at 8900 feet on Basin Peak.

On the following day, 22 miles farther north, I collected four finches (MVZ 159038-159041) and saw many in a cirque on the northeast face of the Sierra

Buttes at 8300 feet in Sierra County. The males had testes measuring 9 to 11 mm and the female had an ovary 5 mm long with largest ovum 1 mm in diameter and a well-developed brood patch.

These records extend the known range of this race 60 miles north of the previously published localities. None of the specimens shows any indication of intermediacy with *L. t. littoralis* such as Miller (1939b) reported for birds taken 140 miles to the north on Mt. Shasta. I revisited Miller's locality on Mt. Shasta on 11 June 1967 and 13 June 1970 and collected a total of five males and two females. Four of these birds (MVZ 159044, 159046, 159047, 161835) have gray cheeks resembling *L. t. littoralis*, one (MVZ 159043) has brown cheeks like *L. t. dawsoni*, and two (MVZ 159045, 161836) are intermediate with gray covering only a portion of the cheeks and brown the remainder. When Miller's two specimens are compared with these birds they appear intermediate but closer to *L. t. littoralis*. Miller was correct, then, that this population is closest to *L. t. littoralis*, but it also includes a small proportion of *L. t. dawsoni*.

Birds from Mt. Lassen, midway between the Sierra Buttes and Mt. Shasta, would be of interest but surprisingly none has ever been reported there and my own attempt to find birds there (2 September 1973) was unsuccessful. Perhaps too little time has elapsed for reestablishment of the alpine ecosystem since the volcanic eruptions of 1914 through 1921.

A first breeding record for Nevada was obtained on 23 June 1973 when two males (WSU 73-264, 73-265) and one female (WSU 73-266) were collected at 10,700 feet on Mt. Rose, Washoe County. All birds were in breeding condition; the males had testes 10 and 11 mm long and the female had an ovary 9 mm long, ova up to 2 mm in diameter, and a brood patch.

*Leucosticte atrata*.—The first breeding locality for this species in Oregon was obtained on 4 July 1967 when I collected two males (MVZ 159140, 159141) at 8900 feet on Steens Mountain in Harney County. Both specimens were in breeding condition with testes measuring 10 mm in length. This makes unlikely Bendire's (1877) suggestion that *L. t. littoralis* might breed in these mountains.

The only previous report of this species in Oregon during the breeding season was that of a male not in breeding condition collected on 23 July 1923 in the Wallowa Mountains in the northeast corner of the state (Jewett 1924). While this record did not establish this form as a breeding bird, subsequent observations suggest that it probably breeds there in small numbers. On 13 July 1967 I obtained one male (MVZ 159123) in breeding condition (testes 9 mm) in these mountains at 9200 feet on the east face of Eagle Cap in Union County, a location where *L. t. wallowa* also has been found at this season (Miller 1939a, pers. obs.). Considering the close proximity of populations of *L. atrata* in Idaho its presence in the Wallowa Mountains is not surprising. This record tends to confirm Miller's suspicion (1939a) that the dark color of *L. t. wallowa*, the common breeding form in this range, may be due to the influence of interbreeding with *L. atrata*.

Existing breeding records for Nevada come from the Jarbidge and Ruby Mountains in Elko County in the northeastern part of the state (Miller 1955, French 1959). I found a new breeding locality 130 miles to the south in the Snake Range on 25 June 1970. Here I collected four birds in breeding condition (MVZ 161822-161825) and saw several others near the summit of Wheeler Peak at 12,800 feet, White Pine County. Males had testes of 10 and 11 mm. One female had an ovary 9 mm long and another had a brood patch and fully formed egg in the uterus.

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**Postmortem change in a Black-crowned Night-Heron's eye color.**—On 23 April 1972, about 2115, I collected an immature male Black-crowned Night-Heron (*Nycticorax nycticorax*) among rushes (*Juncus* sp.) in the Oued el Ferd, 10.7 km east and 15 km south of Gabès, Gouvernorat de Gabès, Tunisia. When fresh (2230), both irises, viewed under fluorescent light, were red-brown. But at 1100 the next day, when the bird had been refrigerated for some 12.5 hours, the irises were red-orange.

Witherby et al. (1939, The handbook of British birds, vol. 3, London, Witherby, p. 152) note of this species, "iris crimson (juvenile brown)." Etchécopar and Hüe (1964, Les oiseaux du nord de l'Afrique[,] de la Mer Rouge aux Canaries, Paris, Éd. N. Boubée & Cie, p. 63) write, "L'iris est rouge"; Hollom (translating Etchécopar and Hüe 1967, The birds of North Africa, from the Canary Islands to the Red Sea, Edinburgh, Oliver & Boyd, p. 53) translates this literally, "Iris is red." Verbal characterizations of color are difficult. Systems for objective description require comparison with published standards, such as those reviewed by Wood and Wood (1972, Bird-Banding 43: 182). The apparent disparity between the earlier observations and that reported here may be more of wording than of actual fact.

Changes at death in the colors of birds' eyes and of other soft tissues are well known. The principal significance of this observation is the lightened saturation (chroma) of the iris after death, when experience generally is that colors become darker when a bird dies. This description by a single observer of lightened tone provides an impression that is independent of the problems of definition.

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