

Occurrence of the Chestnut-backed Chickadee in the Sierra Nevada Mountains, California

Frederick T. Crase*

“. . . the Chestnut-backed Chickadee is well-established in the Sierra Nevada Mountains . . . but has yet to be confirmed as breeding there . . .”

The earliest known record of the Chestnut-backed in the Sierras was a specimen collected by Dr Robert Rudd in 1939 in Butte County (Grinnell and Miller, 1944). There were no more reported sightings until 12 years later when two flocks were seen a few months and many miles apart in Calaveras and El Dorado Counties (Table I). Since that time, observations of Chestnut-backed in the region have occurred fairly regularly. Based on these observations it seems probable that the Chestnut-backed Chickadee was just beginning to invade the Sierras when recorded in 1939, then continued the expansion undetected through the 1940s until spotted again in 1951.

The most probable route of invasion would have been a southeastern expansion from established populations in Siskiyou and Shasta Counties (Figure 1). Two pieces of evidence suggest this route. First, the regular sightings in Tehama County were only a few miles southeast of known populations, with no apparent natural barrier separating the two. Second, the specimen collected by Dr Rudd was of the *rufescens* subspecies and, based on the subspecific descriptions of Grinnell (1904) and the examination of museum specimens, so were the individuals I observed in El Dorado County. The Sacramento Valley seems to have been an effective barrier to cross for the *neglectus* and *barlowi* subspecies and probably for the more southerly populations of *rufescens* also.

At the present time, it appears that the Chestnut-backed Chickadee is well established in the Sierra Nevada Mountains. Reported flock sizes average only slightly below those reported by Smith (1967) which were recorded within its normal range and during the winter months when flock size may have been greatest. Also, most sightings in the Sierras have come from areas with easy public access, leaving large gaps of less readily accessible forest in between sighting locations. Further investigation will doubtless reveal Chestnut-backed in many, if not all, of these “gaps”.

Primary potential niche competitors in the Sierra Nevada would be the Mountain Chickadee (*P. gambeli*) and Plain Titmouse (*P. inornatus*). Dixon (1954) reported that Chestnut-backed and Plain Titmice did not compete directly for space after the Chestnut-backed invasion of the eastern San Francisco Bay region, apparently owing to behavioral compensations attributed to the Chestnut-backed. Further, Smith (1967) found that Chestnut-backed and Black-capped Chickadees (*P. atricapillus*) did not compete for feeding sites in British Columbia; but no studies of Chestnut-backed—Mountain Chickadee interactions have been published. Perhaps the Chestnut-

*California State University, Sacramento, Present Address: U.S. Fish and Wildlife Service, Box C, Davis, California, 95616

backed has also made behavioral changes allowing it to co-exist with the Mountain Chickadee.

The Chestnut-backed has yet to be confirmed as breeding in the Sierra Nevadas. Since most spring and summer sightings have occurred in the middle

altitudes (2000-6000 feet; Table 1), these altitudes would seem to offer the best opportunity for adding the Chestnut-backed Chickadee to the breeding avifauna of the Sierra Nevada Mountains.

Table 1. Chestnut-backed Chickadee sightings in the Sierra Nevada Mountains of California.

Date (month, day, yr.)	Number observed	Location	County	Source ¹
7/3/39	1	4 mi E Sterling City	Butte	Grinnell & Miller, 1944
6/17/51	5	Calaveras Big Trees S.P.	Calaveras	Curl, 1952
8/18/51	"flock"	Whitehall	El Dorado	AFN 6(3):212
10/13/51	"	"	"	"
2/10/52	"	"	"	"
9/13/52	4+	"	"	AFN 7(1):35
10/3/54	20	Alder Creek Campground	"	AFN 9(1):53
5/17/55	15	Whitehall	"	AFN 9(4):356
7/21/55	"flock"	1 mi E Pollock Pines	"	AFN 9 (5):401
7/14/57	1	Whitehall	"	AFN 11 (5):427
8/20/58	2	Mirror Lake, Yosemite N.P.	Mariposa	AFN 13(1):60
8/2/58	?	Coulterville	"	"
11/9/58	"flock"	Pollock Pines	El Dorado	"
6/15-18/59	1+	Calaveras Big Trees S.P.	Calaveras	AFN 13(5):453
5/18/63	1	9 mi E Wilseyville	"	AFN 17(4):431
5/10 & 17/64	2	Potato Patch Camp	Tehama	AFN 18(4):484
8/11/64	7	30 mi E Placerville	El Dorado	AFN 18(5):533
6/1/65	2	Potato Patch Camp	Tehama	AFN 19(4):509
11/11/66	1	Emerland (Emerald?) Bay Lake Tahoe	El Dorado	AFN 21(3):455
9/11/67	6	Potato Patch Camp	Tehama	AFN 22(1):87
11/4/67	3+	Mirror Lake Yosemite N.P.	Mariposa	AFN 21(1):74-75
10/8/68	1	Big Trees S.P.	Placer	AFN 22(1):87
10/24/70	5	1 mi N Union Valley Dam	El Dorado	Author
12/29/70	2	Yosemite Valley, Yosemite N.P.	Mariposa	AB 25(2):514
7/5/71	1	Big Trees S.P.	Placer	AB 25(5):903
10/16/71	6	1 mi N Union Valley Dam	El Dorado	Author
10/8/72	3	Wawona Tunnel, Yosemite N.P.	Mariposa	AB 27(1):117
10/15/72	1+	1 mi N Union Valley Dam	El Dorado	Author
12/23/72	11	Yosemite Valley, Yosemite N.P.	Mariposa	AB 27 (2):535
6/8/74	1	5 mi E Baltic Lookout	El Dorado	Author

¹ AB = American Birds; AFN = Audubon Field Notes

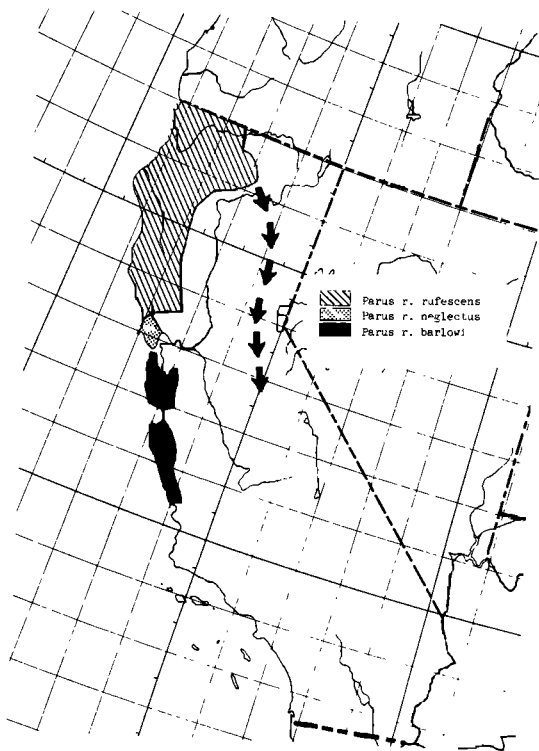


Figure 1. Historic distribution of the Chestnut-backed Chickadee (*Parus rufescens*) in California (from Grinnell and Miller, 1944), and the most likely route of expansion into the Sierra Nevada Mountains.

LITERATURE CITED

American Ornithologists' Union. 1957. Check-list of North American birds. Fifth ed. Amer. Ornithol. Union, Baltimore, Md.

Bent, A.C. 1946. Life histories of North American jays, crows, and titmice. U.S. Nat. Mus., Bull. 191.

Chandik, T. and A. Baldrige. 1968. Middle Pacific Coast Region. Audubon Field Notes 22(2):83-88.

Chandik, T.A. and R.O. Paxton. 1967. Middle Pacific Coast Region. Audubon Field Notes 21 (3):452-456.

Chase, T., Jr. and R.O. Paxton. 1965. Middle Pacific Coast Region. Audubon Field Notes 19(4):507-510

Cogswell, H.L. and R.H. Pray. 1955. Middle Pacific Coast Region. Audubon Field Notes 9(1):50-54.

—. 1955. Middle Pacific Coast Region. Audubon Field Notes 9(4):353-358.

—. 1955. Middle Pacific Coast Region. Audubon Field Notes 9 (5):397-402.

Curl, A.L. 1952. Chestnut-backed chickadee in the Sierra Nevada. Condor 54(2):15.

Cutler, B.D. 1959. Middle Pacific Coast Region Audubon Field Notes 13(1):58-60.

Cutler, B.D. and E.A. Pugh. 1959. Middle Pacific Coast Region. Audubon Field Notes 13 (5):450-454.

DeBenedictis, P. and T. Chase, Jr. 1964. Middle Pacific Coast Region. Audubon Field Notes 18(4):482-485

—. Middle Pacific Coast Region. Audubon Field Notes 18(5):532-534.

DeSante, D. and R. LeValley. 1971. Middle Pacific Coast Region. American Birds 25 (5):899-904.

DeSante, D. and V. Remsen. 1973. Middle Pacific Coast Region. American Birds 27(1):110-119.

Dixon, K.L. 1954. Some ecological relationships of chickadees and titmice in central California. Condor 56(3):113-124.

Grinnell, J. 1904. The origin and distribution of the chestnut-backed chickadee. Auk 21 (3):364-382.

Grinnell, J. and A.H. Miller. 1944. The distribution of the birds of California. Cooper Ornithol. Club, Pacific Coast Avifauna No. 27.

Linsdale, J.M. 1962. Middle Pacific Coast Region Audubon Field Notes 6(3):211-212.

Mans, M. and T. Chase Jr. 1963. Middle Pacific Coast Region. Audubon Field Notes 17 (4):429-432.

Messinger, N. 1971. Seventy-first Christmas Bird Count—Yosemite National Park, Calif. American Birds 25(2):513-514.

—. 1973. Seventy-third Christmas Bird Count—Yosemite National Park, Calif. American Birds 27(2):535.

Paxton, R.O. and T.A. Chandik. 1967. Middle Pacific Coast Region. Audubon Field Notes 21(1):72-76.

Pray, R.H. 1953. Middle Pacific Coast Region. Audubon Field Notes 7(1):33-35.

Robbins, C.S., B. Bruun, H.S. Zim, and A. Singer. 1966. Birds of North America. Golden Press, New York

Smith, S.M. 1967. An ecological study of winter flocks of black-capped and chestnut-backed chickadees Wilson Bull. 79(2):200-207.

Williams, L. 1957. Middle Pacific Coast Region Audubon Field Notes 11 (5):426-428.

The Blue List

This year's Blue List of declining species will be published as usual in the December issue. Birders are requested to refer to last year's list (Am. Birds 29: 1067), and their own field notes for 1976, and send their views on the status of these species to

their Regional Editors by October 15. Any suggestions, for additions to or deletions from the list, with supporting evidence, should be submitted at this time.