

was founded upon characters too intangible for recognition by name. However, after examination of good series from most of the islands and a very large series from the mainland it seems apparent that the recently proposed "elimination" of *clementis*¹ was not well considered. There is considerable individual variation in this species and the differences between *clementis* and the mainland *frontalis* become apparent only when good series are compared. The following points will bear emphasis.

The extent of red or yellow on the males, the proportion of red to yellow males, and the measurements of wing and tail in either sex are all items to which no diagnostic value can be attached. The tarsi and feet of *clementis* are slightly heavier in appearance but are not longer than in *frontalis*, and, considering the variation displayed, this tendency will not bear stressing. The characters which appear to provide the most secure basis for differentiating the island race are the decidedly heavier bill, the intensity or brilliancy of coloration in the males and the heavier streaking of the females.

Specimens have been examined from Los Coronados Islands (8), San Clemente Island (61), Santa Catalina Island (13), Santa Barbara Island (7), Santa Cruz Island (28), Anacapa Island (2), San Miguel Island (1), mainland of California (151). On the basis of the above series I should divide the island linnets as follows:

Clementis, best development: San Clemente and Santa Barbara islands.

Clementis, intermediate toward *frontalis*: Los Coronados and Santa Catalina islands.

Frontalis, occasionally intermediate toward *clementis*: Santa Cruz, Anacapa and San Miguel islands. This form is most probably the one which occurs on Santa Rosa Island also.

These conclusions (with minor differences which probably result from the use of different series) are essentially the same as those reached by Dr. Joseph Grinnell.² I offer them simply as a "counter irritant" for the proposed elimination,—which proposal it may be pointed out was not based on a first-hand study of the case insofar as can be ascertained from the text.—A. J. VAN ROSSEM, Pasadena, California, May 20, 1925.

Winter Birds Seen at the Grand Canyon, Arizona.—In the CONDOR of March, 1920 (xxii, pp. 79-80), H. S. and Winifern W. Swarth reported the birds seen by them at the Grand Canyon in three days, December 18 to 20, 1919. I spent nine days there, December 3 to 12, 1924, exploring the rim on foot in each direction for eight miles, traversing the Bright Angel Trail on mule-back and the Hermit Trail on foot, and spending two nights and a day at the foot of Hermit Trail.

The temperature at the rim during these nine days varied from 13° to 45° F. The weather was fine with the exception of three days when it snowed hard, a total snow precipitation of 19.8 inches. About 3500 feet below the rim, there was rain, and the temperature averaged 20° higher, although there was a slight frost both nights that I spent at Hermit Creek Camp.

In the following list I have marked with an asterisk the species that are not included in the Swarth list. The birds seen by them that I failed to observe were: Eastern Goshawk, Cactus Woodpecker, Slate-colored Junco, and Bohemian Waxwing.

**Accipiter velox*. Sharp-shinned Hawk. A single bird was seen on two different days close to the rim, and one near Hermit Creek Camp, 4000 feet below the rim.

Dryobates villosus monticola. Rocky Mountain Hairy Woodpecker. Several seen above the rim.

Colaptes cafer collaris. Red-shafted Flicker. One seen above the rim.

**Sayornis sayus*. Say Phoebe. One seen in Hermit Creek Canyon.

Cyanocitta stelleri diademata. Long-crested Jay. Several above the rim.

Aphelocoma woodhousei. Woodhouse Jay. Two or three above the rim.

Nucifraga columbiana. Clark Nutcracker. Although I did not observe this bird myself, it was seen and described so accurately by an acquaintance at the hotel that I have included it here. The Swarths saw several.

Cyanocephalus cyanocephalus. Pinyon Jay. Single birds and a flock of twenty at the rim and a few seen on Tonto Trail near Hermit Creek Camp.

¹ Dawson, Birds of California, 1923, p. 213.

² Pacific Coast Avifauna, no. 11, 1915, pp. 107-108.

Passer domesticus. English Sparrow. Unpleasantly common about the hotel and cottages at the rim.

**Leucosticte atrata*. Black Rosy Finch. On December 5 and 6 it snowed hard and again on the 8th. On the last named date, about half way between the hotel buildings and Hermit's Rest, close to the road, I saw a single bird of this species and nearby three others. They were very unsuspecting and allowed me to approach within fifteen feet and to examine them with eight-power binoculars and note down every detail. They were perched in the pinyon pines and later on the snow, picking the seeds from low plants. Their striking black and gray and rosy plumage, their yellow bills with black tips, made them well marked, attractive, and easily recognized birds. This bird is not recorded in Swarth's Distributional List of the Birds of Arizona.

**Astragalinus psaltria*. Arkansas Goldfinch. On December 9 twenty-four of these little birds settled for the night in a cottonwood, still in leaf, close to the back door of the Hermit Creek Camp.

Spinus pinus. Pine Siskin. Three seen close to the hotel.

Junco hyemalis connectens. Shufeldt Junco. The common junco at the rim and in the Canyon.

**Junco hyemalis mearnsi*. Pink-sided Junco. One identified at the rim.

**Junco phaeonotus caniceps*. Gray-headed Junco. Three identified at the rim.

Salpinctes obsoletus obsoletus. Rock Wren. Five or six observed at and near Hermit Creek Camp.

Catherpes mexicanus conspersus. Canyon Wren. An equal number of this species was seen at Hermit Creek Camp. A few also at the foot of Bright Angel Trail. The beautiful song was heard twice.

Sitta carolinensis nelsoni. Rocky Mountain Nuthatch. Several seen in the woods along the rim.

Sitta pygmaea pygmaea. Pigmy Nuthatch. This bird was abundant near the rim in the yellow pines and pinyons. On December 11 I saw at least two flocks of perhaps a hundred each.

Baeolophus inornatus griseus. Gray Titmouse. Several seen above the rim.

Penthestes gambeli gambeli. Mountain Chickadee. Common above the rim.

**Psaltriparus plumbeus*. Lead-colored Bush-tit. Several seen near the Tonto Trail in the Canyon on December 9.

**Regulus calendula*. Ruby-crowned Kinglet. Several seen in Hermit Creek Canyon.

**Myadestes townsendi*. Townsend Solitaire. Two were seen on December 4 and one on the 10th near the rim.

Planesticus migratorius propinquus. Western Robin. One seen on the rim.

**Sialia mexicana bairdi*. Chestnut-backed Bluebird. Abundant in flocks at the rim. Often to be seen eating juniper berries.

The ten birds new to the list observed by me, together with the Swarth's list of twenty, makes the total of winter birds for the Grand Canyon, thirty.—CHARLES W. TOWNSEND, Boston, Massachusetts, February 26, 1925.

An Observation on the Pre-nuptial Feeding Habit of the California Linnet.—During the past few weeks several pairs of California Linnets (*Carpodacus mexicanus frontalis*) have been coming regularly to a feeding table located just outside my office window at the Natural History Museum, Balboa Park, San Diego. They have become accustomed to the presence of human beings within the room but a few feet distant, and act in a perfectly normal manner, quarreling over food and mates when more than a single pair are eating at the same time.

On the afternoon of March 19, 1925, a pair alighted on the edge of the table and my attention was soon attracted by a peculiar twittering call given by the female. It was rather unusual, so I watched them carefully and observed the male feed the female regurgitated food several times. His actions were much the same as those of any bird raising partly digested food from its crop; the head was bent sharply downward several times and the pellet was seen to rise up through the gullet. At that moment the female, with much twittering and flipping of wings, would open her beak to receive the titbit.

I have often seen this pre-nuptial feeding act at some distance on telephone wires or other exposed places, but have never before had the pleasure of such a close view;