

September 12, 1936, at Redlands City Reservoir. Shovellers were not seen in San Timoteo Canyon when trips were made in October and December, 1936, but in January, 1937, approximately twenty-five were seen, and about this same number was noted in February and the first half of March. Shovellers were almost always seen in numbers when trips were made to Elsinore. They were noted in April, October, and November, 1935; February and March, 1936; and March, 1937, in Railroad Canyon near Elsinore, and in April at Elsinore and San Jacinto lakes. In April in 1935 and 1937, in spring migration, Shovellers were very numerous at Elsinore, probably numbering into the thousands.

Nyroca americana. Redhead. This species seems to be a regular winter visitant in San Timoteo Canyon. A few usually were seen among the wintering ducks, but flocks of thirty or forty were sometimes seen after a storm or during spring migration. Birds were noted in October, 1935; February, March, September, October, and December, 1936; and February and March, 1937.

Nyroca collaris. Ring-necked Duck. Apparently a common winter visitant in San Timoteo Canyon. Observed many times at close range with 8-power binoculars. Scaups and other species were present for comparison. Eight or more were noted on March 15, approximately thirty March 29 and three April 23, 1936. Four were seen at Redlands City Reservoir November 7, 1936. A flock varying from about fifteen to thirty-five was seen in San Timoteo Canyon December 26, 1936, January 30, February 20, and March 1, and a few March 11, 1937.

Lophodytes cucullatus. Hooded Merganser. A female was observed December 23, 24, and 25, 1934, in company with a few American Mergansers at Redlands City Reservoir. I was able to get within twenty or thirty feet of her and observed her closely for some time.

Mergus merganser americanus. American Merganser. It is possible that some of the following records may pertain to the Red-breasted Merganser, but no male Red-breasted Mergansers were seen in the periods when the mergansers were in this vicinity, and male American Mergansers were sometimes present in the flocks, although most all of the birds had female plumage. When close observation of females was possible, they proved to be American Mergansers. Also, I have skins of two American Mergansers which were found shot in San Timoteo Canyon. A female was found January 30 and a male March 12, 1937. On December 13, 1934, eleven birds arrived at Redlands City Reservoir. From this date until December 25 from three to fifteen birds were present nearly every day, and one was present December 31. Two were seen near Loma Linda on December 16. In 1937 American Mergansers were again noted in this vicinity. From one to about five were seen in San Timoteo Canyon January 30, March 1, 4, 11, and 21.

Mergus serrator. Red-breasted Merganser. A male in full plumage appeared on Redlands City Reservoir April 28, 1937, and is still present. Perhaps he is wounded. I have never seen him fly any distance. On September 17 I looked at the bird with binoculars and noticed that his plumage was greatly changed; he was in the eclipse plumage and looked quite like a female. On September 24 I was able to get very close to the bird. His head was the color of a female's and had a small crest, the brown band did not cross the breast, and the primaries and secondaries were entirely molted.—
HAROLD M. HILL, Redlands, California, September 24, 1937.

Hybridization of Juncos in Captivity.—In order to verify certain conclusions drawn from a study of naturally occurring hybrid juncos, an attempt has been made to breed two distantly related types in an aviary. Since January, 1935, I have had a male Red-backed Junco (*Junco caniceps dorsalis*) in captivity in my cages in Berkeley. Mr. Lyndon L. Hargrave very kindly sent me this bird from Flagstaff, Arizona, where he trapped it. Because *dorsalis* is essentially non-migratory, a cross was attempted with the permanently resident Point Pinos Junco (*Junco oreganus pinosus*) which has a breeding season similar to that of *dorsalis*. These two races, although they never meet in nature, represent species which do.

The pair of birds was kept in an 8'x8' aviary with an average height of about 7 feet. The birds were supplied with a variety of seeds and they could obtain a small number of insects from the natural vegetation in the cage. Some insects were blown into the cage from the oak trees and grass that surrounded them. It was necessary to keep other juncos, both captive and wild, out of sight in order that the nesting pair be undisturbed. The sound of other juncos singing, although definitely noticed, did not cause trouble.

The female of the pair was a local bird that was taken early in the spring of 1935, at which time she had a brood patch. On June 13 she was placed with the male *dorsalis*, but they did not breed. The female undoubtedly was too much disturbed by her unaccustomed confinement to resume nesting at this late date.

In late May of 1936, the female laid two eggs. These she incubated, but about three days before the time for hatching, the birds removed them from the nest. The embryos were nearly fully developed, but were dead, at least when found. Immediately another nest was started on the same site, a beam

6 feet above ground, and three eggs were laid. On the evening of the eleventh day of incubation one of the eggs was partly open and the young one could be seen within. The next morning this bird was found removed from the nest and dead. Apparently it had not hatched successfully as its down was not fluffed out and the umbilicus was not perfectly closed. The other two eggs were pipped. However, they failed to hatch, and when removed several days later the young were found to have died just as development in the egg was completed. It began to appear that some deficiency or disharmony in development in these hybrids became manifest at this age.

In 1937, the first set of 2 eggs was completed by this pair on May 25, and incubation was begun. On the morning of June 6 both eggs had hatched and the young were normal in every respect. On the evening of the 7th both were removed to attempt rearing by hand. This was unsuccessful and the birds died the next day. The failure in this instance must be laid entirely to incorrect care and nutrition and not to weakness of the hybrids. Similarly, difficulty in most instances has been encountered in rearing the offspring of captive parents that were both typical *pinosus*.

The results, which as yet are rather unsatisfactory, do permit certain conclusions. These are that strikingly different juncos, when placed together in captivity by themselves, will accept one another as mates and proceed to nest as readily as will birds of like race. *Dorsalis* and *pinosus* can produce viable young. But, nothing can be said as to comparative vigor of hybrid offspring.—ALDEN H. MILLER, *Museum of Vertebrate Zoology, Berkeley, California, March 5, 1938.*

Records of Arrival of Calliope Hummingbirds.—In the January, 1938, issue of the *Condor* (p. 42) I read with interest the field note by Mr. Woods concerning an early spring migration record (March 6) for the Calliope Hummingbird (*Stellula calliope*). It struck me that this was not an especially early record for the Calliope, and on going to my records of first arrivals in Yosemite Valley I found the following:

March 2, 1924	April 26, 1927	April 2, 1930
March 24, 1925	March 8, 1928	March 21, 1931
March 18, 1926	April 18, 1929	April 7, 1932
		April 14, 1933

All of the above records are for a single male bird that put in his appearance on the warm alluvial fan that spreads out at the mouth of Indian Canyon. For five years the favorite perch of this first arrival was on a dead twig that stood above a clump of ceanothus bushes beside the Foley Studio. In the course of a clean-up campaign the dead wood in this ceanothus clump was trimmed away and the "first arrival" was forced to move about fifty yards to a new perching site that had escaped the campaigners. This new site became the favorite perch of the "first arrival," and here he could be found during the spring months for the next five years.

Mrs. Michael has often said that the Calliope Hummingbird does not date his arrival in Yosemite Valley by the calendar, but that his arrival is coincident with the blooming of the manzanitas. As a matter of fact, of all the summer visitants to Yosemite Valley, the Calliope Hummer is the most irregular in time of arrival.

Once the Calliope did arrive he stayed put; he did not leave the neighborhood in search of a mate. Apparently he had a rendezvous, for always a mate put in her appearance. When the courting days were over the female disappeared. The male stayed on for weeks, even months, depending on the seasonal bloom. Because a bird came early year after year to the same locality and to the very same perch, I wanted to believe that it was the same individual, but this I could never establish by evidence.

I have a suspicion that the female nested directly across the valley, a half mile away from the garden of the honeymoon. Here in a small golden-cup oak that clung to a bluff in the shadow of the south wall a nest was built in four successive years. The fact that nesting records are rare and that female Calliope Hummingbirds are seldom seen on the floor of the Yosemite in the nesting season influenced me in my suspicions.—CHARLES W. MICHAEL, *Pasadena, California, January 23, 1938.*