Dendroica caerulescens. Black-throated Blue Warbler. An adult male in full plumage was taken by Kridler on September 27, 1960. The specimen is now at refuge headquarters. It is the second record for the state. The first state record was also a male collected here by Marshall on October 9, 1957 (*op. cit.*:55). What makes the Oregon records interesting is that both birds were adult males which were collected in the same group of trees at the same season of the year.

Setophaga ruticilla. American Redstart. A female of this species was taken on September 8, 1960, by Kridler. There have been several unpublished sight records for this species in southeastern Oregon. Gabrielson and Jewett (*op. cit.*:517) stated that this species probably was a breeding bird of rare occurrence in northeastern Oregon, but they had no definite information regarding such breeding.

Icterus galbula. Baltimore Oriole. On June 1, 1960, Marshall was attracted to an unfamiliar song emerging from a cottonwood grove. The bird proved to be a male of this species. In so far as we can determine it constitutes the first record for the state.

Junco hyemalis. Slate-colored Junco. An adult female was taken on October 19, 1960, by Kridler. This specimen is the first record for Harney County and fills the gap in the block of counties comprising eastern Oregon from which there are records.

Zonotrichia querula. Harris Sparrow. On October 22, 1960, an immature bird was captured and banded by Kridler, and both he and Mr. and Mrs. Harry Adamson of Oakland, California, were able to observe closely another unbanded individual at headquarters on October 30, 1960. Three immature birds were netted, all at one time, by Kridler on November 6, 1960. Two were banded and released, but the third was saved as a specimen. The only other record for eastern Oregon is the immature bird seen and photographed here at headquarters by Mr. John Cowles on October 30 and 31, 1955 (Marshall, *op. cit.*:55–56).

Zonotrichia albicollis. White-throated Sparrow. On September 8, 1960, an immature of this species was taken by Kridler. Another immature was netted on September 19, but was banded and released. It was recaptured and released again on October 14. The specimen is the first recorded in southeastern Oregon. The only other records for this part of the state are a bird photographed at refuge headquarters by Mr. John Cowles on October 30 and 31, 1957 (Marshall, *op. cit.*:55–56) and a sight record of one by Marshall and others at refuge headquarters on April 25, 1960.—EUGENE KRIDLER and DAVID B. MARSHALL, *United States Fish and Wildlife Service, Burns and Portland, Oregon, September 14, 1961.*

Additional Record of the Chestnut-backed Chickadee in the Calaveras Big Trees State Park, California.—The occurrence of a flock of five Chestnut-backed Chickadees (*Parus rufescens*) along the Big Trees Trail in the Calaveras Big Trees State Park, Calaveras County, California, on June 17, 1951, as reported by Curls (Condor, 54, 1952:115), was in a region far from its normal range. On June 25, 1961, along this same trail, I was surprised, therefore, to observe a Chestnut-backed Chickadee feeding one of its young. Their identity was unmistakable when observed at a distance of less than ten feet. The presence of a young bird would seem to indicate that this species was nesting within the park.—MILTON MOORE, *Sacramento, California, July 20, 1961.*

Occurrence of Great Gray Owls in Mono County, California.—Because of the paucity of published field notes on the distribution and habits of the Great Gray Owl (*Strix nebulosa*) in California, the following observations may be of interest. They were made in the course of a two-week collecting trip, August 13 to 28, 1960, to the east slope of the Sierra Nevada. Our camp site was at Sardine Meadow, 8760 feet, Mono County. The dominant vegetation included lodgepole pine (*Pinus contorta*), red fir (*Abies magnifica*), mountain hemlock (*Tsuga mertensiana*), white-barked pine (*Pinus albicaulis*), Sierra juniper (*Juniperus occidentalis*), and sagebrush (*Artemisia* sp.), typical of the subalpine forest ecologic formation (Miller, Univ. Calif. Publ. Zool., 50, 1951:566). At least two Great Gray Owls were seen during our stay. The following is an account of the observations of R. I. Bowman, T. A. Mandas, E. A. Parchim, and the writer.

On August 14, an owl was heard calling near camp in the pre-dawn hours. Two days later, at dusk, an owl was heard calling from a low ridge north of camp. We searched for the bird but it could not be located. The calls consisted of several low-pitched *whoo*'s, repeated at varying intervals. Both calls were identical with those of birds later observed.

At dusk on August 19, an extremely large owl was seen flying at a distance along the same ridge. The owl was very wary and made no sound.

At approximately 5:00 a.m. on August 26, we were awakened by two owls calling from slightly different directions. There was a distinct difference in the pitch of the two calls, the quality of which was identical with that of those previously heard. A few minutes later, one of the birds flew directly overhead and perched atop a lodgepole pine approximately 30 yards away. In the beam of a lantern, the bird remained perched long enough to permit positive identification as a Great Gray Owl. Both birds called repeatedly, and a few moments later, the second bird glided directly overhead.

According to Grinnell and Miller (Pac. Coast Avif. No. 27, 1944:205–206), no Great Gray Owls have hitherto been reported from Mono County, California, on the east side of the Sierra Nevada.—STEPHEN L. BILLEB, *Department of Biology, San Francisco State College, San Francisco, California, August 18, 1961.*

The Minimum Water Requirements of Mourning Doves.—Since water appears to be one of the primary factors limiting the successful habitation of arid regions, it is desirable to learn as much as possible about the water economy of successful desert inhabitants. Mourning Doves (*Zenaidura macroura*) are conspicuously successful inhabitants of arid North America and are often seen under the most severe of desert conditions. This success appears, however, not to be attributable to any unusual physiological mechanisms in their water economy, but to their wide-ranging habits which allow them to visit potable surface water at least every few days (Bartholomew and MacMillen, Physiol. Zool., 33, 1960:171–178).

Bartholomew and MacMillen (*op. cit.*) have previously studied the water economy of Mourning Doves but limited their investigations of water consumption to measurements of *ad libitum* intake. Recent work on the California Quail (*Lophortyx californicus*) suggests that the thirst mechanism of captive birds may not be geared to their actual water needs and that some species may habitually drink in excess of the amount required for maintenance of body weight (Bartholomew and MacMillen, Auk, 78, 1961:505–514).

In the light of these observations, the measurement of *ad libitum* water consumption is probably not a valid criterion of the amount of water actually required by a bird. The present study, therefore, undertakes to determine the minimum amount of water required for maintenance of body weight by Mourning Doves.

The 11 birds used were trapped in Rustic Canyon in the Santa Monica Mountains near the Los Angeles campus of the University of California in November and December, 1959. The birds were not segregated by sex and were housed individually in cages measuring $10 \times 10 \times 10$ inches in a windowless room on a 12-hour photoperiod (lights on from noon to midnight). The flight feathers of the birds were clipped to facilitate handling. Mixed bird seed with a water content varying between nine and ten per cent as determined by drying to a constant weight at 100°C. was available at all times. Room temperature varied between 18° and 26°C.; relative humidity varied between 40 and 70 per cent. The birds were weighed to the nearest tenth of a gram on Mondays, Wednesdays and Fridays near the end of the dark period.

Water consumption was determined by the use of graduated cylinders equipped with "L"-shaped drinking tubes and containing distilled water. The water drunk was measured daily to the nearest 0.5 ml. The birds were trained to use the tubes by placing a watering cup nearby for several days. One drinking device was used to determine the rate of evaporation.

The minimum amount of water required daily for maintenance of body weight was determined by successively halving the previously determined *ad libitum* consumption until that amount was found below which each bird was unable to maintain a constant body weight.

The mean body weight of the 11 Mourning Doves used in this investigation, after several days of acclimation to laboratory conditions, was 108.1 ± 14.7 grams (range, 91–144). The *ad libitum* distilled water consumption of these doves during seven days averaged 6.9 ± 0.9 per cent of body weight per day. The birds showed a slight average gain of 0.1 per cent of initial body weight per day.

While determining the minimum daily water requirements the birds were kept on a restricted water ration for a period of 11 to 31 days (mean, 21.4). When placed on the minimum water ration, the birds typically showed an initial loss in body weight which was followed by a period of weight maintenance or weight gain. The figures for minimum water consumption were obtained during the last eight to ten days of this period of weight maintenance or weight gain. The minimum distilled water ration required by the 11 Mourning Doves for maintenance of body weight was