

tative identification of this species from the Lomita diatomite (Howard, Los Angeles County Mus. Contrib. Sci., 25, 1958:11).—HILDEGARDE HOWARD, *Los Angeles County Museum, Los Angeles, California, May 18, 1962.*

Distributional Data on Certain Owls in the Western Great Basin.—Recent field work by the authors has resulted in the accumulation of the following records which further our knowledge of the ecologic and geographic distribution of four species of owls in northeastern California and western Nevada.

Otus flammeolus flammeolus. Flammulated Owl. In summarizing the known Californian reports of this species, Grinnell and Miller (Pac. Coast Avif. No. 27, 1944:189) cite only two records of occurrence in the northeastern part of the state: Fort Crook, Shasta County, one specimen, August 23, 1860, and Quincy, Plumas County, in 1907. The following new records are thus of interest: Modoc County.—Ten miles west of Canby, 5500 feet, June 7–10, 1958, from one to four called in each evening and two males collected in mature and residual ponderosa pine, white fir, and incense cedar. The remains of one were also found in the stomach of a Horned Owl (*Bubo virginianus occidentalis*) obtained by Russell. Lassen County.—One mile east of Fredonyer Summit, 5700 feet, June 18, 1959, male taken in second-growth Jeffrey pine and white fir that formed an understory to an open stand of mature Jeffrey pine. This individual was the only member of this species found at this locality in a total of approximately nine hours of night calling by the senior author between June 16 and 18, 1959, and on May 30, 1961. Coyote Flat, 5740 feet, July 8, 1961, male taken by Charles S. Thaeler, Jr., in residual yellow pine and scattered young white fir. Sierra County.—One and one-half miles west of Sardine Peak, 6900 feet, May 14, 1959, three called in; June 2, 1959, five called in, female collected in mature, residual, and second-growth ponderosa pine and white fir. Dog Valley, 6100 feet, May 27, 1960, at least ten males found in a broken forest of ponderosa pine, Jeffrey pine, white fir, and incense cedar. The timber was often scattered through large *Ceanothus* patches. One and three-quarter miles east and one-half mile south of Babbitt Peak, 6800 feet, July 7, 1962, seven called in and five males collected in broken ponderosa pine and white fir forest. Placer County.—One mile west of Martis Peak, 7300 feet, June 30 and July 1, 1960, at least four males called in each evening and one taken in second-growth Jeffrey pine and white fir mixed with mature white fir.

There has been but one previous record of this species in Nevada (Linsdale, Pac. Coast Avif. No. 23, 1936:62), that of a female taken on May 8, 1930, at South Twin River, 6500 feet, Nye County. On June 23, 1961, eight individuals were called in and a male and female were collected at one and one-half miles north of Crystal Bay, Lake Tahoe, 6900 feet, Washoe County, Nevada. This locality is near the California state line. The owls occurred in an open forest of mature sugar pine, ponderosa pine, white fir, and scattered incense cedar. Many patches of *Ceanothus* and granite boulders covered the ground between the trees.

Data on reproductive condition, weights, fat, and dates, respectively, for these 13 specimens are: ♂♂, testis 5×3 mm., 51.8 gm., no fat (June 9); 9, 48.8, no fat (10); 8×5 , 50.6, no fat (18); 5×3 , 55.9, no fat (23); 3×2 , 54.9, moderate fat (30); 5×3 , 55.0, no fat (July 7); 6×4 , 58.4, some fat (7); 5×3 , 66.1, fat (7); 6×3 , 57.3, fat (7); 4×3 , 58.2, very fat (7); 5×3 , 58.3, fat unrecorded (8).

♀♀, largest ovum 3 mm., 60.3 gm., moderate fat (June 2) and 11 (yellow), edematous brood patch, 78.2, slight fat (23).

Information on stomach contents was recorded for 10 of the 13 specimens. One of the stomachs was empty; the remainder contained various insects among which were the following: seven Jerusalem crickets (occurred in five stomachs), one unidentified cricket, one grasshopper, two caterpillars, at least seven moths, and three scarab beetles each approximately three-quarters of an inch in length.

Otus asio macfarlanei. Screech Owl. Grinnell and Miller (*op. cit.*: 190) report a single record of this race from California, a specimen obtained (probably in 1860) at Fort Crook, northeastern Shasta County. On June 12, 1958, the authors collected a female (weight, 177.0 grams; ova small) in an open woodland of small black oaks at three and one-half miles west of Burney, Shasta County.

Glaucidium gnoma californicum. Pigmy Owl. The following specimen records document the distribution of this species in northeastern California essentially as described by Grinnell and Miller (*op. cit.*: 199–201) chiefly on the basis of sight observations. However, it is now certain that at least the

western half of Modoc County is also involved in the breeding range. Modoc County.—Twelve miles east of Steele Meadow, 5200 feet, May 28, 1948, male taken. Ten miles west of Canby, 5500 feet, June 8–10, 1958, four males collected in mature and residual ponderosa pine, white fir, and incense cedar. One mile northwest of the junction of Turner Creek and Pit River, 4000 feet, June 14, 1948, male taken. Lassen County.—Three miles north and one mile east of Susanville, 4800 feet, June 18, 1959, male taken in second-growth ponderosa pine, incense cedar, and black oak. Sierra County.—One and one-half miles west of Sardine Peak, 6900 feet, June 2, 1959, male taken in second-growth Jeffrey pine. Placer County.—One mile west of Martis Peak, 7300 feet, June 30, 1960, male taken in second-growth Jeffrey pine. The latter two birds were taken at exceptionally high elevations for this species in California.

Data on gonads, weights, and dates, respectively, for these nine males are: testis 6 mm., 66.3 gm. (May 28); 5×3 , 66.7 (June 2); 6×4 , 68.0 (8); 5, 62.4 (9); 5, 62.3 (9); 4, 60.2 (10); 4, 59.5 (14); 2, 57.3 (18); and 5×3 , weight unrecorded (30). None of these individuals was fat. Contents of three stomachs were: one small bird, cicadas, one small mammal, and one Jerusalem cricket.

Strix occidentalis occidentalis. Spotted Owl. In central California this form has been reported from the west slope of the Sierra Nevada in the Upper Sonoran and Transition life-zones between elevations of 2500 and 6600 feet. A disjunct population occurs on the coastal slope of the southern part of the state (Grinnell and Miller, 1944:205). Recent field work by the senior author has established the occurrence of this species east of the Sierran crest in the mountains north of Lake Tahoe in Placer County, California, near the Nevada state line. Specifically, on the night of July 1, 1960, an adult female was collected at one-half mile south and one mile west of Martis Peak at 7500 feet elevation, and another adult female was taken at one and one-half miles south and one-half mile west of the same peak at 7300 feet elevation. The individual from the first locality began calling at midnight from an unusually heavy stand of mature red fir and white pine growing on a moderate slope above camp. It repeatedly answered imitations of the barking and whistling calls, but did not move during the 15-minute interval required to approach the red fir where it was finally found perched at 25 feet above the ground. The bird weighed 648.4 grams and had unidentifiable insect remains in its stomach. The ovary appeared to be regressing and contained ova up to two millimeters in diameter.

The other individual was apparently attracted to the imitated calls of the Flammulated Owl that were given in the late evening along a trail through mature Jeffrey pine, white fir, and red fir in a steep canyon. The owl perched silently in the top of a small white fir approximately fifteen feet in height that grew at the edge of a clearing in the heavy timber on either side of the canyon. This bird weighed 615.7 grams and had a small mammal in its stomach. The largest ova were two millimeters in diameter; the appearance of the ovary suggested that it was regressing.

Both specimens show ensheathed ventral body feathers. The rectrices of one bird were all in early stages of growth, with the feather vanes extending from two to four centimeters beyond the sheaths, thus providing evidence for a simultaneous tail molt. Mayr and Mayr (Auk, 1954:173), however, have reported that the tail molt appears to be gradual in *Strix*.

On June 24, 1961, another visit was made to the second locality mentioned above, at which time a Spotted Owl answered imitated barks at 11:30 p.m. from the top of a white fir approximately 150 feet in height. After an exchange of six series of calls the owl flew from the tree and disappeared up the canyon.

The presence of at least three individuals at this locality during the summer is evidence that this area is probably used for breeding by these owls. This report of high zonal occurrence further suggests that the Spotted Owl should be sought in subalpine forests in other parts of the Sierra Nevada, particularly where dense stands of mature conifers provide the requisite deep shade used for daytime roosting. This species has not yet been recorded in Nevada; a search for it on the night of June 23, 1961, at one-half mile north of Crystal Bay, 6900 feet elevation, Lake Tahoe, Washoe County (approximately two miles east and two miles south of Martis Peak) was unsuccessful. The proximity of the Martis Peak records, however, suggests at least sporadic occurrence in the Tahoe region of Nevada in spite of the rather open and second-growth timber predominant there.

We wish to express our thanks to James D. Anderson, Hans J. Peeters, Charles S. Thaeler, Jr., and William L. Thompson for their assistance and companionship in the field. Thaeler also provided a record of the Flammulated Owl for our use.—NED K. JOHNSON and WARD C. RUSSELL, *Museum of Vertebrate Zoology, Berkeley, California, August 1, 1962.*