

## NEST OBSERVATIONS OF THE LONG-EARED OWL (*Asio otus*) IN BENTON COUNTY, OREGON, WITH NOTES ON THEIR FOOD HABITS

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### INTRODUCTION

A nesting pair of long-eared owls was found 10 miles north of Corvallis, Benton County, Oregon, on 24 April, 1969. The pair was observed and photographed until 30 May, when the young left the nest.

This is the third record of nesting *Asio otus* west of the Oregon Cascades. Gabrielson and Jewett (1940) reported that Pope collected eggs from a nest "presumably near Sheridan" in 1894. Maser and Gordon (1965) found a nesting pair 2½ miles north of Bellfountain, Benton County, on 13 May, 1964.

### HABITAT

The owls were located in the north end of McDonald Forest at approximately 400 feet elevation. The nest was in a grove limited on the northern extreme by a small, unused grassy meadow which opened into a long shallow valley. The meadow, like the grove, had a gentle north slope and was interspersed with a few small white oaks (*Quercus garryana*). The grove itself was second-growth Douglas fir (*Pseudotsuga menziesii*), 10 to 12 inches D.B.H., with scattered white oaks and big-leaf maple (*Acer macrophyllum*). The average height of the grove was approximately 40 feet.

From the meadow's edge to the border of a small flat, 100 yards up the slope, the fir was dense. The canopy on the flat, 50 x 150 yards, was relatively open and more frequently interspersed with deciduous trees. Surrounding the nest tree, in the middle of the flat, the predominant ground cover was poison oak (*Rhus diversiloba*), Oregon grape (*Berberis nervosa*), and occasional grassy areas.

### NEST

The nest was in Douglas fir—6½ inches D.B.H.—29 feet above the ground. Three vertical branches of a snow-break supported the nest which was constructed of moss (*Eurhynchium oreanum*) and interwoven Douglas fir twigs. Nest measurements in inches were: 23 x 13 x 5½. The top of the nest was almost flat, however, along its length it had a slant of about 2 inches, the low side being toward the uphill slope. Maser, who examined the nest, said it had been constructed by a squirrel which had probably abandoned it prior to use by the owls.

The nest was found with 4 eggs on 26 April. Three of the eggs had hatched by 1 May; the remains of the fourth egg were found on the ground beneath the nest. On 21 May, the two eldest young were missing. (Since they were considered too young to fly a search of the area was undertaken. No sign of the young was discovered, therefore it is unlikely that there was any predation.) The remaining owlet jumped from the nest. It was unable to fly, but could break its fall slightly by fluttering its wings. It was returned to the nest. By 23 May the nest had been deserted by the last young.

### FOOD HABITS

On 4 May five microtines were found lining the edge of the nest, equally spaced, with tails toward the center. Two were intact, and three

Table I: Long-Eared Owls, 10 miles north of Corvallis, Benton County, Oregon.

| Total number of pellets: 104 |                   |           |
|------------------------------|-------------------|-----------|
| Prey animals                 | number of<br>each | % of diet |
| <i>Microtus</i>              |                   |           |
| <i>M. canicaudus</i>         | 51                | 33.33     |
| <i>M. townsendi</i>          | 20                | 13.07     |
| <i>M. oregoni</i>            | 6                 | 3.92      |
| <i>M. sp.</i>                | 35                | 22.87     |
| Total <i>Microtus</i>        |                   | 73.19     |
| <i>Sorex</i>                 |                   |           |
| <i>S. vagrans</i>            | 4                 | 2.61      |
| <i>S. townsendi</i>          | 1                 | .65       |
| <i>S. yaquinae</i>           | 1                 | .65       |
| <i>S. sp.</i>                | 9                 | 5.22      |
| Total <i>Sorex</i>           |                   | 9.13      |
| Unidentified mammals         | 13                | 8.49      |
| <i>Peromyscus</i>            |                   |           |
| <i>P. maniculatus</i>        | 7                 | 4.57      |
| <i>Zapus</i>                 |                   |           |
| <i>Z. trinotatus</i>         | 3                 | 1.96      |
| <i>Arborimus</i>             |                   |           |
| <i>A. longicaudus</i>        | 1                 | .65       |
| <i>Neurotrichus</i>          |                   |           |
| <i>N. gibbsii</i>            | 1                 | .65       |
| Beetle                       | 1                 | .65       |
| Total                        | 153               | 99.29     |

partially eaten. Four days later there was a microtine mid-section and a posterior half of another placed in a similar manner. On the next visit, 23 May, a whole *Microtus canicaudus* was found directly below the deserted nest, and a partially eaten *Microtus canicaudus* was collected 50 feet west of the nest. A small portion of an unidentifiable vole was discovered about 50 feet west of the nest on 30 May. The partially consumed microtines found on the ground would appear to indicate that the adults may have been feeding the young, which I could not locate, or may have been making frustrated attempts to feed non-existent young.

Throughout the study the area was searched for pellets. A total of 104 were collected and analyzed. As seen from this analysis (Table I), *Microtus canicaudus*, *Microtus townsendi*, *Zapus trinotatus*, and *Sorex vagrans*, primarily meadow dwellers, compose 50.97% of the diet. *Microtus oregoni*, *Peromyscus maniculatus*, *Neurotrichus gibbsii*, 9.14% of the diet, are known to inhabit meadows adjacent to forest. Such data indicates that the owls hunted primarily in the meadow, while incidental hunting in the forest is indicated by the *Arborimus longicaudus*. — 1745 N.W. 9th Street, Corvallis, Oregon 97330, 24 November, 1969.

#### ACKNOWLEDGEMENTS

The author extends his appreciation to Chris Maser for aid in identifying the mammals and for critically reviewing the manuscript.

#### REFERENCES

- BENT, A. C. 1938. Life Histories of North American Birds of Prey (Part II). Dover Publication, Inc., New York.
- GABRIELSON, I. N., and S. G. JEWETT 1940. Birds of Oregon. Published by Oregon State College, Corvallis, Oregon.
- MASER, C. 1969. Personal communication.
- MASER, C. and K. GORDON 1965. A Nesting Record of Long-Eared Owls in Benton County, Oregon. *The Murrelet*, Vol. 46 No. 3, p 39.