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INSECT HAWKING OBSERVED IN THE LONG-EARED OWL (ASIO OTUS)

The Long-eared Owl (*Asio otus*) has been described as a specialist on a relatively narrow range of species of small mammals (Errington 1932, *Condor* 34:176—186; Craighead and Craighead 1979, Hawks, owls, and wildlife. Stackpole Co., Harrisburg, PA U.S.A; Marks and Marks 1981, *Murrelet* 62:80–82), and highly dependent on *Microtus* spp. in many parts of North America and Europe (Marks 1984, *Can. J. Zool.* 62:1528–1533; Marks and Marti 1984, *Ornis Scand.* 15:135–143). *Asio otus* has also been found to shift dietary preference seasonally among different *Microtus* spp. in southern Sweden and as well as among other small mammals in central Slovenia (Nilsson 1981, *Ornis Scand.* 12: 216–223; Tome 2003, *Ornis Fenn.* 80:63–70).

Invertebrates are a minor component of this species' diet (0.5-0.2% by number, <0.1% by mass; Marti 1974, Condor 76:45-61; Marti 1976, Condor 78:331-336; Tome 1994, J. Raptor Res. 28:253-258; Alivizatos and Goutner 1999, J. Raptor Res. 33:160-163) as are larger prey, such as juvenile (100-150 g) lagomorphs (0.75% by number, 2.5% by biomass; Marks 1984).

Foraging behavior among Long-eared Owls is less understood than diet. The long-pointed wings and relatively low-wing loading of Long-eared Owls suggests the ability to hunt aerially, which has been observed in the form of quartering the ground for prey. Such adaptations are similar to Caprimulgids such as the Common Nighthawk (Chordeiles minor) which "hawk" prey aerially (catching prey on the wing; Poulin et al. 1996, Common Nighthawk (Chordeiles minor), In A. Poole and F. Gill [EDs.], The birds of North America, No. 213. The Birds of North America, Inc., Philadelphia, PA U.S.A.). In the Long-eared Owl, hawking behavior has never been documented (Marks et al. 1994, Long-eared Owl (Asio otus), In A. Poole and F. Gill [EDs.], The birds of North America, No. 133. The Birds of North America, Inc., Philadelphia, PA U.S.A.). There are very few published observations of Long-eared Owl foraging

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behavior, as this species is strictly nocturnal and difficult to observe. Glue and Hammond (1974, *Br. Birds* 67:361–369) report Long-eared owls "hovering" seconds before making a kill of a small mammal, but not otherwise. During nocturnal owl and bat surveys, we were frequently able to observe the behavior of several owl species. Here, we report observations of a hovering/hawking approach to aerial feeding by a Long-eared Owl, not previously reported in this species.

Observations took place in the boreal forest of northern Ontario, Canada, south of the municipality of Ear Falls. The topography of the area is highly variable, with many lakes, and is dominated by stands of black spruce (*Picea mariana*) and to a lesser extent jack pine (*Pinus banksiana*).

On 25 June 2001, between 2220–2240 H, we first observed a Long-eared Owl perched on an aspen tree (*Populus tremuloides*) on the roadside. We confirmed the owl's identification with a flashlight and a pair of binoculars. We were able to approach the bird three times to within 10 m as it perched on various trees. As we tried to find the bird a fourth time, it flew out from the side of the road and began to hover, slowly sweeping back and forth across the road ca. 2 m off the ground within 5 m of our vehicle. In the headlights, we were able to observe the owl as it "hawked" moths over a large water puddle in the middle of the road. The moths were large enough to be clearly visible (ca. 5.7–6.3 cm wingspan), and were later confirmed to be moths of the genus *Actius* or *Smerinthus* (Ross 1873, The butterflies and moths of Canada. Rowsell and Hutchison, Toronto, Canada), which had previously been observed in the area. While we watched, the owl captured at least three moths, which were apparently consumed whole. The owl then flew back into the woods in the direction from which it came, and was not seen again that night.

Comments on this observation from M.C. Drever and T.D. Nudds were greatly appreciated. We wish to thank the Sustainable Forest Management Network of Centres of Excellence and The University of Guelph for funding, and for cooperation from Weyerhaeuser Inc., all of whom contributed to our presence in the field during the summer of 2001.—Darren J.H. Sleep (e-mail address: dsleep@uoguelph.ca) and Rowan D.H. Barrett, Department of Organismal Biology, Ecology and Evolution, University of Guelph, Guelph, Ontario N1G 2W1, Canada.

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