

## Fall migration of Northern Saw-whet Owls at an inland, urban site: University of Michigan-Dearborn, Wayne Co.



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The Northern Saw-whet Owl (*Aegolius acadicus*) breeds across most of southern Canada and the northern U.S., and at least part of the population migrates in fall to winter in the east-central U.S. and sometimes further south (Cannings 1993). It is an uncommon summer and winter resident in Michigan (Allen and Trautman 1994). Tiny, secretive and highly nocturnal, both its residency and migratory status can be difficult to discern. However, the use of an audio lure broadcasting the species' courtship call is a highly effective method for capturing them during migration. Data from a growing number of owl banding stations have indicated several probable migration routes: From central Ontario through the Ohio River valley, along the Atlantic coast, and around Lake Superior from Minnesota to Wisconsin and then south and/or east (Cannings 1993). The vast majority of owl banding stations are located in coastal sites (Atlantic or Great Lakes). Since very limited attempts at owl banding at the University of Michigan-Dearborn proved the presence of saw-whet owls at the site (eight banded in 1981 using passive mist nets, seven banded in as many nights in 1993-1995 using an audio lure), we decided to expand the project in fall 1999.

### Study site and methods

The University of Michigan-Dearborn is located in Dearborn, Wayne Co., MI (42°19'N, 83°14'W). The site is approximately 290 acres (118.2 ha) of mature floodplain forest, secondary forest, old fields, and mead-

ows along the Rouge River. It is entirely surrounded by urban and residential use.

Two stations were set up. Each consisted of three 12 m mist nets of 60 mm mesh arranged in a nearly closed triangle. The audio lure, a continuous loop tape of the saw-whet owl courtship call played on a portable tape recorder at full volume, was placed in the center of the nets. Nets were opened at dusk and closed an average of 6.5 hours later on 11 nights from 24 October through 16 November. The stations were in cleared, brushy areas surrounded by forest approximately 0.25 miles (0.4 km) apart. One station was approximately 70 ft. (21 m) and the other 150 ft. (46 m) from the edge of campus (a perimeter road surrounding buildings and parking areas).

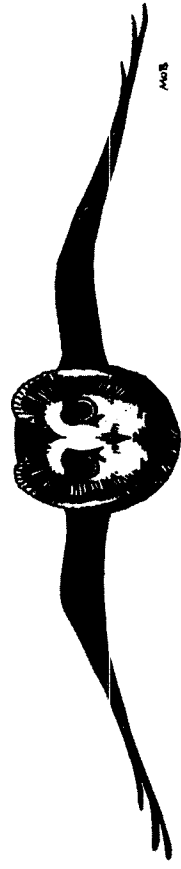
Nets were checked at least once per hour. Time of capture and net location were recorded. Owls were weighed on a digital scale accurate to  $\pm 0.1$  g, their right wing chord and culmen were measured, and the color of the tip of the bill (black or white) was noted. Owls were aged according to Pyle (1997) using relative color and wear of flight feathers. Owls were sexed using wing chord-mass discriminant function criteria approved by the U.S. Geological Survey's Bird Banding Lab (Brinker 2000).

### Results

Twenty saw-whet owls were banded and 3 were recaptured later. Capture rate was 5.4 per 100 net-hours. Peak dates were 4 birds on 6 November, and 4 on 7 November. At least 1 owl was captured every night except the last 2 nights, 13 and 16 November. The Table sorts the owls by age and sex. Eleven birds had black-tipped bills, 6 had white, and the color was not noted in 3.

**Table. Age and sex of Northern Saw-whet Owls banded at University of Michigan-Dearborn, fall 1999.**

	Male	Female	Unknown
Hatching Year	4	6	7
Second Year	0	2	1



Project Owlnet logo by Michael O'Brien

### Discussion

While few conclusions about migratory patterns can be drawn from these preliminary results, it is evident that saw-whet owls make use of this patch of urban, inland forest during fall migration.

It is likely we could have substantially increased our catch had we been able to begin our banding season earlier than 24 October. At Prince Edward Point, Ontario (43°57'N, 76°54'W) peak saw-whet owl capture is in mid-October, with 75% being captured before the end of the 3rd week in October (Weir et al. 1980).

The high proportion of juvenile owls captured (85%) may also be due to the late start date. Adults move slightly ahead of juveniles (Cannings 1993), and during 3 seasons, each spanning late September to early November, juveniles accounted for only 58.3% of the total catch at Prince Edward Point (Weir et al. 1980). However, our small sample size and the fluctuation in the timing of migration of age classes from year to year makes this speculative (Weir et al. 1980, Cannings 1993). Further, the number of migrating saw-whet owls is apparently directly related to annual productivity and the number of juvenile birds moving south (Cannings 1993). Since 1999 was noted as an exceptional flight year, perhaps the sheer numbers of migrating owls resulted in some utilizing our site. We plan to significantly expand coverage in 2000 and beyond to help eliminate these biases.

### Acknowledgements

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### Submission Deadlines

Deadline	Issue
March 1 .....	No. 1 (January–March)
June 1 .....	No. 2 (April–June)
September 1 .....	No. 3 (July–September)
December 1 .....	No. 4 (October–December)
December 1 .....	No. 5 (Supplement)

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