

- Martin, S. G. and T. A. Gavin. 1995. Bobolink (*Dolichonyx oryzivorus*). In A. Poole and F. Gill (eds.) The birds of North America, no. 176. Acad. Nat. Sci., Philadelphia, and Am. Ornithol. Union, Washington, DC.
- Mead, C. J. and B. R. Watmough. 1976. Suspended moult of Trans-Saharan migrants in Iberia. *Bird Study* 61:187-196.
- Norman, S. C. 1991. Suspended split-moult systems—an alternative explanation for some species of Palearctic migrants. *Ringing & Migration* 12:135-138.
- Parrish, J. R., J. Stoddard, and C. M. White. 1987. Sexually mosaic plumage in a female American Kestrel. *Condor* 89:911-913.
- Patten, M. A. 1993. A probable bilateral gynandromorphic Black-throated Blue Warbler. *Wilson Bull.* 105:695-698.
- Payne, R. B. 1972. Mechanisms and control of molt. Pp. 103-155 in D.S. Farner, J.R. King and K.C. Parkes (eds.) Avian biology Volume II. Academic Press, London; New York, NY.
- Pyle, P. 1997. Identification guide to North American birds, Part I Columbidae to Ploceidae. Slate Creek Press, Bolinas, CA.
- Sanz, J. J., J. Moreno, S. Merino, and G. Tomas. 2004. A trade-off between two resource-demanding functions: Post-nuptial moult and immunity during reproduction in male Pied Flycatchers. *J. Anim. Ecol.* 73:441-447.
- Senar, J. C. 1988. Delayed moult in the Siskin *Carduelis spinus*. *Ringing & Migration* 9:91-92.
- Walsberg, G. E. 1983. Avian ecological energetics. Pp. 161-220, in D.S. Farner, J.R. King, and K.C. Parkes (eds.) Avian biology Volume VII. Academic Press, London; New York, NY.
- Yunick, R. P. 1976. Delayed molt in the Pine Siskin. *Bird-Banding* 47:306-309.

## Some Evidence of Winter Site Fidelity in Cooper's Hawks

Alfred D. Knutsen  
Lansing, MI

Thomas W. Carpenter  
3646 South John Hix  
Wayne, MI 48184-1047  
tcarpn1980@yahoo.com

Arthur L. Carpenter  
3646 South John Hix  
Wayne, MI 48184-1047

### ABSTRACT

We report three recoveries of Cooper's Hawks banded in Lansing, MI, that suggest winter site fidelity, and one additional recovery that suggests breeding near the wintering location.

### INTRODUCTION

Cooper's Hawks (*Accipiter cooperii*) commonly breed in urban/suburban environments in the Midwest (Rosenfield and Bielefeldt 1993, Kielb 1994, Rosenfield et. al. 1996, Kapler and Conrads 1997) and are also common winter residents, utilizing prey attracted to bird feeders (Dunn and Tessaglia 1994). However, little is known about Cooper's Hawk winter ecology and behavior, and there is no information on fidelity to wintering areas (Rosenfield and Bielefeldt 1993). Here we report

band recoveries that provide evidence of winter site fidelity.

### METHODS

According to banding records provided by the Bird Banding Laboratory (BBL), Knutsen banded 45 Cooper's Hawks in or near Lansing, MI. With the exception of a single bird banded in 1963, all were banded between 1979 and 1996. Most bandings took place during the period October through March (Fig. 1). Birds were trapped for banding using automatic bownets designed by Knutsen (patented on 24 Jun 1958, Patent # 2,839,867), with European Starlings (*Sturnus vulgaris*) and Rock Pigeons (*Columba livia*) used as lures. Of the 45 banded, females predominated ( $n = 28$ , Fig. 1), with equal numbers of adult and immature females.

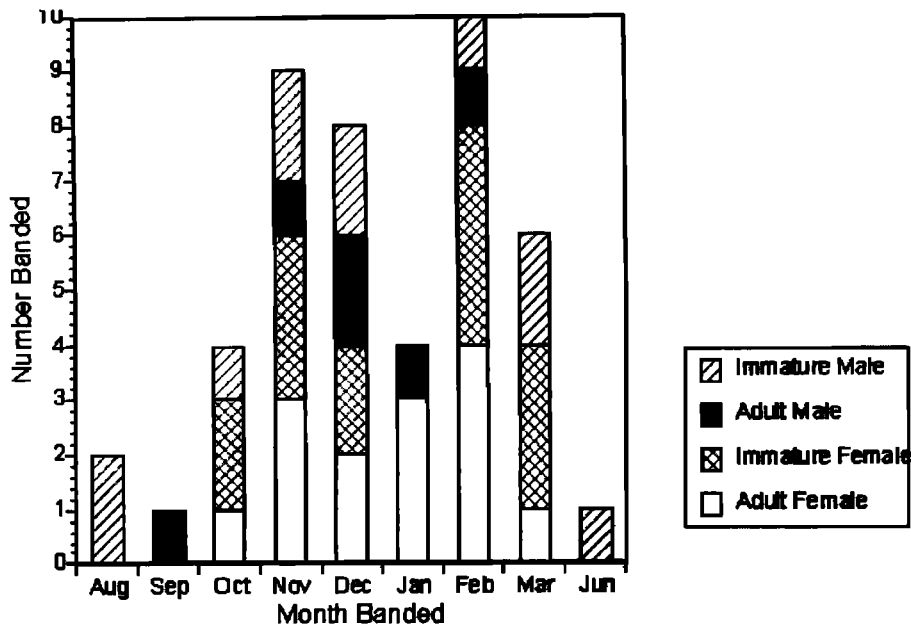


Fig. 1. Age, sex and month banded for 45 Cooper's Hawks banded by Alfred D. Knutsen in or near Lansing, MI.

To date, there have been five recoveries (Table 1), all in Lansing, MI, the same city where originally banded. All recovered individuals had been banded in January, February, or March; three were recovered in a subsequent winter, suggesting fidelity to their wintering area. One adult female was recovered during July, suggesting that she may have bred in the same area where she spent the winter. Rosenfield and Bielefeldt (1993) reported two birds banded as breeders that were recaptured in January within 5 km of their breeding locations. These three records suggest that some individuals winter in the vicinity of their breeding location.

Table 1. Details on Cooper's Hawks Banded and Recovered in Lansing, MI.

Date Banded	Date Recovered	Age and Sex When Banded	
26 Jan 1992	4 Jul 1996	Adult	Female
3 Feb 1995	4 Dec 1995	Adult	Female
24 Mar 1992	2 Mar 1993	Immature	Female
9 Feb 1995	26 Feb 1995	Immature	Female
14 Feb 1994	14 Mar 1995	Adult	Male

Unfortunately, the exact distance between banding and recovery locations cannot be determined because banding locations in the BBL data were recorded only to the precision of a 10-min latitude-longitude block. All recoveries occurred within the 10-min block where banded. The diagonal distance across the 10-min block is approximately 21 km. The city of Lansing, however, encompasses only about 62% of the block, and the maximum diagonal distance across Lansing is 11.6 km. Thus, the recovery locations were likely less than 10 km from the banding location.

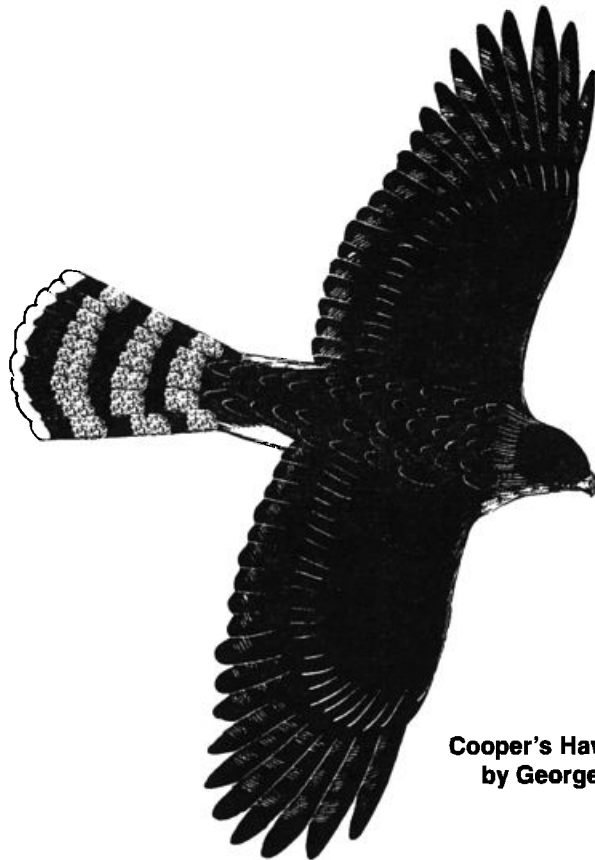
#### ACKNOWLEDGMENTS

We thank the BBL for providing Knutsen's lifetime raptor banding records, which unfortunately, he never published prior to his death in 1997. The two junior authors have taken on the important task of summarizing these records; this is the second publication from them. The first dealt with Knutsen's pioneering banding at Whitefish Point, MI (Carpenter and Carpenter 2000) and includes a brief biography. We also thank Daniel Varland and Peter Lowther for their helpful comments, which significantly improved this paper.

---

## LITERATURE CITED

- Carpenter, A. L. and T. W. Carpenter. 2000. Alfred D. Knutsen: the first hawk bander at Whitefish Point, MI. *Mich. Birds Nat. Hist.* 7(4):197-203.
- Dunn, E. H. and D. L. Tessaglia. 1994. Predation of birds at feeders in winter. *J. Field Ornithol.* 65: 8-16.
- Kapler, J. E. and D. J. Conrads. 1997. Notes on an urban nesting Cooper's Hawk in Dubuque, Iowa. *Iowa Bird Life* 67: 73-77.
- Kielb, M. A. 1994. The population growth and nest cycle of the Cooper's Hawk (*Accipiter cooperii*) in the Ann Arbor area, Washtenaw County, Michigan, 1988-1993. *Mich. Birds Nat. Hist.* 1(2):2-9.
- Rosenfield, R. N. and J. Bielefeldt. 1993. Cooper's Hawk (*Accipiter cooperii*). In *The birds of North America*, No. 75 (A. Poole and F. Gill, eds.). Philadelphia: The Academy of Natural Sciences; Washington, D. C.: The American Ornithologists' Union.
- Rosenfield, R. N., J. Bielefeldt, J. L. Affeldt, and D. J. Beckmann. 1996. Urban nesting biology of Cooper's Hawks in Wisconsin. Pp. 41-44 *In Raptors in human landscapes* (D. M. Bird, D. E. Varland, and J. J. Negro, eds.). London: Academic Press. Raptor Research Foundation, Inc.
- 



Cooper's Hawk  
by George West