

WINTERING LOCALITIES OF COOPER'S HAWKS NESTING IN NORTHEASTERN OREGON

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Abstract.—Cooper's Hawks (*Accipiter cooperii*) nesting in northeastern Oregon winter in western Mexico. Four Cooper's Hawks (2.3%) were recovered from among 174 banded between 1974 and 1979. The second year bird shot in Guerrero, Mexico, is one of the southernmost records for the species.

LUGARES EN DONDE PASAN EL INVIERNO INDIVIDUOS DE *ACCIPITER COOPERII* QUE ANIDAN EN EL NORESTE DE OREGON

Sinopsis.—Individuos de *Accipiter cooperii* que anidan en el noreste de Oregon, pasan el invierno en el oeste de Mexico. De un total de 174 aves anilladas entre 1974 y 1979, cuatro (2.3%) fueron recobradas en Mexico. Un ave de dos años que fue cazada en el estado de Guerrero, es uno de los informes más al sur para la especie.

This paper documents wintering localities of nesting Cooper's Hawks (*Accipiter cooperii*) banded in the Blue and Wallowa mountains of northeastern Oregon from 1974 to 1979. Prior to this study few Cooper's Hawks were banded in Oregon and little was known about their migratory characteristics. Gabrielson and Jewett (1940) considered the species a regular permanent resident throughout Oregon. The lifespan (maximum 10.5 yr, Klimkiewicz and Fitcher 1989) of the banded cohort is now believed completed; therefore, this analysis seems timely.

STUDY AREA AND METHODS

The study was conducted within and around Wallowa-Whitman National Forest between 45° and 46° north latitude at 500–1600 m elevation in the Blue Mountain province of Oregon. Franklin and Dyrness (1973) and Hall (1973) describe the physiognomy of this province and climatic conditions of the various forest types.

During a six-year nesting study, 174 Cooper's Hawks of three age classes were banded: adults (49 male, 24 female), second year (11 male, 6 female), and hatch year (84 not sexed). The age of Cooper's Hawks was estimated by plumage (Mueller et al. 1981). Using the terminology of Palmer (1972), hawks during the nesting season (excluding those produced that nesting season) were lumped into only two age or plumage classes: (1) Juveniles (in second calendar year of life), which were beginning to molt and grow Basic Plumage, and (2) birds in Basic Plumage, which generally included an entire new feathering, although some could have been further split into a Basic 1 (in third calendar year of life) because they retained a few juvenal feathers due to an incomplete molt. However, to simplify the presentation, the two age classes were called

second year and adults. Sex was determined by an examination of standard measurements as explained for accipiters by Mueller et al. (1976, 1981), but see Henny et al. (1985). Nestlings were not sexed.

Adults and second year birds were captured at nest sites with Dhogaza nets using a stuffed Great Horned Owl (*Bubo virginianus*) (Hammerstrom 1963) and a tape recorder or in forest openings along logging roads with Bal-chatri traps baited with two live starlings (*Sturnus vulgaris*) (Berger and Mueller 1959). Hatch year birds were banded in the nest prior to fledging.

RESULTS AND DISCUSSION

Four Cooper's Hawks (2.3%) were recovered from the 174 banded during this study, excluding birds retrapped in the study area during subsequent nesting seasons. The three recoveries in the fall-winter were all from western Mexico (Table 1). The adult female from Sinaloa might have been still migrating when shot (22 Sep.) and the migratory status of the hatch year bird found dead (20 Oct.) in Sonora is uncertain; it might have been dead for some time before found. Hoffman (1985) reported the peak Cooper's Hawk migration period in the Goshute Mountains of eastern Nevada occurred in mid- to late-September and was minimal after 15 Oct. He further noted that adults tended to migrate slightly later than hatch year birds. Only limited migration data are available from other locations in the west, but the Goshutes' observation site is about 600 km south and 200 km east of the study area and probably reflects the timing of migration for Cooper's Hawks from northeastern Oregon. The second year bird shot (12 Nov.) while preying on domestic poultry in Guerrero was probably on its wintering grounds. The nearly 7-year old found dead (8 May) near Boise, Idaho (south and east of study area) was dehydrated and had been dead for some time according to the person reporting the band. It probably died during spring migration. Cooper's Hawks in the Oregon study area lay eggs in May (Henny et al. 1985).

The band recovery data from this study suggest that Cooper's Hawks from northeastern Oregon (including all age classes) winter in western Mexico—perhaps from Sonora south to Guerrero although the Sonora and Sinaloa birds might have been migrating at the time of death. Migrants banded at Hawk Cliff, Ontario, yielded 11 recoveries during the nonbreeding season with none south of the United States and the southernmost record from Louisiana (Duncan 1981).

Hellmayr and Conover (1949) report Cooper's Hawks wintering from the northern United States south to Mexico and Guatemala, occasionally even to Costa Rica (El Mojon) and Colombia (Colonia Agricola de Sumapaz); the Colombia record being from a bird banded in Manitoba (Cooke 1941). Land (1970) records the species as a rare transient and winter visitor in Guatemala. Blake (1977) added a site record from Honduras. Friedmann et al. (1950) reported the Cooper's Hawk as a widespread winter visitor in Mexico including the southernmost states: Baja

TABLE 1. Recoveries of Cooper's Hawks banded in northeastern Oregon.

Band number	Date banded	Age/sex	Date recovered	How obtained	Where recovered
585-66485	19 Jul. 1976	HY unknown	12 Nov. 1977	Shot	20 km E Zihuatanejo, Guerrero, Mexico
745-30901	8 Jul. 1977	Adult female	22 Sep. 1978	Shot	Sinaloa Leyva, Sinaloa, Mexico
585-66498	19 Jul. 1978	HY unknown	20 Oct. 1978	Found dead	80 km W Obregon, Sonora, Mexico
585-66479	13 Jul. 1976	HY unknown	8 May 1983	Found dead	10 km E Boise, Idaho

California, Sonora, Sinaloa, Jalisco, Colima, Guerrero, Oaxaca, Chiapas, Chihuahua, Aguascalientes, Guanajuato, San Luis Potosi, Hidalgo, Nuevo Leon, Tamaulipas, and Veracruz. Thus, the Cooper's Hawk banded in Oregon and later shot at the small village of La Baqueta, 20 km east from Zihuatanejo, Guerrero, a seaport on the Pacific Ocean, is one of the southernmost records for the species.

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