



Breeding of Cooper's Hawk (*Accipiter cooperii*) in Oaxaca, Mexico

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Resumen

Anidación de *Accipiter cooperii* en el Estado de Oaxaca, México

Accipiter cooperii se ha encontrado anidando en la zona central del estado de Oaxaca, a poco más de 1000 km al sureste de donde anteriormente se creía que era el límite sur de su área de anidación.

Palabras clave: *Accipiter cooperii*, Oaxaca.

Summary

Cooper's Hawk (*Accipiter cooperii*) has been found nesting in central Oaxaca, slightly more than 1000 km southeast of what was previously thought to be the southernmost breeding area for the species.

Key words: Cooper's Hawk, Oaxaca

Resume

Épervier de Cooper reproducteur dans l'état d'Oaxaca, Mexique

Un nid actif d'Épervier de Cooper a été trouvé dans le centre de l'état d'Oaxaca, à plus de 1000 km au sud Est de l'aire de reproduction connue pour cette espèce.

Mots clés: Épervier de Cooper, Oaxaca.

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Cooper's Hawk (*Accipiter cooperii*) has not been known to nest previously in Oaxaca. Binford (1989) records the species in central Oaxaca only as a rare winter resident. Howell and Webb (1995) map it as nesting south to southern Durango. Rosenfield and Bielefeldt (1993) indicate nesting slightly farther south, into northern Nayarit. Earlier authors (Peterson and Chalif 1973, Edwards 1989) had the species nesting farther south yet, to Michoacán. Howell and Webb's text and map indicate possible nesting in Guerrero. I mentioned the possibility of nesting in Oaxaca for this species, based on my observations of 1997 and 1998, in my booklet on the birds of central Oaxaca (Forcey 1998). Hunn et al. (2001) also mention breeding season sightings of this species in Oaxaca.

Methods

The following data was collected in central Oaxaca as part of my own observations of the birds of that region, carried out over the years 1995 to the present. These observations were made as I had opportunity to be in the field. Map coordinates and elevations were read from INEGI maps 1:50000 scale. Elevations are given in meters above sea level.

Observations

On June 16, 1997 a single adult *A. cooperii* was seen harassing a soaring *Buteo jamaicensis* and giving repeated *keh-keh-keh* calls at a location on the road between San Gabriel Etla, Etla District, Oaxaca and the town of La Guacamaya, Ixtlan District, Oaxaca (17°10'N, 96°40'W, at 2250 m elevation). On June 12, 1998, within 200 m of the first location, a single adult *A. cooperii* was seen in a small riparian grove of alder (*Alnus acuminata* Betulaceae) trees and heard giving *keh-keh-keh* calls, presumably in response to my presence. On April 4, 1999, in the same location as the 1998 observation, a single bird was seen which gave several, separate, low *keh* calls at my presence. This bird was also seen later chasing another large raptor through the forest, which I thought possibly another *A. cooperii*. On May 18, 2001 an adult *A. cooperii* at the same location gave several quiet *keh-keh-keh* calls from a perch at my presence, and another unseen bird was heard responding from nearby.

A nest was finally located on May 22, 2001, about 12 m up in an alder tree growing along a small stream of water. These alders form small riparian groves in what is otherwise extensive pine-oak woodland with small adjacent meadows. The nest could only be seen from below, from where it appeared as a platform of small sticks



supported in the fork formed by two larger, inclined limbs of the alder tree. Downy white feathers appeared to be scattered over the nest material. Size of nest was difficult to judge, but I estimated it at about 50 to 60 cm in diameter, not counting some protruding nest material. On this and subsequent visits to the nest, the female bird was quite nervous, refusing to stay at the nest until I was out of sight. On the first visit she finally settled on the nest after poking about in it with her bill. I thought that she was incubating eggs, as also on June 7. On this last date the male flew to near the nest, after which the female left the nest and flew to him. I believe they then became aware of my presence as the female left and the male flew to several perches nearby, apparently trying to get a better view of me. On June 19 a single downy chick could just barely be seen as it moved about with difficulty in the nest. I judged it to be about 6 to 8 days old at that time. On June 30 I was able to see two nestlings. Also, directly below the nest, I was able to collect a sizeable fragment of a broken egg shell along with a single primary feather which I thought likely to have come from the attending female. On July 13 the nestlings were quite well developed, one obviously more so than the other. The larger nestling moved out of the nest onto a branch when it became aware of my presence nearby, and I judged that it was near to fledging. Because of continued nervousness of the adult female at the nest, I thought it would be best not to continue visits after that date.

In addition to these observations at the Guacamaya road site, I have several other records of this species that could pertain to breeding birds. I have recorded this species on May 16, August 3, and August 26 soaring over oak scrub at the San Felipe Ecological Park north of Oaxaca City (17°10'N, 96°40'W, elevations 1800 to 2000 m). The individual seen on August 26 was an immature bird. Single birds were seen in disturbed arid subtropical scrub near the Monte Albán archaeological site (17°0'N, 96°50'W, at 1800 to 1900 m elevation) on April 4 and August 23. The individual seen on April 4 was harassing a *Bubo virginianus*, chasing it when it flew. A single *A. cooperii* was seen at an arroyo in arid subtropical scrub above the town of Rojas de Cuauhtémoc (17°0'N, 96°40'W, 1700 m altitude) on May 25. On June 16 a single bird was seen just south of Teotitlán del Valle (17°0'N, 96°30'W, 1650 m elevation). On May 29 and August 4 individual birds were seen east of the same town (17°0'N, 96°30'W, 1650 m elevation). Habitat in both of these Teotitlán locations is disturbed arid subtropical scrub.

Description

That the birds at the Guacamaya road site were accipiters was indicated by their size and shape. They were smaller than most area *Buteo* species, and their short wings and long tails separated them from those species with

which their size might be comparable. Habitat, usually in forest interior, also was indicative of the *Accipiter* genus. Smaller size and the rusty barring on the under parts indicated either *A. cooperii* or *A. striatus*. *A. gentilis* is not mapped in the area in Howell and Webb (1995), and color of the adult birds is quite different than that of the two smaller species of the genus.

A. striatus has previously been considered a breeding species in central Oaxaca while *A. cooperii* has not. Good views were difficult to obtain of the adult birds, but over the several visits made to the nest I was able to observe several points which I believe indicate with certainty the identification of these birds and establish that they were not *A. striatus* (see Kaufman 1990). The tail of the female bird on the nest extended past the nest rim, while her beak rested on the inner rim, and I estimated her length to be about 40 cm long, perhaps slightly longer. In a good view of the male as seen from below, the tail was rounded and graduated below. Also, the individual retrices had rounded corners. In a brief, clear view of the head of the male from the side, I was able to see that the dark crown contrasted markedly with the gray nape. On the last visit I was able to see distinct, dark breast streaks on the older of the two immatures. The second immature had not developed enough to show these markings but appeared mostly white below with some dark blotching on the upper breast. On this same occasion I was able to see the upper side of the spread tail of the larger immature bird. It showed a wide light terminal band that I estimated to be about two cm in width. The egg fragment appeared to be between a third to half the original length of the egg. The color inside is a light greenish blue. Outside it shows the same color but faded almost to white and blotched with brownish marks that I presume to be dried blood. I estimated its original size to be about 38 x 48-50 mm, although actual width was slightly smaller, and length was necessarily a rough estimate. The feather measured 232 mm from tip to tip. I sent photos of this feather to Héctor Gómez de Silva who was able to compare them to specimens in the collection of the Universidad Autónoma de México. He determined that the feather was an inner primary of *A. cooperii*.

Discussion

The first four observations at the Guacamaya road site were all of birds behaving as if nesting in the area. Vocalizations typical of nesting birds, paired birds, defense of territory against a *B. jamaicensis*, and site fidelity to nesting area over several seasons all were indicative of nesting at this site.

Besides the definite observations of nesting at the Guacamaya road site, others of the above observations, such as the immature bird seen above San Felipe Ecological Park in August and the aggressive behavior toward a potential predator at Monte Albán on April 11,



hint at breeding in central Oaxaca. Hunn et al. (2001) also mention an August immature in their study area in the southern mountains of Oaxaca. August immatures would be in accord with my observation of probable fledging in mid to late July.

Taken together, breeding season observations of Cooper's hawk in central Oaxaca show the species at elevations from 1650 to 2250 m, utilizing not only pine-oak habitat (Guacamaya, San Felipe Park), but also, and somewhat surprisingly, arid subtropical scrub (Rojas de Cuauhtémoc), and this mixed with areas intermittently cleared for agriculture (Monte Albán, Teotitlán). Possibly these more open areas are visited by hunting birds while actual nesting takes place elsewhere. Habitat of the only identified nest site is typical for the species in other parts of its range according to Rosenfield and Bielefeldt (1993).

The above data indicate the presence of this species in central Oaxaca as a breeding bird, more than

1000 km southeast of its breeding range as shown in Howell and Webb (1995). Further, indications are that breeding is widespread and ongoing. This is not a single unusual occurrence. Erickson and Hamilton (1993) correctly comment on the comparative lack of ornithological study during the summer months in Oaxaca. Presumably this, along with the species' known secretive habits, explains why the Cooper's hawk has not been previously recorded as breeding so far south.

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