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MICHAEL R. MILLER, ROBERT M. MCLANDRESS, AND BETTY JEAN GRAY, *Division of Wildlife and Fisheries Biology, University of California, Davis, California 95616. Present address of first author: U.S. Fish and Wildlife Service, Division of Ecological Services, 2800 Cottage Way, Sacramento, California 95825.* Accepted 2 Jul. 75.

First Ovenbird specimens from Arizona.[1]—Phillips et al. (1964, The birds of Arizona, Tucson, University of Arizona Press), listed the Ovenbird (*Seiurus aurocapillus*) as hypothetical with only one sighting (Walnut Grove, Yavapai County) for the state. The two specimens listed here are the first reported for Arizona.

The first specimen of an Ovenbird for Arizona was taken by E. L. Smith on 17 June 1968, near Pioneer Pass Road, 1.5 miles southeast of Pinal Mountain, Gila County. This specimen (University of Arizona No. 9221) was an adult male (testes: L. 5 × 7 mm, R. 6 × 6 mm; skull: ossified; fat: light amounts; plumage: rectrices molting). The specimen was tentatively identified by A. R. Phillips as *S. a. cinereus*. E. L. and J. A. Smith also saw an Ovenbird along Sycamore Creek, near Sugarloaf Mountain, Maricopa County, 22 September 1974.

The second Arizona specimen, collected by R. R. Johnson, was an immature female (MNA No. Z8.4136) (skull: not ossified; fat: light amounts; weight: 12.9 g) in the Grand Canyon near the confluence of Bright Angel Creek with the Colorado River, Coconino County 14 September 1974. This specimen was identified by Roger Clapp of the National Fish and Wildlife Laboratory as being "indistinguishable from a fall series of *S. a. aurocapillus*." The bird was discovered by D. S. Tomko in a small cottonwood (*Populus fremontii*) thicket at the River Ranger Station. Although Bright Angel Creek is less than 50 m away, the bird centered its activities around a small shaded pool of water created by an air conditioner and could not be induced to move more than 15 or 20 m away. This bird was seen at the same place by Park Rangers Stan Stockton and Mary Langdon, for 3 days prior to its collection.

Although the bird apparently had been at the Grand Canyon site for a period of time sufficient to regain weight lost (possibly by straying from its migration route) its 12.9 g weight is low. Ovenbirds from Ontario (Hussell 1969, Auk 86: 75–83) weighed 19.6 g during migration and a weight of 19.6 g was recorded for wintering Ovenbirds in the Panama Canal Zone (Oniki 1972, Condor 74: 209–215). As no evidence of disease was found in the specimen, it was possibly experiencing severe nutritional stress.—R. R. JOHNSON, L. T. HAIGHT, *National Park Service, Grand Canyon, Arizona*; E. L. SMITH, *Arizona State University, Tempe; and* D. S. TOMKO, *Museum of Northern Arizona, Flagstaff.* Accepted 30 Jul. 75.

Cooper's Hawk hunting in the city.—Near noon on 3 March 1974 I saw a female Cooper's Hawk (*Accipiter cooperii*) hunting under most unusual circumstances, unusual in both the technique the hawk used and the habitat hunted. While driving west on Market Street in the city of York, Pennsylvania, a flock of Rock Doves (*Columba livia*) flying in a tight formation caught my eye. They were maneuvering in an evasive zigzag manner typical of frightened birds. Looking above them I saw a Cooper's Hawk (later identified as a female on the basis of large size and plumage) gaining altitude. She plummeted into the flock, which then separated somewhat, and she exited below it with no prey. I cannot say for certain whether she struck prey (I was then busy avoiding traffic and getting the car to the curbside), but she did

[1] Grand Canyon National Park Colorado River Research Series Contribution No. 6.

not appear to. The flock immediately tightened up and resumed the avoidance type flight, looking much like a flock of "peeps" flying along the shore. They made no attempts to land on the edge of a nearby department store or on a silolike structure where flocks of doves frequently loaf. The hawk regained altitude above the flock and made a second pass into it. This time she came out below the flock with a dove hanging limp in one foot. The hawk's flight was noticeably labored. She descended and landed in a grassy spot within a fenced fairgrounds. She did not mantle the kill but immediately began plucking the bird and feeding. I passed by about 40 min later and she was just finishing her meal. Her distended crop was conspicuous even from a distance.

I find no record in the literature of Cooper's Hawk hunting in quite this manner. The more usual method appears to be for the hawk to attempt outflying a single prey individual, be it birds or bats (Brimley 1889, Oologists' Semi-annual 1: 32; Leopold 1944, Wilson Bull. 56: 116), in a short sprinting pursuit. Mead (1963, Condor 65: 167) saw a Cooper's Hawk twice strike a domestic pigeon in the air, after which the prey dropped to the ground. Although the hawk stooped on its prey, there was only a single individual being attacked, and the hawk did not bind to the prey but recovered it from the ground.

The habitat also seemed unusual for it is nearly totally commercial and residential developments well within the city. The open grassy fairground field is the only habitat in the vicinity that is anything like what one would expect to find a Cooper's Hawk hunting. The hawk appeared to be a migrant moving through and making an opportunistic kill (Haugh (1972, Search 2, Publ. Cornell Univ. Agr. Exp. Station) reports the earliest Cooper's Hawk migrants as 7 March at Debry Hill 235 air miles north of York).—RICHARD J. CLARK, *Department of Biology, York College of Pennsylvania, York, Pennsylvania 17405.* Accepted 9 Jul. 75.

Sun compass utilization by pigeons wearing frosted contact lenses.—Previous experiments (Schmidt-Koenig and Schlichte 1972, Schlichte 1973, Schmidt-Koenig and Walcott 1973) have shown that pigeons wearing frosted contact lenses may home even though their image vision is so drastically reduced that they cannot recognize landmarks at 6 m distance (Schlichte 1973). The experimental results have suggested that the navigational component of the homing process is not affected by reduced vision, which would mean it is based largely, if not exclusively, on nonvisual information. The published results have not provided any indication whether one visual cue, the sun compass (which we regard as distinct from the navigational or "map" component), might still be used by pigeons wearing frosted lenses. It is this question that we have sought to answer in the experiments reported here.

The experimental birds for the first series of test releases were clock-shifted 6 h clockwise by being confined at least 4 days in light-tight rooms with timer-controlled artificial lights turned on 6 h before sunrise and off 6 h before sunset, as previously described in more detail (Schmidt-Koenig 1961, 1972; Keeton 1969). Control birds, drawn at random from the same flocks and thus having identical previous training and experience, were confined for the same period in similar rooms, except that the artificial lights were turned on and off in synchrony with sunrise-sunset. The test releases were conducted during the overlap period between the experimental birds' day and the true day.

Several hours prior to the release, both control and experimental birds were fitted with frosted contact lenses. These lenses, made of plastic, were manufactured as described by Schlichte (1973). Because such lenses have the disadvantage of usually remaining in the eyes of the pigeons until removed by the experimenter, we have more recently developed lenses made of gelatin that dissolves after several hours, thus enabling lost birds to regain their sight. We report the present results now, though they are still somewhat scant, because these will be our last such tests with the old type lenses.

Four experimental releases with clock-shifted birds are reported here; several releases conducted on very windy days—4 Beaufort or higher—are not included but will be mentioned in a paper dealing with the effects of high wind on pigeons wearing lenses. Three of the releases, involving 46 experimental birds and 34 controls, were conducted with Cornell pigeons: 19.3 km E (29 August 1972), 23 km W (30 August 1972), and 73.5 km N (5 September 1973) of the Cornell lofts. One release utilized pigeons (23 experimentals and 37 controls) from the loft in Frankfurt, Germany: 13.8 km N of the Frankfurt loft (15 August 1973). In each case, the pigeons were released individually, and were tracked with 10 × 50 binoculars until they vanished from sight; the vanishing bearings were recorded to the nearest 5 degrees.

The vanishing bearings from the four releases are shown in Fig. 1, pooled according to the format regularly used by Schmidt-Koenig (e.g. 1961); i.e. the mean bearings for each of the four groups of control birds have been set to 0° and the bearings of the clock-shifted birds have been plotted relative to the means of the controls.

Homing success was recorded in the usual manner. Experimental birds that homed with one or both lenses lost en route were excluded from the scoring of homing performance.