



Fig. 2. Three Pygmy Nuthatches remaining motionless near nest in presence of chipmunks at base of tree.

of the three (fig. 2). I continued to move closer until all flew away. I sat in the car. In five minutes all four were again in position on the trunk about five inches apart where they stayed for another twenty minutes. When one flew away, the remaining three all fluttered their wings as do females awaiting being fed by the male.—DON BLEITZ, *Los Angeles, California, January 9, 1951.*

Red-tailed Hawk Captures Cottontail Rabbit.—Several years of random observations of wildlife on the Santa Rita Experimental Range near Tucson in south-central Arizona have rarely given opportunity to watch the visual predation of Red-tailed Hawks (*Buteo jamaicensis*), although these birds are fairly abundant. Considerable circumstantial evidence of predation is available in the form of skulls, bones, and other remains about nests or roosting places. Some of these records, however, may be the result of eating carrion rather than prey. Accordingly, an observation of actual details of capture of prey by the Red-tailed Hawk seems worth recording.

The pursuit and capture of a cottontail (*Sylvilagus auduboni*) was observed on December 19, 1950, about 3:30 p.m. While driving slowly along an abandoned road, I saw a Red-tailed Hawk perched about 12 feet off the ground in a mesquite tree some 40 feet away. The bird was evidently so concerned with watching an animal that the presence of the automobile caused no alarm. Before the car could be stopped the hawk swooped down on a cottontail rabbit which apparently was resting beneath another mesquite about 15 feet away. The rabbit dashed toward another mesquite about 10 feet distant, reversed directions around this tree, and then crossed a small clearing, running for the shelter of a hackberry bush. The hawk at all times was in close pursuit and was never more than two feet off the ground. Wing tips touched the ground and shrubbery several times. The maneuvers of this particular broad-winged hawk were similar to those characteristic of the Cooper and Sharp-shinned hawks.

The cottontail was captured by the hawk after a chase of about 50 feet. One foot clutched the shoulder region of the back; the other held the hindquarters, and balance was maintained with the wings. The hawk had no difficulty holding the rabbit, although it was mature and weighed about

two pounds. The cottontail was killed by a few sharp stabs of the beak into the postorbital region of the head. The hawk was so intent upon killing the cottontail that it was not frightened until the observer came within 10 feet of the scene of the killing. Even when flushed, the hawk was reluctant to leave the area and would fly only 50 to 100 feet at a time when pursued.—HUDSON G. REYNOLDS, *Southwestern Forest and Range Experiment Station, Tucson, Arizona, December 20, 1950.*

Notes on the Nomenclature of the Brown Jay.—Hellmayr (Cat. Birds Amer., pt. 7, 1934:15, footnote 1) stated that the ventral coloration of the Brown Jay (*Psilorhinus morio*) varied so widely over the entire geographic range of the species that it was of no advantage to split the species into a northern and a southern race. At the same time he admitted that dark-bellied variants were "rather more predominant" in southern Veracruz. Brodtkorb (Misc. Publ. Mus. Zool. Univ. Mich., No. 55, 1943:71) noted variation in the ventral coloration of nine specimens from southern Veracruz and Tabasco and stated that several of them were paler below than a single bird from Tamaulipas. Fifty-five specimens of *P. morio* from the Robert T. Moore collection and from the United States National Museum show variation in ventral coloration along a north-south cline. Thirteen specimens from Nuevo León and Tamaulipas are noticeably pale ventrally. Specimens from southeastern San Luis Potosí, Puebla, Veracruz, Oaxaca, and Chiapas are mainly darker below than the northern birds. Although some of these specimens approach the northern birds in the pallor of their ventral coloration, 14 out of 15 specimens from southern Veracruz, northeastern Oaxaca, and Chiapas are uniformly darker below. The terminal populations of this cline are thus readily separable. This agrees with the findings of Wetmore (Proc. U. S. Nat. Mus., 93, 1943:296-297), and his conclusion that there are two recognizable subspecies of *Psilorhinus morio* seems justified.

A second character which shows a clinal pattern of variation is the intensity of the bluish, or glaucous, sheen on the outer webs of the rectrices, visible under certain conditions of illumination. This character was noted by Ridgway (Bull. U. S. Nat. Mus., 50, pt. 3, 1904:299) but has apparently not been used in the taxonomy of this species. Of 30 specimens taken between Nuevo León and a point five miles north of Jalapa, Veracruz, only one specimen lacks this sheen. Of ten specimens taken at various localities between Jalapa and Orizaba, Veracruz, three lack the sheen. Of fifteen specimens taken southeast of Orizaba in the states of Veracruz, Oaxaca, and Chiapas twelve have the bluish sheen absent or reduced to a mere trace.

Van Rossem (Bull. Mus. Comp. Zool., 77, 1934:415-416), while recognizing two races of *P. morio*, synonymized *Psilorhinus morio fuliginosus* (Lesson), the name which up to that time had been applied to the dark-bellied southern birds. This he did on the grounds that the type of *Pica morio* Wagler, presumably collected by Deppe at Jalapa, Veracruz, was an example of the dark southern race, to which he therefore applied the name *Psilorhinus morio morio* (Wagler). The pale northern population, left nameless by his action, he named *P. m. palliatus*. Van Rossem's action seems unwarranted. He stated that "Other specimens definitely from Jalapa, which have been examined in the present study, belong to the northern and interior race" (*op. cit.*:415). Therefore he concluded that Deppe's specimen was collected not at Jalapa but "much more probably at an altitude considerably below the town" (*loc. cit.*), a purely conjectural statement. The Moore collection contains an adult female taken five miles north of Jalapa, 4450 feet, on March 22, 1939. This bird is definitely dark below. Since the town of Jalapa is at an elevation of 4423 feet, it seems likely that specimens taken at Jalapa and five miles north of Jalapa pertain to the same population. Therefore, if van Rossem's identification of his known Jalapan material was correct, the population at and near Jalapa includes variants toward both the northern and southern races. This implies that Wagler's type of *Pica morio* may have come from an intermediate population at Jalapa. Further, the rectrices of the specimen taken five miles north of Jalapa are strongly and extensively bluish, and in this character the specimen is more similar to birds from the north than to those from the south.

In view of the clinal nature of the variation in the ventral coloration of *P. morio*, the wide variability of this coloration over most of the range of the species, and the apparent presence of both dark and pale variants in the population at the type locality of *Pica morio*, it seems proper to assume that Wagler's type came from an intergrade population. *Psilorhinus morio morio* could thus properly be applied to the northern populations and *Psilorhinus morio fuliginosus* to the southern.

Assignment of ranges to the two races of *P. morio* on the basis of the variation in ventral coloration is of necessity arbitrary. On the basis of the variation in the coloration of the rectrices *P. m. morio*