

THE GREAT-TAILED GRACKLES OF THE SOUTHWEST

By ALLAN R. PHILLIPS

Since 1913, a general northward invasion of Great-tailed Grackles has taken place in southern Arizona, New Mexico, and adjacent parts of southwestern Texas and northern Mexico. Two distinct races are involved, and the future will probably produce mingling of these races. Ornithologists should make careful observations and collections, especially of females, as this unusual situation develops.

One of the races involved is *Cassidix mexicanus nelsoni* (Ridgway) of Sonora (Phillips, 1940; Huey, 1942); the other has been in doubt. As early as 1934, van Rossem (1934:476) called attention to the small bills of four males from the city of Chihuahua; he had seen no females. Lowery (1938) was likewise handicapped by paucity of specimens from the plateau when he described the bird of the Texas lowlands. Since then, thanks largely to the discriminating collecting of Gale Monson and of A. E. Borell, a number of females have been taken in the upper Rio Grande valley and vicinity. These show that the birds of the northern plateau of Mexico resemble most closely the nominate race and are more distinct from the paler races of the adjacent coastal lowlands. They may be known as

Cassidix mexicanus monsoni, new subspecies

Type.—Adult female, no. 706, collection of Allan R. Phillips, taken near San Antonio, Rio Grande Valley, New Mexico, April 3, 1942, by Gale Monson, field no. 182.

Diagnosis.—A large grackle with dark-plumaged female and with iris broadly straw-white in both sexes; closely similar to *C. m. mexicanus* (Gmelin) of the coastal lowlands of eastern Mexico (type locality Vera Cruz), but with distinctly less massive bill and apparently more slender tarsus. Adult female darker on head and underparts and more constantly brownish on chest than in *C. m. prosopidicola* Lowery (1938), and bill somewhat more slender. A decidedly larger, longer-tailed bird than the now geographically adjacent *C. m. nelsoni* (Ridgway) of central southern Arizona and Sonora (type locality Alamos), with decidedly darker female, the breast and belly in unfaded plumage being dark brownish gray instead of pale brownish buffy.

Range.—Originally, the plateau of central northern Mexico, at least in Chihuahua, in recent years breeding northward to north-central New Mexico and (presumably this race) the Gila Valley in eastern Arizona; ranges east to western Texas (Brewster County) and west to southeastern Arizona (casually to Benson, San Pedro valley, and even to near Randolph, Pinal County). Winters sparingly along the Rio Grande from Juarez, Chihuahua, north to at least the Bosque del Apache refuge near San Antonio, New Mexico, and even in Arizona (Pinal County, and Thatcher, Graham County); main winter range unknown, presumably in southern Chihuahua.

Age differences in males appear more pronounced in *Cassidix* than are the slight differences between races and species. My comparisons were made, therefore, principally with females. While age differences in females are less obvious, they seem to be of some importance also. Study of the series of female *monsoni* indicates that adults may often be distinguished (up to May or June) by their more steel-blue, iridescent wing-edgings and coverts, broader rectrices and remiges and primary coverts (particularly the proximal webs of the latter, which are also dark to their tips), and darker coloration below on sides, flanks, tibia, malar region, and cheeks; they have less pronounced pale superciliary stripes and sometimes even an admixture of dusky in the throat and under parts. They show less feather wear (month for month) than do first-year females, and their ovaries enlarge earlier. I did not succeed in determining the age of all of the female *monsoni* examined, however, and autumn females of known age are badly needed. With males there is no difficulty in determining age, as adults are more iridescent on the breast, sides, anterior flanks, and back, the feathers of these parts having broad pur-

plish edgings; adults also have more iridescent (bluish) rump and tail, broader and more rounded rectrices and tertials, and distinctly blacker (less brownish) tibial feathering than do young birds, and they are larger.

Measurements of Races of *Cassidix mexicanus* in Millimeters

	Length (flesh)	Wing (chord)	Tail	Bill from nostril	Depth of bill at nostril
Females					
4 adult <i>monsoni</i>	360±-362	147.0-151.5 (148.4)	157.6-165.0 (161.1)	24.1-26.2 (24.9)	9.6-10.5 (10.0)
6 first-year <i>monsoni</i>	339-343	140.0-146.3 (143.2)	140.2-151+ (146.5)	23.3-25.4 (24.4)	9.7-10.6 (10.0)
8 <i>prosopidicola</i>	355-374	141.4-149.6 (146.3)	135.0-155.8 (142.9)	22.3-26.9 (24.3)*	10.0-11.0 (10.6)*
9 <i>mexicanus</i>		142.3-154.5 (148.3)	138.3-158.0 (148.7)	24.0-28.5 (25.9)†	10.7-11.6 (11.1)†
12 <i>nelsoni</i>	317+ -324+; 338	124.2-140.0 (132.5)	116+ -134.0 (124.2)	20.9-27.4 (23.0)	8.5-11.1 (9.6)
Males					
3 adult <i>monsoni</i>	473	186.4-192.0 (188.6)	217.0-225.0 (219.8)	31.8-34.8 (33.5)	12.5-12.9 (12.7)
6 first-year <i>monsoni</i>	425-426+	174.0-179.5 (177.0)	176.5-200.5 (191.5)	28.6-32.6 (30.8)	11.8-12.6 (12.2)
2 adult <i>nelsoni</i>	391	164.3-177.8 (171.0)	166.0-185+ (175.5)	29.1-31.5 (30.3)	11.6-11.7 (11.6)
5 first-year <i>nelsoni</i>	365+ -392	160+ -167.5 (163.3)	142+ -163.0 (153+)	25.6-28.5 (27.0)	11.4-12.1 (11.7)

*18 specimens.

†10 specimens.

For additional measurements of *mexicanus* and *prosopidicola* see Lowery (1938).

It will be noted that the relatively long tail and dark female of *monsoni* are in distinct contrast to the clines toward small size and pallor toward the north along both coasts of Mexico.

The eastern limits of *monsoni* are not clear, as no birds from the Pecos valley have been examined. Old specimens from Fort Clark, Texas, and eastward are *prosopidicola*. To the west, while no *monsoni* have yet been taken near Tucson, a female taken there on January 31, 1945, closely resembles *C. m. graysoni* except for its slender bill; it is probably an intergrade between *nelsoni* and *monsoni*. To the south, the range of *monsoni* is apparently quite restricted. A female from Las Delicias, southern Coahuila, while very worn, is almost as pale as *nelsoni*; it is very close to *prosopidicola*, although a little large, long-tailed, and perhaps a bit paler. Two females from San Luis Potosí in the Sanford collection are also pale but are very small and short-tailed. If these are really *prosopidicola*, the range of that race is almost or entirely divided by the tongue of *mexicanus* that now extends north to at least Linares, Nuevo León. Indeed, a female from 20 miles north of Monterrey, while nearest *prosopidicola*, is darker and browner than average, thus approaching either *mexicanus* or *monsoni*.

The range currently ascribed to *C. m. mexicanus* seems to be too large. Three females from Guatemala (Panajachel and Finca Carolina) are only slightly browner than *prosopidicola*, being decidedly paler than birds from the eastern lowlands of Mexico. Inland, *mexicanus* appears to reach the edge of San Luis Potosí (Tamazunchale), al-

too, agree closely with *mexicanus* except for an unusually short and stubby bill, and I judge it to be a straggler or pioneer from the south.

The range of *C. m. mexicanus* would thus appear to be restricted to the lowlands of eastern Mexico, from southern Nuevo León and southern Tamaulipas south at least to Chinchorro Bank, Quintana Roo; it has extended north (casually?) in recent years to the southern tip of Texas.

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