

The call notes of this swift have been compared to those of a chick (Alvarez del Toro, *loc. cit.*). Several *peep* or *peet* sounds given by these birds as they circled above my camp were similar to the call notes of the Booming Nighthawk (*Chordeiles minor*), but they were less nasal and higher pitched.

The occurrence of this large swift in Michoacán represents an extension of known range of over 500 miles and the first record north of the Isthmus of Tehuantepec. Its seasonal status in Michoacán is unknown but quite probably it will be found to breed locally in mountainous areas.—ROBERT K. SELANDER, *Museum of Vertebrate Zoology, Berkeley, California, October 26, 1954.*

**The Nighthawks of the Tamaulipas Coast of México.**—Warner and Mengel (Wilson Bull., 63, 1951:292) in their useful paper on the birds of the Veracruz coastal plain discussed two specimens of Nighthawk (*Chordeiles minor*) from the coast of southern Veracruz, México. One of these, a breeding female collected by Charles H. Rogers in 1930 had been identified as *C. m. chapmani* by H. C. Oberholser, Rogers, and Frederick W. Loetscher, Jr.; the second specimen, an immature female, was identified by Alexander Wetmore as *aserriensis*, although he indicated that its color was not typical of that form. Warner and Mengel suggested that the nighthawks of the Veracruz coast represented either *aserriensis* or an undescribed subspecies, but *not chapmani*. The distribution of *Chordeiles minor* in México has been summarized by Selander and Alvarez del Toro (Condor, 55, 1953:160–161).

In the summer of 1953 I collected four specimens (adult males) of this species which shed considerable light on the identity of the nighthawks of the southern coastal area of Tamaulipas, México. Two of my specimens (RRG 2260 and 2254) were taken 4 miles southeast of Loma del Real in southern Tamaulipas on June 19, as they “zoomed” over salt flats near the beach in the typical courtship flight of the species. They weighed 68 and 69 grams, respectively. Neither was fat. Both had slightly worn plumage and enlarged testes. I have no doubt that they were breeding birds. They measured: wing chord, 183 and 188; tail, 101 and 102 mm., respectively. The other two specimens (RRG 2436 and 2438) I collected on August 3, about 9 miles south of La Carbonera in northern Tamaulipas. They weighed 68 and 70 grams. Neither was fat. Both were in somewhat worn plumage and had enlarged testes. They also were probably breeding birds. The two measured: wing chord, 186 and 192; tail, both 104 mm. All these specimens fall within the size limits of *chapmani*, and three of the four fall within the limits of both *chapmani* and *aserriensis* as given by Oberholser (U. S. Nat. Mus. Bull., 86, 1914:71, 75), hence their identification is based on color characters (see fig. 1).

It is clear from these specimens that the nighthawks of the northern and southern Tamaulipas coastal areas are not of the same form. The two northern birds are whiter and much less heavily barred below and less heavily mottled with dark dorsally than either of the southern birds. As the locality would indicate, they are representative of the form *aserriensis* and compare well with specimens of that race from Terrell County, Texas. The two southern specimens, on the other hand, approach specimens of *chapmani* from Georgia in the reduction of white and increased dark pigmentation in all parts. Oberholser (*op. cit.*: 29) pointed out the duplication of certain characters in geographically widely separated races of this species. In accordance with Gloger's rule, members of the species tend to be darker in areas of higher humidity and lighter in those of aridity. The ecology of the species would appear to be much the same along the entire coast, because where *Chordeiles minor* occurs, salt and sand limit the vegetation type and growth to a large extent. There is, however, a marked difference in annual precipitation between southern and northern coastal Tamaulipas. It is not surprising, then, to find darker birds in the more humid south. The birds of southern Tamaulipas are separable, however, from specimens of *chapmani*. They differ in having narrower ventral barring, in being buffier in all parts (to this extent suggesting *henryi* slightly), and in having additional light mottling dorsally, including the wings.

These Tamaulipas specimens which are clearly neither *aserriensis* nor *chapmani*, although more like the latter, show why the breeding female from southern Veracruz was called *chapmani*. Mr. Rogers kindly sent that specimen to me and I have carefully compared it with females from Georgia and Louisiana which show the characters of *chapmani*. The Veracruz bird is quite worn and slightly smaller (wing chord, 172; tail, 96 mm.) than the smallest measurement given for female *chapmani* by Oberholser (*loc. cit.*), but in color and pattern it matches birds from the United States very well, differing only in its slightly darker wing coverts (possibly due to wear) and smaller white patch on the outermost primary. The specimen does not represent the southeastern race of the United States,

but a *chapmani*-like form which has not so far as I know been named. Presumably it is of the same race as the distinctive southern Tamaulipas males, but I have neither specimens of males from Veracruz nor Tamaulipas females with which to determine this.

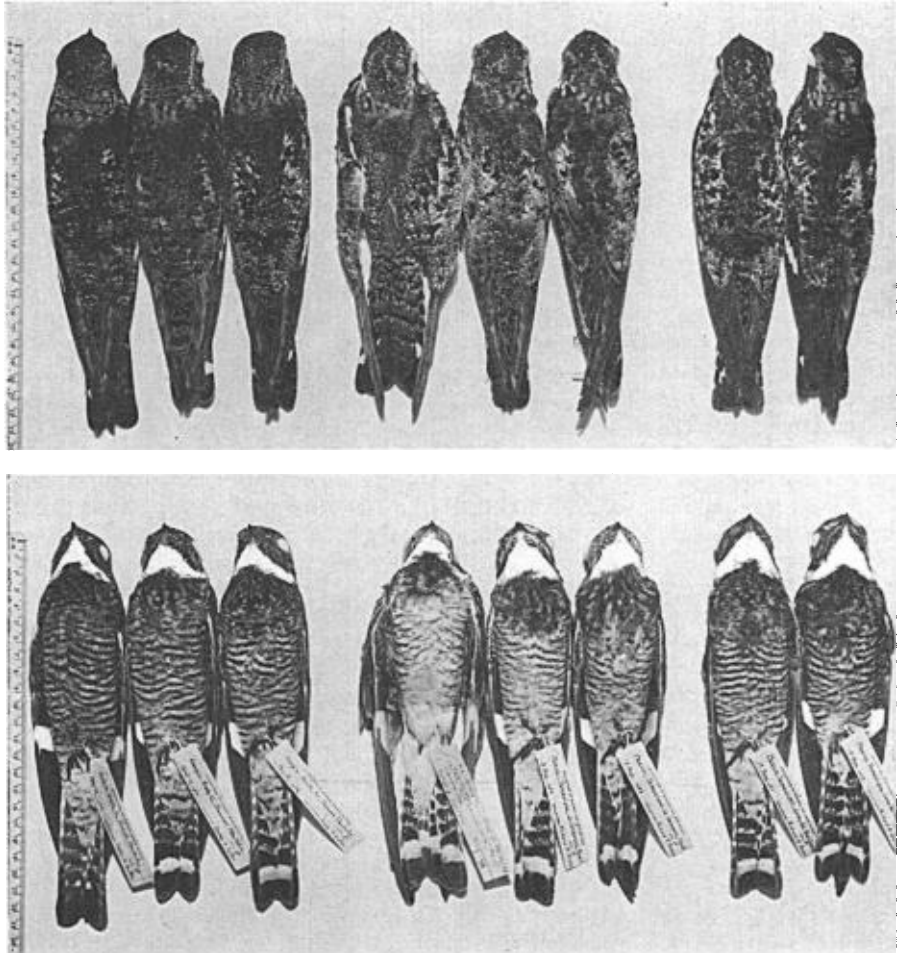


Fig. 1. Dorsal and ventral views of *Chordeiles minor* showing variation in areas of different humidity. Left to right: three *C. m. chapmani* from Georgia, three *aserriensis* from southern Texas and northern Tamaulipas (RRG 2436, 2438), and unnamed form from southern Tamaulipas (RRG 2260, 2254). Note variation in amount of white on outer web of rectrix.

Although I strongly suspect that the birds of southern Tamaulipas warrant nomenclatural recognition, it seems advisable to wait for additional material to be collected. The color variation may occur as a smooth cline (pale-north to dark-south), but it is probably comparable to the variation between eastern *chapmani* and *aserriensis*.

I wish to thank Mr. Rogers of the Princeton Museum of Zoology, Dr. W. Frank Blair of the University of Texas, and Dr. George M. Sutton for the use of comparative material from collections in their charge.—RICHARD R. GRABER, *Museum of Zoology, University of Oklahoma, Norman, Oklahoma, October 6, 1954.*