

cottonwood stream border, I observed 12 to 15 Starlings between 9 and 11 a.m. Here I saw a male Red-shafted Flicker (*Colaptes cafer*) fly to a nest hole at the top of a dead cottonwood trunk. He was promptly displaced by a male starling, carrying food, who entered the hole, then turned around and looked out. It was a sharply cut aperture, probably of this year's excavating by a flicker. The flicker remained for the next half hour in the neighboring cottonwood tree, 12 to 15 feet distant, and called repeatedly, but it did not come into the nest tree again. The male starling continued to stand guard while I was there. He was not otherwise belligerent toward the flicker. Probably the issue had been settled some time before.

The female starling, carrying food but growing wary as I watched, retired to a distant tree top and several other starlings gathered with her there, evidently in response to her agitation. Finally she returned to the dead cottonwood top, hopped about for some time, and then departed without food. Again she came with insects and left without them. I had changed my seat to one in sight of a second hole 8 feet below, but she had not entered either nest hole. On circling the tree, a third, older, ragged-edged flicker hole was disclosed on the opposite side, 18 inches below the first. She returned a third time with a large billful of angle worms and soon entered this hole, appearing at once without them. I saw her bring food four more times at intervals of 6 to 8 minutes. The nest was about 35 feet up in the cottonwood.

Three Tree Swallows also came and hovered a few inches in front of the upper nest hole to which the flicker had come, but they never alighted. The male starling was always nearby. Once when the flicker came very near, the female starling gave a warning cry at the nest entrance and the male came closer to her.

It would seem that the flicker had been driven from his newly-excavated nest hole in the dead cottonwood top, or that at least the tree had been preempted by the starlings before the flicker's spring-time return.—JOHN L. BLACKFORD, *Libby, Montana, June 6, 1954.*

Another Blue-footed Booby in Southern California.—An immature booby was found at Paloma Street and North Foothill Boulevard in Pasadena, California, on the night of September 17, 1954, by Mrs. Roberta H. Rumble. The bird was exhausted and apparently in a dying condition. It was given water and a small trout, and by the next day it appeared fully recovered. We put it in a large flying cage where it promptly perched on the back of a large desert tortoise and rode around contently all day. It only slipped off to refresh itself with a dip in a large tub of water and to nibble on the tortoises' lettuce. It accepted a half cup of mosquito fish which it captured itself in the water dish. The bird was checked for identity by Jean Delacour of the Los Angeles County Museum and was determined to be *Sula nebouxi*, the Blue-footed Booby. There are three previous records of this species for southern California, the most recent in 1934 (see Pac. Coast Avif. No. 27, 1944:52).—ALMA STULTZ, *Audubon Center of Southern California, El Monte, California, November 23, 1954.*

Great Swallow-tailed Swift in Michoacán, México.—Prior to 1951 the Great Swallow-tailed Swift (*Panyptila sancti-hieronymi*) was recorded only from the mountains of western Guatemala, where six specimens had been collected. In that year, Carr and Dickinson (Wilson Bull., 63, 1951:271-273) reported nine specimens from south-central Honduras and a sight record made by Griscom and Miller in north-central Nicaragua in 1917. More recently the known range was extended to extreme southern México by Alvarez del Toro (Condor, 54, 1952:113-114), who obtained a specimen at Tuxtla Gutiérrez, Chiapas. A smaller species, *Panyptila cayennensis*, which occurs locally in the lowlands from eastern Honduras south to southern Brazil, is known in México from the unique type of *P. c. veraecrucis* from Presidio, Veracruz (Moore, Proc. Biol. Soc. Wash., 60, 1947:143-144).

On June 6, 1954, I collected a specimen of *P. sancti-hieronymi* at a point 3.5 miles northwest of Tzitzio, 6500 feet, Michoacán, México, on the road leading south from the Mexico City-Guadalajara highway to Huetamo. This individual was one of five to eight birds of this species that circled low over my camp in the late afternoon in association with another, smaller swift (probably *Cypseloides niger*) and several unidentified swallows. The locality has been described by Davis (Condor, 55, 1953:90-98) in connection with a report of the birds of the Tzitzio region. It is a region of slopes and ridges where dry pine-oak forest mingles with leguminous thorn-scrub elements invading upward from lower elevations to the south. Near the highway, four or five miles northwest of my camp site, there is a series of vertical cliffs.

The Michoacán specimen (see fig. 1) is an adult female in a late stage of molt. The rectrices, secondaries, secondary coverts, some upper middle and lesser primary coverts, marginal coverts of the forearm, distal coverts of the manus, primaries 2 to 4 and 6 to 8 and their greater coverts, and most of the body feathers are new and unworn. The upper tail coverts and a few feathers in the sternal region are ensheathed basally; primaries 5, 9, 10 and their corresponding greater coverts are old; primary 1 on either side is missing; and the alulae are old. A brood patch was present but, pre-

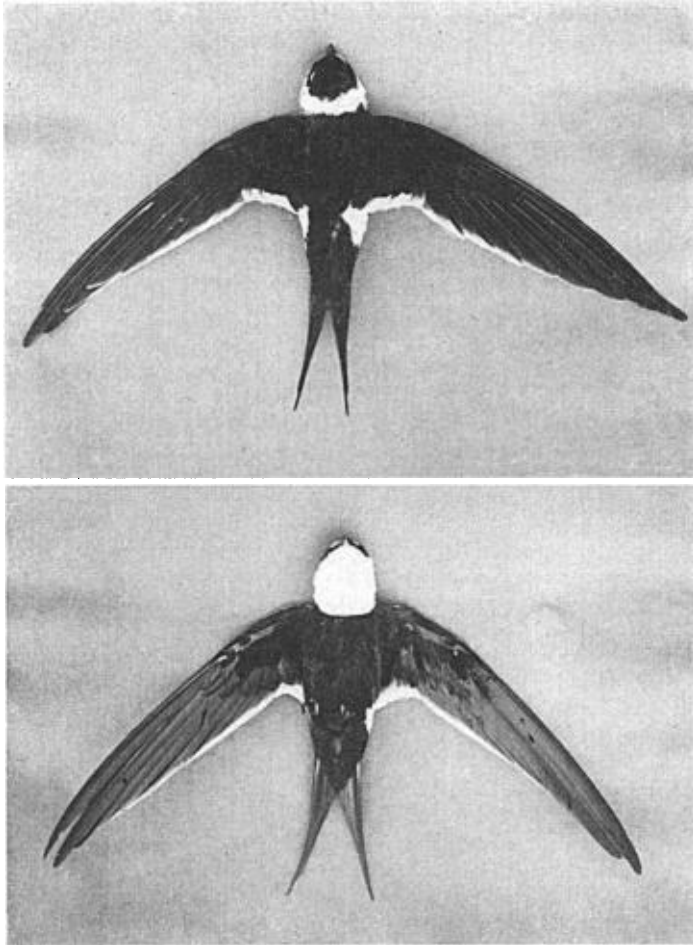


Fig. 1. Dorsal and ventral views of Great Swallow-tailed Swift taken in Michoacán.

sumably, it was old since the skin was not edematous and the bare patch was crossed on either side by a line of small, new feathers. The ovary measured 7.2 mm. in length and contained no enlarged ova; the oviduct was not enlarged. These data on molt, and condition of gonad, oviduct, and brood patch suggest that the bird had bred earlier in the season.

Dr. Josselyn Van Tyne and I compared this specimen with examples of this species from Honduras in the Museum of Zoology of the University of Michigan, from which it differs in no significant way. It measured as follows: wing, 190.0 mm., tail, 92.7, exposed culmen, 6.9, weight, 49.3 gm.

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,