

First United States specimen of the White-collared Swift

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ON JANUARY 25, 1981, Samuel and Jean McMillan of Mobile, Alabama, visited a condominium near Gulf Beach on Perdido Key, Escambia County, Florida (15 air miles southwest of Pensacola, Florida, and 4 miles east of the Alabama/Florida border). When they arrived they were surprised to find a large, recently-dead swift clinging to the sliding screen door of the porch. Both McMillans are amateur bird students, but neither was familiar with this species. With the help of friends and reference books, they identified the bird correctly as a White-collared Swift, *Streptoprocne zonaris*, a wide-ranging species found in Cuba and a few other Greater Antillean islands, and from southern Tamaulipas, México, south to Argentina. They called the Florida State Museum and arranged to ship the bird there in dry ice. It duly arrived in mid-February, in perfect condition for preservation as a study skin (UF 20620; Fig. 1); we also saved the "carcass" in alcohol. The defrosted specimen weighed 80.7 g. It was neither fat, dehydrated, nor severely emaciated, and its stomach was empty. It had no broken bones or other signs of injury. It was a female; the ovary was largely decomposed but the oviduct was evident and thickened—indicating that it had bred at least once, according to Clench's examination.

The McMillans were eager to learn how the bird came to reach Florida and immediately set about obtaining meteorological charts from key stations—Mérida, Yucatán; Veracruz, Veracruz; Boothville, Louisiana; and Appalachicola, Florida. Meanwhile we called Kenneth C. Parkes of Carnegie Museum of Natural History in Pittsburgh, to borrow female specimens of several races of the species, since at the Florida State Museum we had only a single specimen of the Antillean race for comparison.

We quickly ruled out *Streptoprocne zonaris pallidifrons* (confined to Cuba

and the Greater Antilles) as the race of our new specimen because unlike all other subspecies of the White-collared Swift it has a distinctive whitish forehead, lores, and eye stripes; the Florida bird has no white head markings at all. After we received the loan from Carnegie, we saw that although the size of the white collar differs considerably from race to race, all the subspecies from Costa Rica southward through South America have narrow ventral collars. The Florida specimen has an unusually broad white collar on its upper breast (Fig. 2) even when compared with the Carnegie specimens of *S. z. mexicana* from northern Middle America; otherwise it is a good match.

Costa Rican and Venezuelan White-collared Swifts (*S. z. albicincta*) are also smaller than the race from farther north (Table 1). Mexican and Honduran birds are largest, the wings of 4 females measuring (measured flat) 205 to 212 mm from bend to tip, and the tarsus 23.7 to 24.8 mm. The single available Cuban specimen is intermediate in these measurements.

By plumage and measurements, the Florida specimen seems to be *S. z. mexicana*, a bird from northern Middle America, and probably from México.

Through the kindness of the McMillans, we analyzed the weather charts containing pertinent data (National Weather Service, National Oceanic and Atmospheric Administration, U. S. Department of Commerce). The following information gleaned from these charts characterizes the favorable but not especially forceful features of the weather that probably helped bring the swift to the west Florida coast.

At Mérida, Yucatán, México, from midnight January 19/20 through noon on January 24, moderate to strong upper winds blew from the SSE/WSW quadrant (thus from México toward the Florida panhandle). These averaged 15.6 knots (about 17.9 mph) at 5000 ft, a velocity that is called a "fresh breeze" by the Weather Service. At 10,000 ft the winds averaged 26.7 knots (30.7 mph), a "moderate gale." Among dozens of readings at different altitudes above 500 ft during this period, only 5 would have

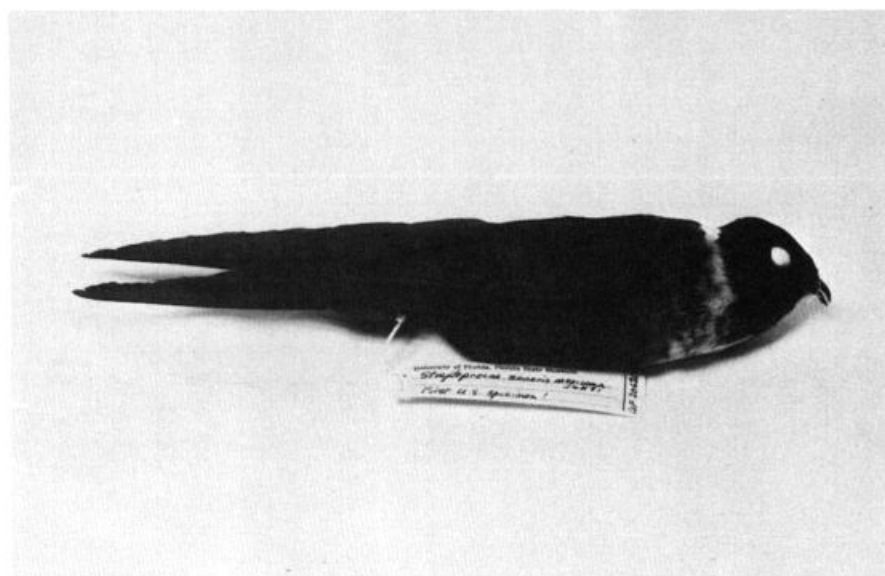


Fig. 1. White-collared Swift, *Streptoprocne zonaris*, study skin UF 20620. Label is 83 mm (3.3 in.) long.

Table 1 *Streptoprocne zonaris* measurements

Locality	Sex	Wing(mm.)	Tarsus(mm.)	Specimen
Perdido Key near Pensacola, Florida	♀	206	24.3	UF 20620
Near La Joya, Veracruz, México	♀	206	24.52	CM 126650
Axtla, near Tamanzuchale San Luis Potosi, México	♀	207	23.60	CM 126688
San Esteban, Honduras	♀	212	24.85	CM 133701
San Esteban, Honduras	♀	205	23.69	CM 133697
Cuba	?	200	22.39	UF 9691
Paso Real de Terraba, Costa Rica	♀	194	22.92	CM 28830
Peralta, Costa Rica	♀	197	21.71	CM 29356
Petare, Miranda, Venezuela	♀	185	18.91	CM 104848
Petare, Miranda, Venezuela	♀	193	22.00	CM 104847

UF: Florida State Museum. CM: Carnegie Museum of Natural History.

inhibited movement of the swift from México to Florida, and none were persistent or stronger than 40 knots. At all times during the period January 19/20 to 24, SSE/WSW winds were blowing at some or all upper levels. Between about noon and midnight on January 24 the wind shifted, blowing lightly (except above 19,000 ft) from the W to NNW, until the swift was found on January 25. The same general pattern of winds held for this period at the Florida, Louisiana, and Veracruz stations as well. There were no winds from the E or SE (from the Antilles) from January 20 until after the bird was found.

WHILE ANALYZING the weather data we assumed that swifts do not fly at altitudes above 30,000 ft. Dorst (1962, *The Migrations of Birds*, Houghton Mifflin) gives a record height for all birds of 29,500 ft, for geese crossing the Himalayas. Most regular migrations are at low altitudes of up to 5000 to 6000 ft, occasionally up to 11,000 ft. But of course swifts are exceptionally strong and high fliers and apparently not subject to the same restrictions as many other birds.

Dorst (1962) also gives data on swift flight and movements that seem pertinent here: The European Swift, *Apus apus*, has a normal flight speed of 38 to 57 mph and is known to migrate at altitudes up to 6700 ft. It also can arrive and depart on migration independently of local weather conditions. An Alpine Swift, *Alpus melba*, homed at 370 miles per day when displaced 1000 miles. Swifts (e.g. *Apus apus*) can go for long periods without food: nestlings survived 21 days without food but became lethargic (aestivated?); adult *Apus apus* can live four days without food, although not without entering a torpid state.

We know of no flight speed, altitude, or survival-while-fasting data from White-collared Swifts, but because they are much larger and presumably physiologically stronger than the *Apus* spp. reported by Dorst, they should be capable of at least similar feats. C.T. Collins, who has had field experience with the White-collared Swift in México, Trinidad, and Venezuela, believes the species is "extremely mobile . . . (and does) not consider anything less than about 100 miles to be other than 'daily wanderings' in *zonaris*" (*pers. comm.*).

Devora Ukrain and David Whitacre, who have studied the White-collared Swift in México, agree. By radio-tracking they have found (*pers. comm.*) that breeding swifts easily travel over 100 miles in a day, foraging both in mountainous areas and in lowlands from their breeding sites at high elevations. Outside the breeding season,

their daily flying range almost surely is much greater. The nearest breeding population of White-collared Swift to Perdido Key, Florida, is in southern Tamaulipas province, México, approximately 850 miles in shortest distance.

In our judgment, the White-collared Swift made it to Florida with basically favorable winds and other weather conditions, but it was not blown here. On arrival, it probably died because it was unable to find food; prolonged freezing temperatures in northern Florida had eliminated most flying insects at the time. The bird's post mortem weight of 80.7 g also suggests death by starvation. The only published weights of *Streptoprocne zonaris* we have been able to locate for comparison are those of the smaller race (*S. z. albicincta*), taken in Venezuela by Collins (*Bull. British Ornithol. Club* 92:151-153). His unsexed sample of 19 swifts ranged from 85.75 to 107.25 g. Allan R. Phillips (*pers. comm.*) has reported three weights of Mexican birds with heavy body fat as being 110 g (immature bird), and 100.4 g and 130.2 g (adult males). Devora Ukrain and David Whitacre have weighed several hundred breeding swifts, and although their data are not presently available, they report that breeding birds are lean, with an average weight of about 100 g or slightly more. From this we concluded that the Florida female *S. z. mexicana*, probably starved to death.

SAMUEL MCMILLAN later learned through friends that Eileen and

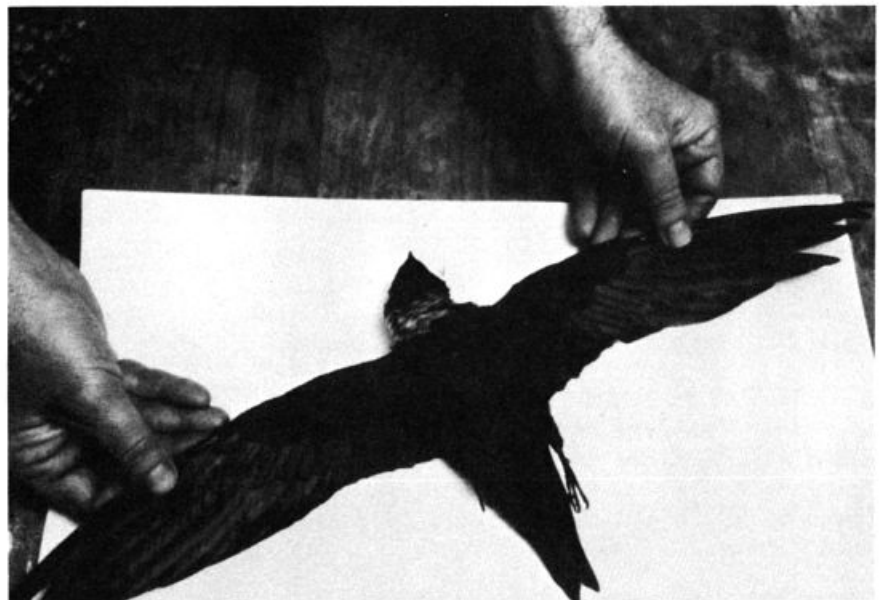
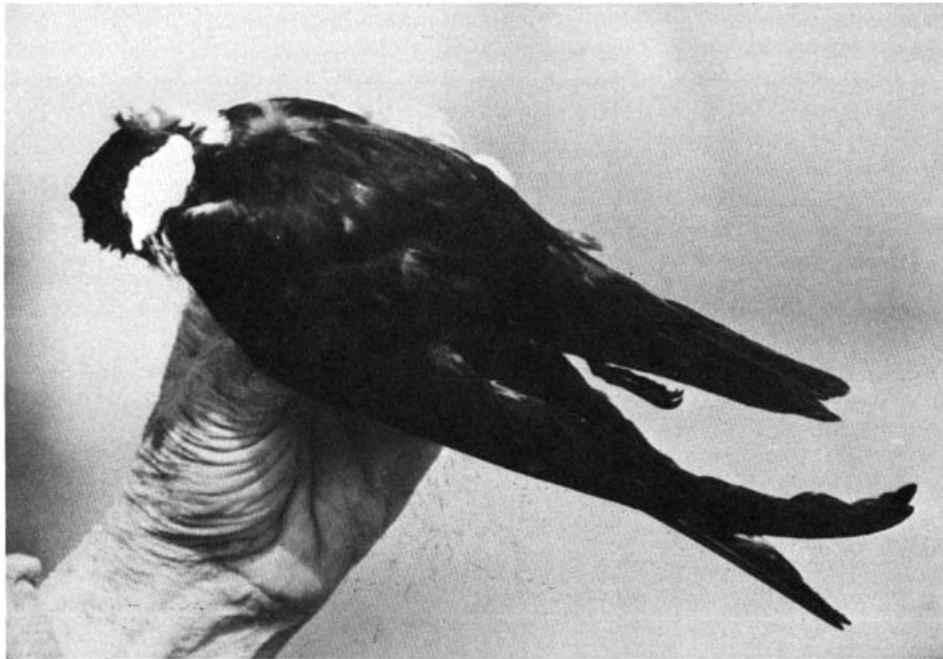


Fig. 2. White-collared Swift, underside of fresh specimen.



Figure 3. The Perdido Key specimen of *Streptoprocne zonaris*, in two additional photographs, showing the wing/body length ratio, and the striking white collar from below. Photos/Fairly Chandler.



Charles Riordan, who lives about 2 miles north of where the swift was found, had seen five or six dark birds with distinct white collars around the neck; the birds were on the front lawn of the Riordan's apartment on the edge of a golf course. The date was not recorded more specifically than "about the end of January," and the birds were moving around on the lawn as if looking for insects, but soon flew away. This record suggests that the Florida specimen may have been accompanied on its journey. It seems logical to believe that more

than one swift did make the trip because individuals of this species are almost never seen alone in the air; they are usually in large flocks of 20 to 50 birds.

There is one earlier sight record of the White-collared Swift in the United States: two birds at Rockport, Texas, seen by Thomas W. Burke and Susan J. Stappers late on the afternoon of December 4, 1974 (*American Birds* 29:84). The birds were watched in flight for up to 10 minutes, sometimes too close to allow use of binoculars. Their white collars were clearly visible.

One might expect that a species such as the White-collared Swift, living a few hundred miles south of the United States border, and having strong powers of flight and a habit of foraging over a large area, would sooner or later be expected to reach the United States. Observers should be alert for additional occurrences of this, and similarly capable, species.

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