This aerial species is only known with certainty from the southern end of the Cauca valley, south-west Colombia, although a recent unconfirmed record from Napo province in Ecuador suggests that it may range more widely. It has apparently been recorded just once in Colombia since 1966.

**DISTRIBUTION** The White-chested Swift is, with certainty, known only from the middle and upper Cauca valley, Valle and Cauca departments, south-western Colombia. However, there has recently been an unconfirmed record of birds in Napo province, Ecuador, c.400 km south of the known Colombian range. Unless otherwise stated, coordinates are from Paynter and Traylor (1977, 1981).

Colombia Within the foothills of the Cauca valley, records of this bird come from between Cali and Popayán, where precise localities include: (*Valle*) Cerro de los Cristales ("above Cali", at the west-central part of the city, now within urban limits: LGN), where birds were seen in April 1962 (Eisenmann and Lehmann 1962); (*Cauca*) Hacienda San Julián (untraced, but near Santander, and possibly near San Julián at 3°05'N 76°31'W), where a female (in UV) was collected in June 1966; Santander (3°01'N 76°28'W), where three birds were taken from a flock in April 1961 (Eisenmann and Lehmann 1962); Cerro Coronado (untraced, but apparently very close to Santander), where flocks have been seen, and where specimens were taken in October 1951 and 1957 (Eisenmann and Lehmann 1962); Salvajina hydroelectric plant on the río Cauca near Suárez, where 12 birds were seen in August 1989 (A. J. Negret *in litt*. 1990); Mondomo (2°53'N 76°33'W; 16 km south-south-west of Santander, on the right bank of the río Ovejas), where birds were seen in February 1960 and May 1962 (Eisenmann and Lehmann 1962); and c.8 km south of Pescador (2°47'N 76°33'W), where birds were seen in October 1962 (Eisenmann and Lehmann 1962).

**Ecuador** At least two birds almost certainly of this species were seen above Archidona (0°55'S 77°48'W) on the road to Loreto, Napo province, in a flock of c.150 *Cypseloides* swifts at 1,060 m on 31 March 1990 (B. M. Whitney *in litt*. 1991).

**POPULATION** This species is seemingly very rare and localized: Eisenmann and Lehmann (1962) reported flocks of 20-25, sometimes mixed with other swift species, in the Cali–Santander area from 1951 to 1962, suggesting that the White-chested Swift may have been fairly common in the 1950s and early 1960s. All of these flocks were observed between 16h30 and 18h30 (Eisenmann and Lehmann 1962), and therefore perhaps were "roosting" congregations. Since 1966, when a specimen was collected near Santander (see above), searches for the species at several of the historical localities have failed to find it (LGN). However, the observation of 12 birds in August 1989 near Suárez (see Distribution) confirms that the species still exists in small numbers. The probable record of at least two birds in Ecuador may represent either wanderers or non-breeders from Colombia or residents from a previously unknown population (B. M. Whitney *in litt.* 1991).

ECOLOGY The White-chested Swift has been recorded from between 1,000 and 1,300 m in the foothills of the upper Cauca basin; a flock seen in April was flying over pasture in flat country, but all other records have been in hilly or eroded areas where the bare red soil is sparsely covered with coarse grass interspersed with a small melastomataceous bush and a few other scattered bushes and trees including *Lonchocarpus* sp. and *Cecropia* sp. (Eisenmann and Lehmann 1962). Flocks described as "small" and elsewhere given as between 20 and 25 birds were noted as either single-species congregations, or associated with groups of White-collared Swift *Streptoprogne zonaris*, Chestnut-collared Swift *Cypseloides rutilus*, or White-chinned Swift *C. cryptus* (Eisenmann and Lehmann 1962); the birds seen in Ecuador were associated with a loose feeding flock of *Cypseloides*, almost definitely *cryptus* (B. M. Whitney *in litt*. 1991). All flocks seen by Eisenmann and Lehmann (1962) were recorded between 16h30 and 18h30, when they were either feeding (from 15 to 25 m high in the air) or apparently moving through, unless congregating prior to "roosting". The birds seen in Ecuador were observed for c.45 minutes during the early morning, feeding at heights of 50-100 m (B. M. Whitney *in litt*. 1991).

The seasonal movements of this species are unknown: birds have been recorded in the Cauca valley during most months from early February through to the end of October (see Distribution), and are presumably resident (Eisenmann and Lehmann 1962); however, breeding has never been recorded, and the probable record from Ecuador suggests that seasonal movements may occur or even that some individuals

## Threatened birds of the Americas

are being displaced (B. M. Whitney *in litt*. 1991; see above). Breeding was suspected to occur in the higher hills of the Cauca valley, with immature birds collected in October (Eisenmann and Lehmann 1962). Birds were assumed to build nests in cavities in the soft, bare earth (Eisenmann and Lehmann 1962), although the other members of this genus all nest in rocky ravines and caves, often close to water (F. G. Stiles *in litt*. 1992).

**THREATS** None is known; however, agrochemical usage in the Cauca valley may have affected the population (A. J. Negret *in litt*. 1990). Also, with the ecological requirements of the species remaining unclear, the effect of the expanding area of eroded ground within its Colombian range is unquantifiable. The type of habitat described in Ecology exists around Santander on both sides of the Cauca valley from the eastern foothills of the West Andes to the western foothills of the Central Andes, being at its widest (c.30 km) near Santander, but it stretches north in two prongs: one along the eastern foothills of the West Andes, narrowing to c.15 km north of Buenos Aires, Cauca, and to just 3 km at the northern limit in Vijes, Valle; and the other in the western foothills of the Central Andes, north to the río Palo region, a little northeast of Caloto (Eisenmann and Lehmann 1962). This U-shaped area is probably the result of deforestation, and is increasing (Eisenmann and Lehmann 1962). The critical factor, however, is considered to be the availability of safe nest-sites (F. G. Stiles *in litt*. 1992), and until its breeding grounds have been identified, specific threats remain difficult to assess.

**MEASURES TAKEN** None is known, although Cerro Munchique is situated in the background of one of the habitat photographs in Eisenmann and Lehmann (1962), indicating that the species may occur within the Munchique National Park, which has some of its 44,000 ha within the correct altitudinal range (CNPPA 1982). Los Farallones de Cali National Park is also close to one of the few known localities (i.e. west of Cali), and the bird may well occur there.

**MEASURES PROPOSED** The first challenge is for ornithologists to begin finding regular sites where this species can be found and, perhaps, studied. The extent to which birds have been overlooked or ignored in the past is hard to judge, but it seems possible that some dedicated swift-watching at known sites or wherever feeding flocks are noted might begin to yield new records. If the breeding areas can then be found, along with the type of habitat that the species prefers to feed over, the extent and causes of the threats that it faces may be determined. Systematic searches for the species's breeding grounds should be

undertaken in Munchique and Los Farallones de Cali National Parks (see equivalent section under Multicoloured Tanager *Chlorochrysa nitidissima*).