

This extremely rare and poorly known rail is restricted to brackish lagoons along a small stretch of the north Venezuelan coast, from where there are very few recent records. It is severely threatened by the loss and deterioration of its wetland habitat.

DISTRIBUTION The Plain-flanked Rail is restricted to the coast of northern Venezuela in eastern Falcón, northern Carabobo and Aragua states. The few records of this species are as follows (coordinates from Paynter 1982):

Falcón near Chichiriviche, where A. B. Altman (*in litt.* 1988) heard of an unconfirmed sighting, but did not see it there himself in two visits; Cuare Wildlife Refuge (10°55'N 68°20'W), where the bird has apparently been recorded (Scott and Carbonell 1986: see Remarks); and Tucacas (10°48'N 68°19'W), where a female (in COP) was taken in January 1950, with five males, four females, and two others (in ANSP, BMNH, COP) taken there during May 1951;

Carabobo Puerto Cabello (10°28'N 68°01'W), where four males, three females and two others (in COP, FMNH, USNM) were collected in September 1945; Borburata (10°26'N 67°58'W, 5 km south-east of Puerto Cabello), where a female (in COP) was collected (at sea level) in November 1944; and Patanemo (10°28'N 67°55'W, 10 km east of Puerto Cabello), where a bird (in AMNH) was taken in September 1945;

Aragua La Ciénaga (c.10°28'N 67°49'W, between Ocumare de la Costa and Turiamo), where the type-specimen (in COP) was taken on the west shore of the bay in April 1943 (Zimmer and Phelps 1944); and beside a lagoon near Playa de Cata (c.10°30'N 67°44'W), 15 km east of La Ciénaga, where a pair of birds was seen in April 1991 (A. F. Badillo *in litt.* 1992).

POPULATION The status of the Plain-flanked Rail is unknown (Ripley 1977), but the fact that 11 birds were collected at Tucacas during May 1951 (see above), and nine were taken at Puerto Cabello in September 1945 (see above) suggests that the species was at least locally common. Despite many subsequent collecting trips to the type-locality, this species was not found there again (Zimmer and Phelps 1944), and although a pair was found nearby (15 km east) in the Cata valley in 1991, this was the first record after a decade of periodic ornithological observations within the area (A. F. Badillo *in litt.* 1992). Records of this rail come from between 1943 (when it was discovered) and 1951, after which time the only reports are from Chichiriviche (unconfirmed), Cuare Wildlife Refuge, and east of La Ciénaga; this seems to indicate that the species's population has declined (especially as the localities are easily accessible to ornithologists).

ECOLOGY Very little is known of the Plain-flanked Rail, but it is apparently sedentary (Ripley 1977; see Distribution), and occurs in coastal mangroves at Tucacas, Puerto Cabello and Patanemo (specimens in AMNH, ANSP, BMNH, FMNH, USNM); Meyer de Schauensee and Phelps (1978) added "shallow saltwater lagoons" to the habitat description. At La Ciénaga, the species was taken (see above) in a "mangrove swamp" of c.150 ha on the west shore of the (sea) bay (Zimmer and Phelps 1944, Ripley 1977); east of this locality, the lagoon near Playa de Cata is apparently covered in emergent vegetation (A. F. Badillo *in litt.* 1992). The habitat at Cuare Wildlife Refuge was described in Scott and Carbonell (1986) as a shallow sea bay bordered in most parts by mangrove swamps, and a large area of seasonally flooded brackish lagoons and marshes (with halophytic vegetation dominated by saltwort *Batis maritima*); the area is surrounded by dry thorn and cactus scrub. The type-specimen, collected in April, was apparently in breeding condition (Zimmer and Phelps 1944); a male (in BMNH) taken in May had enlarged testes; and a bird (in AMNH) taken in September is an apparent juvenile, all of which suggests a breeding season starting in April or May.

THREATS Ripley (1977) wrote that this species was generally subject to pressure from development along the north coast both from weekend houses (with consequent destruction of the mangrove habitat), and expanding oil exploration. More specifically, threats to the Cuare Wildlife Refuge include: (1) the expansion of the town of Chichiriviche; (2) invasion of the area by illegal squatters; (3) construction of

large tourist hotels nearby, and on an area currently occupied by squatters; (4) numerous roads within the refuge, leading to excessive tourist pressure; (5) the dangers of pollution from domestic sewage, pesticides, and mercury; (6) a proposal to reduce the area of the refuge by 150 ha, to exclude the area occupied by squatters and an area on which a golf course is to be built (involving a 35 ha landfill); (7) plans to move the squatters to the centre of the refuge; and (8) the construction of a road along the northern edge of the refuge (already under way) without any provision to allow the flow of water to and from the sea (Scott and Carbonell 1986, J. L. Mateo *in litt.* 1991). The lagoon near Playa de Cata, where a pair of birds was seen in 1991, has been modified by the construction of a dike that has closed the lagoon's connection with the sea, seriously threatening the existence of the presumably small, localized population of this rail (A. F. Badillo *in litt.* 1992). The Playa de Cata is one of the most popular beaches along this central part of the Venezuelan coast, and the dike has been constructed to facilitate development for tourism (A. F. Badillo *in litt.* 1992).

MEASURES TAKEN The Cuare Wildlife Refuge (11,825 ha) “protects” a large area of suitable habitat for this species, but is under serious threat (see above), being poorly warded, with no game guards and no notices (Scott and Carbonell 1986: see Threats); yet this refuge is Venezuela's only RAMSAR site (IUCN 1992). The Laguna de Turiamo (1,600 ha) at the north-western end of Henri Pittier National Park (Scott and Carbonell 1986), is close to La Ciénaga and may well support a population of this species, as may the Morrocoy National Park (32,000 ha), north-east of Tucacas (Scott and Carbonell 1986, B. Swift *in litt.* 1988).

MEASURES PROPOSED Clearly, the integrity of the Cuare Wildlife Refuge needs to be ensured, as this area is apparently one of the most important coastal wetlands in Venezuela (Scott and Carbonell 1986), and is currently one of the only places where the Plain-flanked Rail is known to occur. Adequate wardening of the reserve, combined with an awareness campaign, prevention of illegal hunting and careful control of the tourist usage of the area with environmental impact assessments (on all planned developments) are all needed to safeguard the site (see Threats). Official protection of the threatened coastal mangrove habitat would also represent an important step towards the effective conservation of this and other species. Surveys need to be undertaken in the other protected areas (see above) to determine whether or not this rail is present, and an ecological study of the bird would help in the identification of other suitable localities. The tourist developments near Playa de Cata (see Threats) should also be investigated to determine if any remedial action could reduce the long-term environmental impact on the lagoon.

REMARKS It is very possible that the unconfirmed record from “near Chichiriviche” may in fact be the one reported by Scott and Carbonell (1986).