= Zapata rail =

The Zapata rail (Cyanolimnas cerverai) is a medium @-@ sized , dark @-@ coloured rail , the only member of the monotypic genus Cyanolimnas . It has brown upperparts , greyish @-@ blue underparts , a red @-@ based yellow bill , white undertail coverts , and red eyes and legs . Its short wings render it almost flightless . It is endemic to the wetlands of the Zapata Peninsula in southern Cuba , where its only known nest was found in sawgrass tussocks . Little is known of its diet or reproductive behaviour , and its described calls may belong to a different species .

The Zapata rail was discovered by Spanish zoologist Fermín Zanón Cervera in March 1927 in the Zapata Swamp near Santo Tomás , in the southern Matanzas Province of Cuba . The swamp holds one other bird found nowhere else , the Zapata wren , and also gives its name to the Zapata sparrow . Due to ongoing habitat loss in its limited range , its small population size , and predation by introduced mammals and catfish , the Zapata rail is evaluated as critically endangered on the IUCN Red List of threatened species . Tourism and climate change may pose threats in the future .

= = Discovery and taxonomy = =

The Zapata rail was formally described by American herpetologist Thomas Barbour and his compatriot , ornithologist James Lee Peters , in 1927 . They considered it distinctive enough to merit its own genus , Cyanolimnas . The genus name derives from Ancient Greek kuanos " dark blue " and Modern Latin limnas " rail or crake " ; the specific name cerverai honours the rail 's discoverer , Fermín Zanón Cervera , a Spanish soldier who had stayed on after the Spanish ? American War and became a professional naturalist .

Barbour had been accompanied by the Spaniard on his previous visits to Cuba , and on hearing of the strange birds to be found in the Zapata area , he sent Cervera on a series of trips into the region . Cervera eventually found the rail near the very small settlement which is commemorated in the Spanish name for the rail , " Gallinuela de Santo Tomás " . Cervera also discovered the Zapata wren and the Zapata sparrow , and his name is commemorated by the new ecological centre in the Ciénaga de Zapata National Park .

The rail family contains more than 150 species divided into at least 50 genera , the exact number depending on the authority . The Zapata rail is the only member of the genus Cyanolimnas , and is considered to be intermediate between two other New World genera , Neocrex and Pardirallus . All six species in the three genera are long @-@ billed , five have drab plumage , and all but one have a red spot at the bill base . They are believed to be descended from Amaurornis @-@ like ancestral stock .

= = Description = =

The Zapata rail is a medium @-@ sized , dark rail , approximately 29 cm (11 @.@ 4 in) long . The upperparts are olive @-@ brown and the forehead , head sides and underparts are slate @-@ grey , with some white barring on the lower belly . The flanks are grey @-@ brown and the undertail is white . The iris , legs and feet are red , and the bill is yellow with a red base . The tail feathers are only sparsely barbed , and the wings are very short and rounded . The sexes are similar in appearance , but immature birds are duller and have olive feet and bill ; the chicks , as with all rails , are covered with blackish down . The Zapata rail 's call is described as a bouncing cutucutu @-@ cutucutu @-@ cutucutu similar to that of the bare @-@ legged owl , and a loud limpkin @-@ like kuvk kuck . However , these calls may actually be those of the spotted rail .

There are no similar species in Cuba ; the sympatric spotted rail is much the same size , but is heavily spotted and barred with white . The Zapata rail 's plumage is intermediate between those of Colombian crake and plumbeous rail , but these are mainland birds of Central and South America .

= = Distribution and habitat = =

The Zapata rail is a Cuban endemic restricted to the northern part of the 4500 km2 (1740 mi2) Zapata Swamp , which is also the only location for the Zapata wren , and the nominate subspecies of the Zapata sparrow . The favoured habitat of the Zapata rail is flooded vegetation , 1 @.@ 5 ? 2 @.@ 0 m (60 ? 80 in) tall , consisting of tangled , bush @-@ covered swamp and low trees , and preferably near higher ground . Typical plants of the swamp are wax myrtle , the willow Salix longipes , the sawgrass Cladium jamaicensis , and the narrow leaf cattail .

The rail was once more widespread , with fossil bones found at Havana , Pinar del Río and the Isla de la Juventud . Barbour did not believe that the rail , Zapata sparrow and Zapata wren were relics in the sense that they once ranged widely over Cuba (as did , for example , the dwarf hutia and the Cuban crocodile) , since the birds are so highly modified for swamp conditions . He considered that conditions similar to those found today may once have extended over the large submerged area now represented by the shallow banks , with scattered mangrove keys , which stretch towards the Isla de la Juventud and perhaps eastward along the southern Cuban coast . The birds fossilized at Isla de la Juventud are smaller than the single extant specimen , but the paucity of available material makes it impossible to establish whether the populations were genuinely different .

= = Behaviour = =

The Zapata rail usually breeds in Cladium jamaicensis sawgrass , building the nest above water @-@ level on a raised tussock . Breeding occurs around September , and possibly also in December and January . American ornithologist James Bond found a nest containing three white eggs 60 cm (2 ft) above water level in sawgrass , but little else is known of the breeding biology . Rails are usually monogamous , and all have precocial chicks which are fed and guarded by the adults .

The animal prefers to feed in sawgrass . The diet is not recorded , but most marsh rails are omnivorous , feeding on invertebrates and plant material . The rails may disperse in the rainy season , returning to permanently flooded areas in the dry months .

Like other rails , this species is difficult to observe as it moves through the sawgrass , and may crouch to avoid detection , but is not usually particularly wary . When disturbed , it may run a short distance and then stop with its tail raised and the conspicuous white undertail showing . Despite its short wings , the Zapata rail may not be completely flightless . On morphological grounds it would be classed as a flightless species , since the pectoral girdle and wing are as reduced as in other species of rails that are considered to be flightless , but Bond reported that he saw one flutter about ten feet across a canal .

= = Conservation status = =

Island species of rails are particularly vulnerable to population loss since they frequently and rapidly evolve to become flightless or very weak fliers , and are very susceptible to introduced predators . Fifteen species have become extinct since 1600 , and more than 30 are endangered .

The Zapata rail appears to have been easily found in the Santo Tomás area until 1931 , but there were no further records until the 1970s when birds were found 65 km (40 mi) away at Laguna del Tesoro . The few records in subsequent years suggest that numbers remain low , although after no official sightings for two decades , a 1998 survey found the birds at two new locations in the Zapata Swamp . Ten rails were detected at Peralta , and seven at Hato de Jicarita . On the basis of this sample it was estimated that 70 ? 90 rails were present in the 230 hectares (570 acres) between the two sites .

The Zapata rail is restricted to a single area , with an extent of about 1 @,@ 000 km2 (400 mi2) , and its small population , estimated on the basis of recent surveys and local assessments of population densities at between 250 ? 1 @,@ 000 individuals , is assessed as decreasing . In the past , grass @-@ cutting for roof thatch was a cause of extensive loss of breeding habitat , and habitat loss through dry @-@ season burning of the vegetation continues . Predation by introduced small Asian mongooses and rats is a problem and , more recently , introduced African sharptooth

catfish (Clarias gariepinus) have been identified as major predators of rail chicks .

The Zapata rail was classified as an endangered species on the IUCN Red List until 2011 , when its status was uplisted to critically endangered . This had already been suggested since , given the lack of knowledge about its calls , the rail 's population may be lower than currently estimated .

Two remaining sites are in protected areas : the Corral de Santo Tomás Faunal Refuge , and the Laguna del Tesoro nature tourism area . Surveys have recently been conducted throughout the species ' range and proposed conservation measures include the control of dry season burning .

= = = Future threats = = =

There are plans to encourage more tourists to visit the Zapata area , particularly from Europe , and if the United States allows its citizens to visit Cuba in the future this could further increase the effects of ecotourism . This might have a dangerous impact on the wetland , but Cuba 's Tourism Minister , Manuel Marrero , and Pablo Bouza , the director of the Ciénaga de Zapata National Park , both said that the increase in tourism would be sustainable .

In the longer term , the Ramsar @-@ listed swamp itself may be threatened . Rising sea levels due to global warming could contaminate the wetland with saltwater , damaging the plants and fauna , and by 2100 the area of Ciénaga de Zapata would be reduced by one @-@ fifth . Higher ocean temperatures resulting from climate change could also lead to stronger hurricanes and drought . Bouza warned that the fallen vegetation left by hurricanes could act as fuel for further damaging fires once it had dried out .