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Important Bird Areas AMERICAS

TRINIDAD & TOBAGO

Graham White





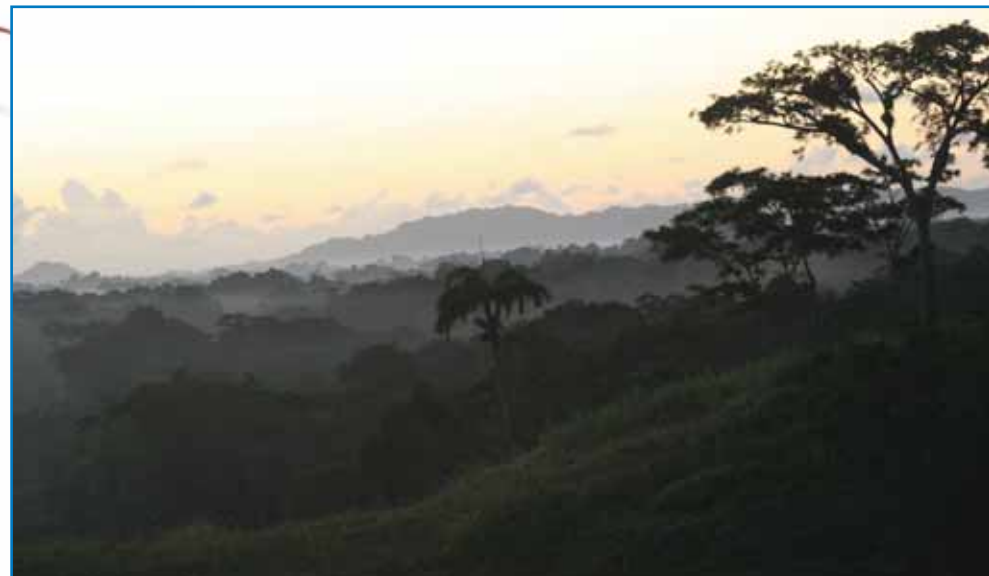
Country facts at a glance

Area:	5128 km ²
Population:	1,300,000
Capital:	Port-Of-Spain
Altitude:	0–940 m
Number of IBAs:	7
Total IBA area:	106,193 ha
IBA coverage of land area:	19%
Total number of birds:	468
Globally threatened birds:	1
Globally threatened birds in IBAs:	1
Country endemics:	1

General introduction

The Republic of Trinidad and Tobago is a twin-island state located where the Lesser Antilles island chain meets mainland South America. Trinidad is the larger of the two islands and has an area of 4828 km². It is highly industrialized and hosts 95% of the population. Economic activities are mainly energy based due to national reserves of oil and natural gas. The major population centers are on the west coast at Port-of-Spain and San Fernando. Tobago, 35 km to the north-east of Trinidad has an area of just over 300 km². It has a degree of local governance through the Tobago House of Assembly and is sparsely populated, with tourism and fishing representing the major economic activities. Trinidad has three mountain ranges: the Northern and Southern Ranges run along the north and south coasts, and the Central Range runs diagonally from north-east to south-west. The Northern Range rises to 940 m at El Cerro Del Aripo, while the Central and Southern ranges are more diffuse, rising to 307 m and 303 m at Tamana Hill and Trinity Hills respectively. The basins between the ranges are generally low-lying, with swamps where the larger rivers meet the sea at Caroni (a mangrove-dominated swamp) on the west coast and Nariva (dominated by herbaceous swamp and swamp-forest) on the east. Bordering the Caroni Swamp and extending down the west coast of Trinidad are extensive coastal mudflats.

The south and east coast are characterized by long sandy beaches and occasional headlands. The north and north-east coasts are steep and rocky with occasional sandy beaches. Due to the outflow from the Orinoco the waters are generally turbid. Tobago is characterized by the Central Ridge which forms the “backbone” of the north-eastern half of the island. The highest point is at 549 m but there are no well defined peaks. The western end of Tobago is low-lying with a coastal plain draining into two coastal wetlands. The coast of Tobago comprises sandy beaches alternating with rocky headlands. While still influenced by the Orinoco, the waters off Tobago are much clearer with an extensive offshore coral reef and fringing reefs in many of the bays.



Victoria-Mayaro Forest Reserve (TT004) is a possible site for Trinidad Piping-guan (*Pipile pipile*).
Photo: Graham White

Politically, Trinidad and Tobago is associated with the West Indies. Biogeographically however, the islands are distinctly South American, with Tobago showing some Antillean influences. The mountains in northern Trinidad represent an eastward extension of the coastal cordillera of Venezuela, and at the closest point Trinidad is only 11 km from Venezuela's Paria Peninsula. Indirect evidence suggests that the two were connected as recently as 2200 years ago. Due to this close affinity with South America, Trinidad and Tobago have a continental flora and fauna characterized by high species richness and low levels of endemism. Both Islands lie on the continental shelf and are influenced by the outflow of the Orinoco River and the South Equatorial Current, resulting in comparatively nutrient-rich and low salinity coastal waters. The islands have a seasonal tropical climate with a wet season from May to December and a dry season from January to April. Annual rainfall is heavily influenced by topography. Average annual precipitation in Trinidad is 2200 mm (ranging from 3500 mm towards the eastern end of the Northern Range, to 1300 mm at the westernmost points of the island). On Tobago, average annual precipitation is 1427 mm in the west to 2363 mm in the north-east. Trinidad and Tobago lie at the edge of the Atlantic Hurricane Belt with the last major hurricane being Hurricane Flora in 1963.

Originally, Trinidad and Tobago would have been almost entirely forested, and both islands still maintain comparatively large areas of forest cover, recently estimated at 44–48%, although arguably just 15% is in a natural state. Forest has been cleared to make way for development and agriculture, with traditional crops of cocoa, coffee and citrus once occupying large tracts of land. Many of these areas are now semi-abandoned and support mature secondary-growth forest. In Trinidad, evergreen seasonal forest predominates in the lowlands where rainfall is high. Moving towards the south and west of the island, the dry season is more pronounced and the forest grades through semi-evergreen seasonal forest to deciduous forest (this latter being best developed along the north-west peninsula and on the offshore-islands). In the Northern Range (above 240 m) there is generally no seasonal drought and lower montane rainforest occurs. This grades into montane rainforest above c.540 m, and finally, above 870 m are small patches of elfin woodland. In Tobago, the natural vegetation of the lowlands is seasonal forest although this has almost all been removed for urban development and agriculture. The Main Ridge on Tobago supports rainforest which, however, is still recovering (structurally) from the devastating Hurricane Flora in 1963.

Conservation and protected area system



The legal framework for protection of wildlife and natural areas in Trinidad and Tobago has recently been reformulated. The former system was characterized by a wide range of regulations managed by a number of different government agencies leading to gaps and overlaps. The new system, progressively being implemented, provides for a single government agency—the Environmental Management Authority (EMA)—to coordinate all environmental management activities. The EMA, together with the Forestry Division (which is responsible for the management of protected areas in Trinidad), both fall within the Ministry of Public Utilities and the Environment¹. Protected areas in Tobago are the responsibility of the Tobago House of Assembly and governed by the Tobago House of Assembly Act. The country has an extensive system of formally designated protected areas, including wildlife or game sanctuaries, nature conservation reserves, scientific reserves, forest reserves, Ramsar sites as well as historic sites, natural landmarks and recreation parks. The protected areas are however small, disparate and difficult to enforce based on existing regulations. The Forests Act makes provision for declaring areas as “Prohibited Areas” and this is the legal mechanism through which critical elements of biodiversity have been protected. The Prohibited Areas-provision has been used to designate especially sensitive areas (e.g. sea-turtle nesting beaches) in order to regulate human activities until effective management can be initiated. The new Environmental Management Act provides authority for designating Environmentally Sensitive Areas and Environmentally Sensitive Species, and requires consideration be given to the environmental impacts of large developmental projects. State-owned forest amounts to c.37% of the land area, and “protected forest” (including wildlife sanctuaries, nature reserves, wind-belt reserves and forest above 90 m) comprises c.11%. Unfortunately, despite the network of designated sites, there is a general lack of respect for the legislation, and the enforcement agencies are hampered by inadequate human and financial resources to properly carry out their mandate. For example, in Trinidad they are not equipped with boats which are capable of patrolling marine areas such as Soldado Rock and Saut d’Eau.

Major conservation actions in Trinidad and Tobago generally involve government agencies, especially the Wildlife Section of the Forestry Division, the EMA and, in Tobago, the Department of Natural Resources and the Environment of the Tobago House of Assembly. Research efforts are mainly through the University of the West Indies (UWI), with input from visiting researchers and the Wildlife Section, while the Institute of Marine Affairs (IMA) conducts research on the coastal and marine environment. However, a wide range of NGOs and individuals make contributions mainly through research, public education or advising policy development. NGOs with a bird focus include the Trinidad and Tobago Field Naturalists' Club (TTFNC), the Asa Wright Nature Centre (AWNC) and the Pointe-a-Pierre Wildfowl Trust (P-a-PWT). TTFNC provides a forum for education and appreciation of the natural environment. It publishes a journal (*Living World*) which focuses on the natural history of Trinidad and Tobago and the wider Caribbean, and sponsors the Trinidad and Tobago Rare Bird (Records) Committee. AWNC is a private nature reserve with visitor ac-

commodation in the Arima Valley. The centre actively manages an area of 526 ha which includes one colony of Oilbirds (*Steatornis caripensis*) and support local conservation initiatives through education and publications. P-a-PWT has the objective of captive-breeding and release of threatened waterfowl in Trinidad. It makes a major contribution to public awareness and education on conservation issues, especially where wetlands are involved. A particularly encouraging development is the contribution being made by community-based groups, including Nature Seekers Inc. and Grande Riviere Environmental Awareness Trust, to the conservation of sea-turtles and the Trinidad Piping-guan (*Pipile pipile*; with support from the Wildlife Section).

Trinidad Piping-guan has been the focus of 25 years of basic research, public awareness and some community-based efforts by Nature Seekers Inc., Grande Riviere Environmental Awareness Trust, the Wildlife Section, RARE Center, Caribbean Union College, UWI and Glasgow University. The species has been designated an Environmentally Sensitive Species which, under the Environmental Management Act, requires that a national action plan for its protection be implemented. A national plan is being prepared by the EMA through the UWI-coordinated “Pawi Project”. The White-tailed Sabrewing (*Campylopterus curvipennis*), which went unrecorded for 10 years after the devastating Hurricane Flora in 1963, has also received attention in terms of basic research concerning its distribution, reproduction and behavior. Research conducted by Caribbean Union College and UWI has received support from EMA and the Tobago House of Assembly.

Habitats in Trinidad and Tobago are being impacted from many quarters. The current economic wealth of the country has placed a severe pressure on land (including wetland) for housing, commercial and industrial development. As well as the loss of habitat, these developments (e.g. heavy industry along the west coast) adversely affect the quality of the surrounding environment (both terrestrial and marine) through pollution. There are currently plans to accelerate the economic development of the country. During the dry season use of fire to clear vegetation either for agriculture or “aesthetic” purposes is a common practice (despite legislation prohibiting fires) often with little or no attempt to manage the fires. This leads to a degradation of the natural forest to open scrub vegetation dominated by grasses, vines and other early successional species, and to erosion problems. About 8% of the country's forest was lost to fire during the period 1990–2000. Squatting is a major problem on state lands, even within protected areas.

In addition to habitat loss and degradation, hunting birds is popular on both islands. Seabird colonies are threatened by poachers who collect the adult birds for meat (and presumably also take the eggs). While both Little Tobago and St Giles Islands are legally protected, poaching on St Giles is a regular occurrence and the breeding seabird population has declined. Management of Little Tobago is far more successful and demonstrates what could be accomplished if St Giles received the same attention. In Trinidad the seabird colonies at Soldado Rock and Saut d’Eau are infrequently visited and the current status of seabird nesting is not certain

(see “IBA overview” below). There is evidence however that the colony at Soldado has been abandoned, possibly due to poaching. Apart from the seabirds, species at particular risk from hunting include the Critically Endangered Trinidad Piping-guan (*Pipile pipile*), all ducks, night-herons, Limpkin (*Aramus guarana*), Scarlet Ibis (*Eudocimus ruber*; in Trinidad) and Rufous-vented Chachalaca (*Ortalis ruficauda*; in Tobago). Trinidad Piping-guan makes a notoriously easy target as it can appear oblivious to human presence even at close range. Hunting, coupled with destruction of freshwater marsh, is largely responsible for the country’s small water-bird populations, and threatens the continued breeding of Scarlet Ibis. In Trinidad there is a strong tradition of keeping cage-birds (including species of parrot, finches, euphonias and an oriole). The preferred species of seedeaters and seed-finches have now been so severely depleted that no

“Seedeaters and seed-finches have been so severely depleted for the cage-bird trade that no viable populations exist in the wild.”

viable population is thought to exist in the wild and birds are imported from the mainland. A prized Lesser Seed-finch (*Oryzoborus angolensis*) can sell for up to US\$2000 and current legislation permits the keeping of these birds. It is unlikely that a wild population would survive while current attitudes prevail.

Ornithological importance



In Trinidad and Tobago 468 bird species have been recorded. In Trinidad this includes 227 year-round resident species and 168 regular seasonal migrants (17 of which breed). A further 50 species are listed as wanderers or vagrants. In Tobago, 240 species have been recorded of which 92 are year-round residents, 122 are regular seasonal migrants (17 of which breed), and 22 are vagrants. The species composition is reflective of the South American origins with hummingbirds, trogons, woodcreepers, ovenbirds, antbirds, manakins and tanagers well represented. The only endemic bird is the Trinidad Piping-guan (*Pipile pipile*). However, there are 36 endemic subspecies of birds currently recognized in the country. The Secondary Endemic Bird Areas of Trinidad (SA 015) and Tobago (SA 017) were identified for Trinidad Piping Guan and White-tailed Sabrewing (*Campylopterus ensipennis*), respectively.

Although six globally threatened and Near Threatened species occur in Trinidad and Tobago, four of these are not represented in IBAs. The Near Threatened Caribbean Coot (*Fulica caribaea*) and Buff-breasted Sandpiper (*Tryngites subruficollis*) are both rare on the islands while the Endangered Red Siskin (*Carduelis cucullata*) has not been recorded since 1960 (and prior to that, 1926). The Near Threatened Olive-sided Flycatcher (*Contopus cooperi*) is a regular winter visitor from North America, frequenting the Northern Range forests, but in very small numbers (perhaps c.30 individuals). However, Trinidad does support the only population of the Critically Endangered Trinidad Piping-guan (thought to number just 70–200 birds), and the Near Threatened White-tailed Sabrewing occurs in the Main Ridge forest on Tobago where the population is recovering from near-extirpation as a result of Hurricane Flora (in 1963). The species is also found in the coastal cordillera and Paria Peninsula in Venezuela.

A number of biome-restricted species (in addition to Trinidad Piping-guan

and White-tailed Sabrewing) are resident in the country. On Tobago, the Rufous-vented Chachalaca (*Ortalis ruficauda*) is abundant (and recognized as the national bird), while the Venezuelan Flycatcher (*Myciarchus venezuelensis*) is less common. The Copper-rumped Hummingbird (*Amazilia tobaci*) is particularly abundant in residential areas of both Trinidad and Tobago. These three species are confined to the Northern South America biome (NSA). The Rufous-shafted Woodstar (*Chaetocercus jordanii*) – a Northern Andes (NAN) biome-restricted bird – is occasionally observed in Trinidad with one undocumented but credible record of nesting.

The small islands off both Trinidad and Tobago have supported important nesting concentrations of seabirds including Audubon’s Shearwater (*Puffinus lherminieri*), Red-billed Tropicbird (*Phaethon aethereus*), Red-footed Booby (*Sula sula*), Brown Booby (*S. leucogaster*), Magnificent Frigatebird (*Fregata magnificens*), Sooty Tern (*Sterna fuscata*) and Brown Noddy (*Anous stolidus*). However, poaching, and disturbance have significantly reduced the numbers involved and some colonies have been abandoned although source populations do persist and could lead to re-colonization if protection can be afforded the nesting areas. The Caroni Swamp and associated coastal mudflats support significant congregations of Scarlet Ibis (*Eudocimus ruber*; up to 15,000 birds), shorebirds (10,000–20,000) and seabirds (mainly 5000–6000 Laughing Gulls; *Larus atricilla*). However, waterbirds are otherwise generally rare in the country. Although 16 species of duck have been recorded, the only ones observed on a regular basis are wintering Blue-Winged Teal (*Anas discors*), and resident Black-bellied Whistling-duck (*Dendrocygna autumnalis*), White-cheeked Pintail (*A. bahamensis*) and rarely Masked Duck (*Oxyura dominica*). Post-breeding dispersal (presumably from Venezuela) results in small numbers of Fulvous Whistling-duck (*D. bicolor*), White-faced Whistling-duck (*D. viduata*) and the occasional Comb Duck (*Sarkidiornis melanotos*).



Black Skimmers (*Rynchops niger*) and Western Sandpipers (*Calidris mauri*) congregating on the West Coast Mudflats (TT001).
Photo: Graham White

IBA overview

All but one of Trinidad and Tobago's seven IBAs (Table 1, Figure 1) are under some form of formal protective designation, representing 80% of the area covered by the IBAs. West Coast Mudflats (TT001) is unprotected at present. However, management and enforcement (as outlined above) are insufficient to ensure the long-term survival of the key species currently found within their boundaries. The IBAs have been identified on the basis of 11 key bird species, including one globally and one Near Threatened bird (both of which are also restricted-range and biome-restricted species), three additional regularly occurring biome-restricted birds, and six congregatory waterbirds/ seabirds.

“None of the key species occurs in more than two IBAs in the country, emphasizing the critical importance of each individual IBA.”



Little Tobago Island (TT007). Photo: Graham White

None of the key species occurs in more than two IBAs in the country, emphasizing the critical importance of each individual IBA. Of particular note are: Caroni Swamp IBA (TT002) in supporting the largest concentrations of waterbirds; St Giles Islands (TT006) and Little Tobago Island (TT007) IBAs for supporting most of the seabirds; Main Ridge IBA (TT005) for harboring the only population of White-tailed Sabrewing (*Campylopterus curvipennis*) and biome-restricted species; and the Northern Range IBA (TT003) for the only confirmed population of the Critically Endangered Trinidad Piping-guan (*Pipile pipile*). The Northern Range IBA comprises six almost contiguous sub-units, defined by river catchments, together with all remaining lands above 500 m. These sub-units reflect different levels of state protection, private ownership and consequent levels of settlement and forest degradation. Trinidad Piping-guan is currently regularly observed within private lands at the northern edge of Matura National Park (embracing 9000 ha from 0–500 m, and including the south-flowing Salybia and Rio Seco rivers, and the north-flowing Shark River and Grande Riviere) and along the western ridge of Morne Bleu. There are also records from the north-flowing Madamas River catchment (4700 ha, from 0–600 m). The species probably survives in other eastern Northern Range watersheds within the IBA including the Quare River catchment (which includes El Cerro del Aripo and the Hollis Reservoir), and the Matelot, Oropuche and Matura river catchments.

Two small islands off Trinidad's coast hosted seabird colonies in the past, but their current status is in doubt and they have not been considered IBAs at this point. Soldado Rock is a small (c.0.6 ha and rising to 35 m) island, located offshore from Icacos Point, midway between Venezuela and Trinidad. The island supported a major breeding colony of Sooty Tern (*Sterna fuscata*) and Brown Noddy (*Anous stolidus*), with c.2500 pairs of each species from 1960 to 1982. Small numbers of Magnificent Frigatebird (*Fregata magnificens*) and Brown Pelican (*Pelecanus occidentalis*) currently roost on the island but the status of other seabirds is not known. It is likely that the colony has been abandoned either due to disturbance or due

Figure 1. Location of Important Bird Areas in Trinidad and Tobago

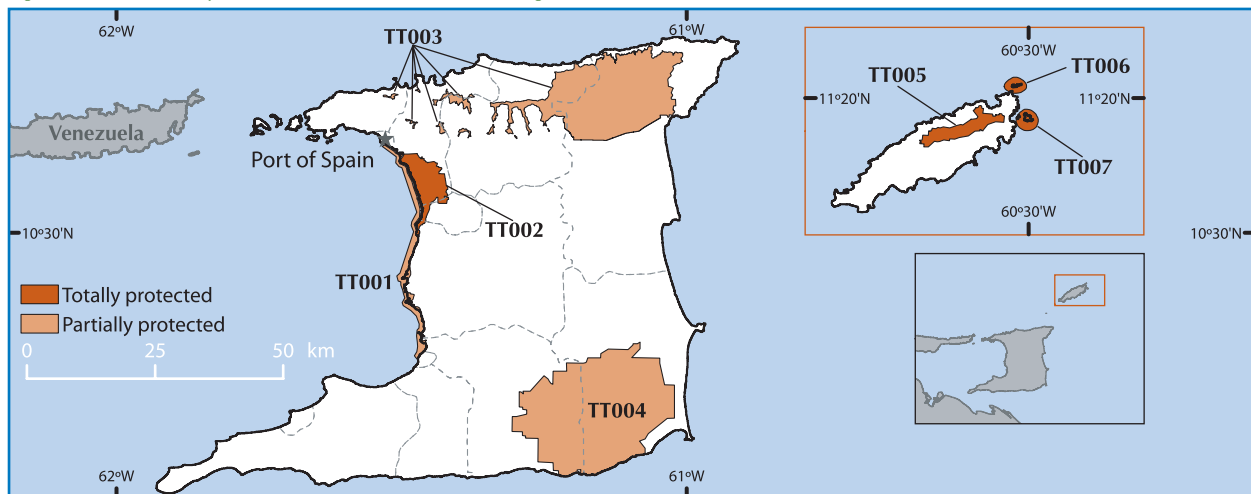


Table 1. Important Bird Areas in Trinidad and Tobago

IBA code	IBA name	Adm unit	Area (ha)	A1				A2		A3		A4		
				CR	EN	VU	NT			A4i	A4ii	A4iii	A4iv	
TT001	West Coast Mudflats	Trinidad	4,770								X		X	
TT002	Caroni Swamp	Trinidad	6,125								X		X	
TT003	Northern Range	Trinidad	36,570	1				X	X					
TT004	Victoria-Mayaro Forest Reserve	Trinidad	52,395	1				X	X					
TT005	Main Ridge, Tobago	Tobago	3,983				1	X	X					
TT006	St Giles Islands	Tobago	1,000								X	X		
TT007	Little Tobago Island	Tobago	1,350								X	X		

For information on trigger species at each IBA, see individual site accounts at BirdLife's Data Zone: www.birdlife.org/datazone/sites/

to general depletion of the fish stocks within the Gulf or Paria. Saut d'Eau island (c.10 ha) is located off Trinidad's north coast. In the past it hosted up to 100 breeding pairs of Brown Pelican but the current status of seabird breeding is not known.

Two sites that are essential for the maintenance of Trinidad's biodiversity but which do not meet the IBA criteria are Nariva Swamp and the Aripo Savannah. Nariva Swamp is Trinidad's largest freshwater marsh and critical for crakes, bitterns and rails. The site is potentially important for migrating waterfowl and has been designated as a Ramsar

Opportunities

Public education and awareness will continue to play an important role in engendering an appreciation of both the needs of conservation and a general respect for the environment. This will be essential if the impacts of hunting are to be reduced, both within the forests and in relation to the dwindling seabird colonies. Existing seabird colonies urgently need to be protected and efforts made to determine how local communities can be included in and benefit from the protection of these assets. Surveys are needed to determine which seabird species continue to breed in significant numbers (both in the IBAs, and in the other offshore islands as mentioned above). Field assessments (surveys and subsequent monitoring) for seabirds and other key species, especially White-tailed Sabrewing (*Campylopterus curvipennis*) and Scarlet Ibis (*Eudocimus ruber*) are also required. In the case of Trinidad Piping-guan, surveys are urgently needed throughout the Northern Range IBA, as is confirmation of its survival in the Victoria-Mayaro Forest Reserve IBA, (TT004), and must be followed up with regular monitoring and redoubled efforts to eliminate hunting as a threat to this Critically Endangered endemic.

“Trinidad Piping-guan surveys are urgently needed throughout the Northern Range and in the Victoria-Mayaro Forest Reserve”

Further information

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site. However, the combined waterbird populations probably do not exceed 10,000 birds. The swamp forest and stands of moriche palm within the Nariva Swamp and surrounding the Aripo Savannah are critical for five resident species: Rufescent Tiger-heron (*Tigrisoma lineatum*), Red-bellied Macaw (*Orthopsittaca manillata*), Epaulet (Moriche) Oriole (*Icterus cayanensis chrysocephalus*), Sulphury Flycatcher (*Tyrannopsis sulphurea*) and, to a lesser extent, Fork-tailed Palm-swift (*Tachornis squamata*). Attempts have been made to re-establish populations of the locally extirpated Blue-and-yellow Macaw (*Ara ararauna*) in this area.

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