
White-winged Nightjars *Caprimulgus candicans* and cerrado conservation: the key findings of Project Aguará Ñu 1997

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Desde el mes de julio hasta noviembre de 1997, el proyecto Aguará Ñu '97 estudió la avifauna de Aguará Ñu, un área de cerrado de gran importancia a nivel global dentro de la Reserva Natural del Bosque Mbaracayú, dpto. Canindeyú, Paraguay. Se realizaron estudios de la población de *Caprimulgus candicans* y por primera vez se describieron el plumaje de la hembra y el nido y los huevos de la especie. También se realizaron estudios breves en dos lugares más, Puerto Bahía Negra, dpto. Alto Paraguay y Estancia Tapytá, dpto. Caazapá. La mayoría de la superficie de Tapytá posee pastizales naturales y es uno de los lugares más importantes en el país para la conservación de las aves. En total se registraron 10 especies amenazadas y 19 casi-amenazadas. De gran importancia fue la población de *Anthus nattereri* descubierta en Tapytá. Nuestros registros de ocho especies nuevas para el Paraguay ilustran la urgente necesidad de realizar más trabajos de campo antes de que los recursos naturales que quedan en el país sean destruidos. Hay muy pocas iniciativas de conservación actuales dirigidas hacia las áreas de pastizales naturales y cerrado, y muy rápidamente se va a perder lo que queda de estos hábitats en Paraguay.

During the period July–November 1997, the Project Aguará Ñu team conducted biological and socio-economic studies at Aguará Ñu, a cerrado site of exceptional global importance within the Reserva Natural del Bosque Mbaracayú (RNBM), dpto. Canindeyú, Paraguay. Ornithological fieldwork was conducted in two further areas: the vicinity of Bahía Negra, Dpto. Alto Paraguay, in the extreme north-east of the Paraguayan Chaco; and Estancia Tapytá, dpto. Caazapá, south-east Paraguay. The project was a follow-up to Project Yacutinga '95^{1,11} which identified RNBM and specifically Aguará Ñu, as the most important site for the conservation of threatened open-country birds in Paraguay.

The two most important and threatened ecosystems in Paraguay are its remaining tracts of Atlantic forest and its natural grasslands^{8,11}. The former are severely threatened by commercial logging, while grasslands are rapidly being destroyed by extensive cattle-ranching, agriculture, forestation schemes, drainage, flooding for hydro-electric dams, fires, excessive use of pesticides and the introduction of exotic grasses¹. In addition, many of Paraguay's grasslands are potentially threatened by the Hidrovia development project, an ambitious plan to canalize most of the Río Paraguay⁴.

As a conservation issue, the destruction of grassland ecosystems has been totally overshadowed by deforestation^{5,15} with the plight of the grasslands and cerrados of central South America especially neglected^{6,13}. Figures for the destruction of grasslands are not even available for Paraguay, but the vast majority have been utilised by man to some extent.

The 64,000 ha RNBM is Paraguay's most important site for global biodiversity conservation^{1,11}. The site list of 417 bird species includes 12 considered threatened and 22 near-threatened⁷. This ranks the reserve among the most significant 'Key Areas' for globally threatened birds in the Americas^{1,14}. The RNBM protects 5,000 ha of dwarf palm cerrado known as Aguará Ñu. It was here, in 1995, that a small population of the enigmatic and Critically Endangered White-winged Nightjar *Caprimulgus candicans* was discovered^{1,11,12}. In addition to providing the first confirmed records for Paraguay, the site is only the third reported anywhere this century for the species. Ornithological fieldwork in 1997 focused on the nightjar. Seven males and seven females were caught, three males and two females were radiotracked and a minimum of six display territories found. The female plumage, roost sites and nest were all described for the first time. It is estimated that Aguará Ñu supports a population of 30–50 *C. candicans*. Other highlights from Aguará Ñu included a minimum of 10 Rufous-faced Crake *Laterallus xenopterus* calling in wet valley bottoms, with the call of this elusive species tape-recorded for the first time, and at least six singing male Black-masked Finch *Coryphaspiza melanotis*.

Fieldwork at Estancia Tapytá, Dpto. Caazapá in October 1997 revealed this site to be the second most important for threatened open-country birds in Paraguay. Tapytá supports a mixture of habitats, including gently undulating *campo sucio* grasslands, low inundated grasslands and Atlantic Forest. The estancia is owned by Forestal Yguazú, a subsidiary of Shell International plc, who are foresting most of the grassland with exotic, and some native, tree species.

One of the most significant discoveries was a population of the Endangered Ochre-breasted Pipit *Anthus nattereri* in the *campo sucio* grasslands. At least nine singing birds were recorded. The near-threatened Cuckoo-tailed Tyrant *Alectrurus tricolor* was found in the same area, with at least three displaying males seen. In the low, inundated grasslands three threatened species were recorded: Rufous-faced Crake *Laterallus*

xenopterus (a minimum of four individuals), Marsh Seed-eater *Sporophila palustris* (a single male associating with a female *Sporophila* sp.) and Saffron-cowled Blackbird *Xanthopsar flavus* (pairs and a flock of seven birds seen regularly). The records of *L. xenopterus* are the southernmost ever, and extend the range of this species by 200 km. One sighting of two Blue-winged Macaws *Ara maracana* was made, a very rare species in Paraguay, recorded once previously at Tapytá and only known currently from one other site in the country^{3,10,11}. Although most of the grassland at Tapytá is to be planted, part of the core area where these threatened and several near-threatened species were recorded is to be set aside as a private nature reserve under the scheme run by Paraguay's largest non-government conservation organisation, Fundación Moisés Bertoni (FMB).

In total, c.450 species were recorded during the project. Of these, 10 are considered threatened and 19 near-threatened⁷ (see Appendix 1). Seven species were recorded for the first time in Paraguay (species either not included or treated as hypothetical in Hayes⁹): Green-cheeked Parakeet *Pyrrhura molinae* (seen regularly in small numbers at Estancia 42, Bahía Negra, dpto. Alto Paraguay), Great Potoo *Nyctibius grandis* (one nesting individual incubating a single egg at Estancia Campo Grande, 90 km north-west of Puerto Bahía Negra, Dpto. Alto Paraguay), Band-tailed Nighthawk *Nyctiprogne leucopyga* (flocks of up to 50 individuals seen daily at Puerto Bahía Negra), Biscutate Swift *Streptoprocne biscutate* (one individual seen in November at Aguará Ñu, RNBM), Bolivian Slaty-antshrike *Thamnophilus sticturus* (common in the thorn scrub-forest at Estancia 42, Bahía Negra), Rufous-winged Antshrike *Thamnophilus torquatus* (seen regularly in small numbers at Aguará Ñu, RNBM: photo in *Cotinga* 8: 12) and Cinnamon Tanager *Schistoclamys ruficapillus* (seen twice in July and August at Aguará Ñu, RNBM). Two Little Cuckoo *Piaya minuta* were seen in riverside scrub on the eastern, Bolivian bank of the Río Negro, north of Puerto Bahía Negra. Given the narrowness of the Río Negro this species presumably occurs in Paraguay. Nevertheless, this represents a notable range extension within Bolivia¹.

Several other species only recently documented in Paraguay were recorded. These included Ocellated Crake *Micropygia schomburgkii* and Spot-tailed Nightjar *Caprimulgus maculicaudus* (both first recorded in Paraguay at RNBM in 1995 and again in 1997^{1,2}), Sooty Swift *Cypseloides fumigatus* (seen regularly at Aguará Ñu in November, first recorded in Paraguay in 1992³), Rufous-throated Sapphire *Hylocharis sapphirina* (recorded at Tapytá and RNBM, two of several widely scattered sites where the species has been recorded in Paraguay), Hellmayr's Pipit *Anthus hellmayri* (a singing bird at Estancia Tapytá, first recorded in Paraguay in 1995^{1,2}) and Dull-coloured Grassquit *Tiaris obscura* (one trapped and at least two seen at Estancia 42, Bahía Negra). The occurrence of *T. obscura* in the Chaco has only recently been documented, although a specimen was collected in the Paraguayan Chaco in 1945².

Our findings, combined with those from fieldwork in 1995, illustrate the importance of Paraguay's cerrado and grassland sites for the conservation of threatened open-country birds. A lack of knowledge of these habitats, and the ecosystems they support, is impeding effective conservation action. The sites surveyed all have some form of protection, but cover only small areas and agricultural development is rapidly encroaching on remaining open-country habitat. Aguará Ñu, Tapytá and Bahía Negra will all gain further protection through the most recent national conservation strategy for Paraguay—Proyecto Protección de Ecosistemas de Importancia Global y Regional en Paraguay. This seeks to declare two biosphere reserves: in the northern Chaco (including Bahía Negra) and the Atlantic forest. The latter will consist of two large areas, centred on RNBM (including Aguará Ñu) and Parque Nacional San Rafael (including Tapytá). An additional protected area will be established in the cerrados of dpto. Concepción. Although such a protected areas system will protect most of Paraguay's major ecosystems, a glaring omission are the southern grasslands of dptos. Misiones and Ñeembucú. This demonstrates that the biological importance of central South American grasslands is still not fully recognised by the relevant authorities. The race continues to discover their biological riches before it is too late.

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Appendix 1: Threatened and near-threatened species recorded during the project.

Threatened species

Black-fronted Piping-guan *Pipile jacutinga*
 Rufous-faced Crake *Laterallus xenopterus*
 Blue-winged Macaw *Ara maracana*
 White-winged Nightjar *Caprimulgus candicans*
 Helmeted Woodpecker *Dryocopus galeatus*
 São Paulo Tyrannulet *Phylloscartes paulistus*
 Ochre-breasted Pipit *Anthus nattereri*
 Black-masked Finch *Coryphaspiza melanotis*
 Marsh Seedeater *Sporophila palustris*
 Saffron-cowled Blackbird *Xanthopsar flavus*

Near-threatened species

Greater Rhea *Rhea americana*
 Solitary Tinamou *Tinamus solitarius*
 Grey-bellied Hawk *Accipiter poliogaster*
 Hudsonian Godwit *Limosa haemastica*
 Ocellated Crake *Micropygia schomburgkii*
 Pileated Parrot *Pionopsitta pileata*
 Sickie-winged Nightjar *Eleothreptus anomalus*
 Saffron Toucanet *Bailloniopsis bailloni*
 Bare-throated Bellbird *Procnias nudicollis*
 Sharp-tailed Grass-tyrant *Culicivora caudacuta*
 Bearded Tachuri *Polystictus pectoralis*

Southern Bristle-tyrant..... *Phylloscartes eximius*
Cock-tailed Tyrant *Alectrurus tricolor*
Lesser Grassfinch *Emberizoides ypiranganus*
Rufous-rumped Seedeater *Sporophila hypochroma*
Dark-throated Seedeater..... *Sporophila ruficollis*
Chestnut Seedeater *Sporophila cinnamomea*
White-banded Tanager..... *Neothraupis fasciata*
Green-chinned Euphonia *Euphonia chalybea*