

Conserving the Grassland Important Bird Areas (IBAs) of Southern South America: Argentina, Uruguay, Paraguay, and Brazil¹

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Abstract

In the southern part of South America, knowledge about bird species distribution is still not used as a tool for land use planning and conservation priority-setting. BirdLife International's Important Bird Areas (IBA) Program is an appropriate vehicle for analyzing existing information about birds, and to generate new data where necessary. IBA inventories should provide input to urgent regional conservation issues, such as those relating to temperate and subtropical grasslands. There is a rich avifauna of grassland-specialist species in Argentina, of which approximately 25 are threatened or near-threatened at the global level. The grassland biome also serves as wintering grounds for nearctic migrants, such as Bobolink (*Dolichonyx oryzivorus*), Upland Sandpiper (*Bartramia longicauda*) and Swainson's Hawk (*Buteo swainsoni*). The BirdLife network is represented in the region by the Brazil Program Office, Guyra Paraguay, Aves Uruguay and Aves Argentinas/AOP. These organizations are trying to start an international cooperative project focusing on grassland IBA identification and conservation.

Key words: Argentina, conservation, grasslands, Important Bird Areas.

Introduction

In the southern part of South America, where grazing and agriculture have severely impacted grassland habitat, knowledge about bird species distribution is still incomplete. As a result, this information is not used as a tool for land use planning and conservation priority-setting. BirdLife International's Important Bird Areas (IBA) Program is a useful way to analyze and to organize existing information about birds, and to generate new data where necessary. IBA inventories should

provide an input to urgent regional conservation issues, such as those relating to temperate and subtropical grasslands.

The Grassland Biome

Southern South America contains an extensive grassland biome, a continuous habitat matrix of 700,000 km², comprising part of Southeast Brazil, Northeast and Central Argentina, Uruguay and Southeast Paraguay (*fig. 1*). Temperate grasslands are known as 'Pampas', and the subtropical ones as 'Campos' (Soriano 1991). Relief is almost flat, with a very slight slope towards the Atlantic Ocean, and a few hills and rocky outcrops in isolated sites. In the Pampas, mean annual temperature is about 15°C, with warm summers and cool winters. Campos are warmer and wetter. Rainfall decreases from 1,000 to 1,500 mm in the north and east to 400 mm in the south and west (Cabrera 1976, Soriano 1991). In the Pampas, rains are more frequent in spring and fall, slight in winter and least in summer (Cabrera 1976), while in the Campos winter rains increase markedly (Lemcoff 1991).

Grasses (Poaceae) dominate the vegetation in the Pampas and Campos. The flora of the Pampas sub-region is comprised of about 1,000 species of vascular plants, mostly native (León 1991). Most of the plant taxa are shared with the Chaco biome, although there are several taxa of Andean origin (Cabrera 1976); endemic species are scarce. The number of grass species present in the Pampas is 230: 190 native and 40 introduced. The native grasslands are dominated by "flechillas" ("little darts"), of the genera *Stipa*, *Piptochaetium*, and *Aristida*. Other important plant families in addition to grasses are the Asteraceae and Fabaceae. In wet locations and years, vegetation structure corresponds to a prairie, and to a pseudo-steppe in drier conditions. We can distinguish some internal heterogeneity inside the Pampas, according to natural gradients and landscape features. The Campos is a gently rolling grassland; a subtropical savanna that constitutes the northern expression of the Pampas, with which it shares many plant taxa. Characteristic grass genera are *Andropogon*, *Aristida*, *Briza*, *Erianthus*, *Piptochaetium*, *Poa*, *Stipa*, *Paspalum*, and *Panicum* (León 1991). Trees appear in isolated patches or as riparian forests.

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The grasslands provide fertile soils, mild climate and excellent locations for urban settlement, and are being modified by several human activities. Grazing by cattle, agriculture, urban and infrastructure development, and afforestation with exotic trees are among the main land uses (Krapovickas and Di Giacomo 1998).

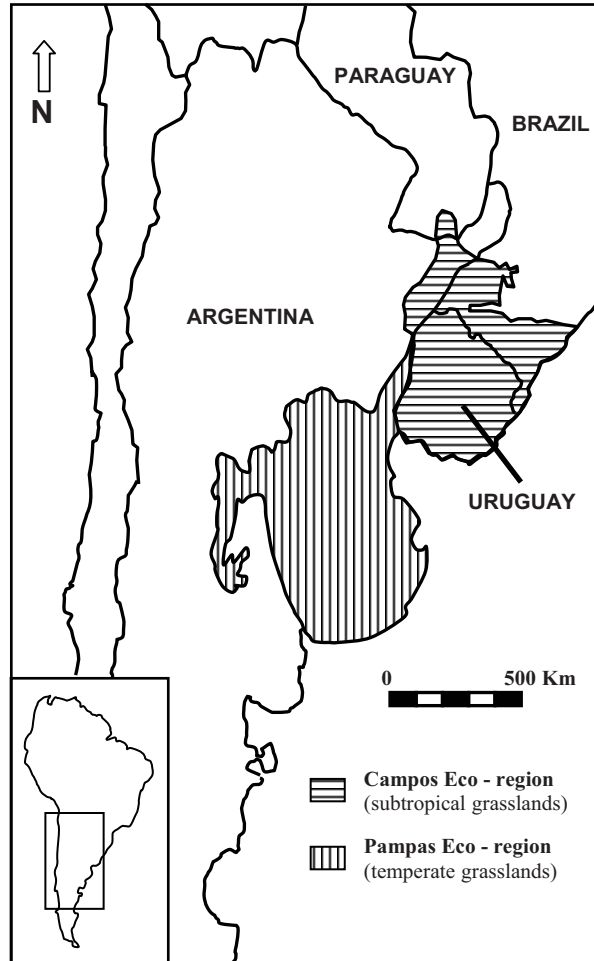


Figure 1— Distribution of two major grassland biomes, Pampas and Campos, in southern South America prior to European settlement. This map was adapted from Soriano (1991) and R. Fraga (pers. comm.).

The Grassland Birds

The avifauna of the grassland's biome is comprised of between 350 and 250 species in a northeast and southwest gradient (Narosky and Yzurieta 1987). There is a rich avifauna of grassland-specialist species, of which approximately 25 are threatened or near-threatened at the global level (table 1; BirdLife International 2000). Most grassland bird populations have declined markedly or are very fragmented (Krapovickas and Di Giacomo 1998). For example, the range of the Pampas

Meadowlark (*Sturnella defilippi*) has contracted by >80 percent (Tubaro and Gabelli 1999). Populations of other species, such as the Saffron-cowled Blackbird (*Xanthopsar flavus*), the Strange-tailed Tyrant (*Alectrurus risora*), and the Black-and-White Monjita (*Heteroxolmis dominicana*) (Fraga et al. 1998, Fraga 2001, A. Di Giacomo unpubl. data) have diminished at least by >50 percent. Numerous other species, including some flycatchers, nighthawks, sandpipers and seedeaters are now rare and very local. As a result of range contraction, these species can only be found in small fractions of the areas that they previously occupied (BirdLife International 2000). The main causes of this decline include the massive conversion of natural grasslands into croplands, the drainage of wetlands, and the intensification of agriculture and forestry in the last decades.

This grassland biome serves as wintering grounds for nine neartic migrants (Vickery et al. 1999) such as Bobolink (*Dolichonyx oryzivorus*), Upland Sandpiper (*Bartramia longicauda*), Swainson's Hawk (*Buteo swainsoni*), and others (table 2). Populations of some of these species decreased in the US between 1966 and 1996 (Peterjohn and Sauer 1999) and it is suspected that winter survivorship may be contributing to these long-term declines (Herkert 1997, Vickery and Herkert 2001).

Argentina's IBA Experience

Pampas and Campos biodiversity is not well represented in existing protected areas of Argentina. Fewer than 150,000 ha are formally included in reserves, representing about 0.3 percent of the biome's surface (APN 1998). Existing protected areas are located mainly in the Flooding Pampa (Samborombón Bay, with salty *Spartina* grasslands), the Austral Pampa (Sierra de la Ventana), and several scattered wetlands. The most threatened birds of the grasslands, including Saffron-cowled Blackbird, Entre Ríos Seedeater (*Sporophila zelichi*) and Black-masked Finch (*Coryphaspiza melanotis*) are not protected in any area of the System of National Parks (Chebez et al. 1998).

In Argentina, grassland IBA identification started in 2000 with financial support provided by BirdLife International/Vogelbescherming Nederland. Aves Argentinas decided to initially focus on the grassland biome (one of 18 ecoregions of the country) because of its high-priority conservation status (Di Giacomo 2001). The IBA Program is based in the Department of Conservation and Aves Argentinas, and the IBA technical committee responsible for formally identifying the IBAs is composed of a National IBA Coordinator (an employee of Aves Argentinas) and a team of field

Table 1— Globally threatened birds of the Pampas and Campos grasslands of Argentina, Brazil, Paraguay and Uruguay (BirdLife International 2000).

Species scientific name	Species common name	Family name	Threat category ¹	Argentina	Brazil	Paraguay	Uruguay
<i>Rhea Americana</i>	Greater Rhea	Rheidae	LR/nt	X	X	X	X
<i>Eleothreptus anomalus</i>	Sickle-winged Nightjar	Caprimulgidae	LR/nt	X	X	X	
<i>Porzana spiloptera</i>	Dot-winged Crane	Rallidae	VU	X			X
<i>Numenius borealis</i> ²	Eskimo Curlew	Scolopacidae	CR	X	X	X	X
<i>Tryngites subruficollis</i>	Buff-breasted Sandpiper	Scolopacidae	LR/nt	X		X	X
<i>Harpyhaliaetus coronatus</i> ³	Crowned Eagle	Accipitridae	VU	X	X	X	
<i>Spartonoica maluroides</i>	Bay-capped Wren-Spinetail	Furnariidae	LR/nt	X	X		X
<i>Limnocittes rectirostris</i>	Straight-billed Reedhaunter	Furnariidae	LR/nt	X	X		X
<i>Culicivora caudacuta</i>	Sharp-tailed Grass-Tyrant	Tyrannidae	LR/nt	X	X	X	
<i>Polystictus pectoralis</i>	Bearded Tachuri	Tyrannidae	LR/nt	X	X	X	X
<i>Pseudocolaptes dimellianus</i>	Dinelli's Doradito	Tyrannidae	LR/nt	X	X	X	
<i>Heteroxolmis dominicana</i>	Black-and-white Monjita	Tyrannidae	VU	X	X		X
<i>Alecturus tricolor</i>	Cock-tailed Tyrant	Tyrannidae	VU	X	X	X	X
<i>Alecturus risora</i>	Strange-tailed Tyrant	Tyrannidae	VU	X	X	X	X
<i>Anthus nattereri</i>	Ochre-breasted Pipit	Motacillidae	VU	X	X	X	
<i>Gubernatrix cristata</i> ³	Yellow Cardinal	Emberizinae	EN	X	X		X
<i>Coryphaspiza melanotis</i>	Black-masked Finch	Emberizinae	VU	X	X	X	
<i>Sporophila ruficollis</i>	Dark-throated Seedeater	Emberizinae	LR/nt	X	X	X	X
<i>Sporophila palustris</i>	Marsh Seedeater	Emberizinae	EN	X	X	X	X
<i>Sporophila hypochroma</i>	Grey-and-chestnut Seedeater	Emberizinae	LR/nt	X	X	X	
<i>Sporophila melanogaster</i>	Black-bellied Seedeater	Emberizinae	LR/nt		X		
<i>Sporophila cinnamomea</i>	Chestnut Seedeater	Emberizinae	VU	X	X		X
<i>Sporophila zelichi</i>	Entre Ríos Seedeater	Emberizinae	CR	X		X	X
<i>Sturnella defilippii</i>	Pampas Meadowlark	Icteridae	VU	X	X	X	X
<i>Xanthopsar flavus</i>	Saffron-cowled Blackbird	Icteridae	VU	X	X	X	X
Total species by country				24	21	17	16

¹CR= critically endangered, EN= endangered, VU= vulnerable, LR/nt= low risk/ near threatened

²Possibly extinct

³Woodland species often found in grassland habitats

Table 2— *Nearctic breeding birds that winter in Pampas and Campos grasslands (Stotz et al. 1996).*

Species name	Family name
Swainson's Hawk (<i>Buteo swainsoni</i>)	Accipitridae
American Golden Plover (<i>Pluvialis dominica</i>)	Charadriidae
Eskimo Curlew (<i>Numenius boreales</i>) ^{1, 2}	Scolopacidae
Upland Sandpiper (<i>Bartramia longicauda</i>)	Scolopacidae
Buff-breasted Sandpiper (<i>Tryngites subruficollis</i>) ²	Scolopacidae
Sand Martin (<i>Riparia riparia</i>)	Hirundinidae
Cliff Swallow (<i>Petrochelidon pyrrhonota</i>)	Hirundinidae
Barn Swallow (<i>Hirundo rustica</i>)	Hirundinidae
Bobolink (<i>Dolichonyx oryzivorus</i>)	Icteridae

¹ Possibly extinct (BirdLife International 2000)

² Globally threatened (BirdLife International 2000)

ornithologists. A manual on how to identify IBAs has been produced in Spanish. This manual explains the basic data needed to complete the IBA nomination forms and at the same time it serves to advertise the project to the public. The manual includes complete up-to-date lists of all species and population thresholds that can trigger the four global IBA criteria. In this way all the necessary information needed to complete a nomination is found in the same publication.

A list has been produced of approximately 200 potential IBAs that contain recent records of globally threatened grassland bird species. Primary sources of data used to support the nomination of these sites as IBAs include: a) a database compiled by Dr. Rosendo Fraga (1995-1998), b) the Inventory of Key Areas - BirdLife International (Wege and Long 1995), c) recent literature and museum specimens, d) inventories from recent field surveys, and e) nomination forms filled out by individuals based on their own data. In addition to these sources of data, sites will be revisited to get more complete information about bird populations, habitat, boundaries, ownership, and threats.

The IBA database for this region (BirdLife's World Bird Database) is still being populated, but as of November 2002 there was sufficient information to complete nomination forms for 22 grassland sites. These sites are currently classified as 'candidate IBAs' (table 3). Each candidate IBA has viable populations of one to 14 threatened bird species. These sites contain a total of 24 threatened species and together constitute a

significant proportion of the total remaining grassland habitat in the region.

Sites in the "Campos" grassland seem to have the highest numbers of threatened species (between 9 to 14 each). However, these sites are severely threatened by accelerating changes in land cover because the government is subsidizing afforestation with exotic pines and *Eucalyptus* (Di Giacomo and Krapovickas 2001). Another important region in which to identify IBAs is the Iberá Marshes Basin in the province of Corrientes. This region encompasses 1.3 million ha of a complex mosaic of habitats such as grasslands, patches of forests, marshes, lagoons, forestations and agricultural fields. There is still much information lacking in order to correctly assess the importance of each Iberá site and determine the boundaries. Threats to Iberá's sites appear to be the same as those mentioned for the sub-region in the Campos. A third area with a high density of potential IBAs is in the southern region of the Entre Ríos province. This region is in the temperate grasslands habitat and it has four candidate IBAs that are threatened by changes in land cover, particularly agriculture and urbanization. All three of these regions are included in the Endemic Bird Area known as "Argentina's Mesopotamian Grasslands;" a region of high priority at global level for the conservation of three endemic bird species of genus *Sporophila* (Stattersfield et al. 1999). Other critical sites that have been identified as potential IBAs include populations of local birds such as the Straight-billed Reedhaunter (*Limnortyx rectirostris*) and the Pampas Meadowlark.

The 22 candidate IBAs include all the provinces in the grassland biome. This set of sites provides a starting point for official IBA designation, outreach, media coverage, stakeholder analysis and advocacy. Some of these candidate IBAs are currently protected by the Federal or Provincial Governments or by private landowners, and the remaining have several threats.

Initiating this IBA project provided Aves Argentinas with an increased opportunity to participate in the search for solutions for one of the most serious conservation problems in southern South America. Since this project began, Aves Argentinas has obtained more up-to-date information concerning problems encountered by populations of threatened grassland species and has also enhanced its ability to carry out new evaluations and to design action plans.

IBAs are a simple and cost-effective way to incorporate biodiversity issues in land-use plans. The IBA activities are aimed at helping to make sound decisions in land use planning and biodiversity conservation, as well as producing a valuable database. It is crucial that society become aware of and concerned about these

Table 3— Candidate Important Bird Areas in the Pampas and Campos grassland of Argentina.

IBA name	Province	Area (ha)	IBAs Criteria¹	Threatened species	Level of protection
Reserva Natural Ing. R. Otamendi	Buenos Aires	3,000	A1, A3	5	National Nature Reserve
Reserva Natural Punta Lara	Buenos Aires	300	A1, A3	2	
San Cayetano	Buenos Aires	ca.30,000	A1, A3	2	
Puan - Tornquist	Buenos Aires	600,000	A1, A3	2	
Bañados del Río Dulce y Laguna de Mar Chiquita	Córdoba	ca.500,000	A1, A4	6	Múltiple-use Provincial Reserve
San Francisco	Córdoba	4,000	A1	3	
Bañados del río Saladillo	Córdoba	80,000	A1, A4	2	
Estancia Dos Hermanas – Fundación Raquel y Pamela Schiele	Córdoba	5,400	A1, A3, A4	3	Private Reserve
Estancia Puerto Valle	Corrientes	8,000	A1, A2, A3	8	Private Reserve
Estancia San Juan Poriahú	Corrientes	14,500	A1, A3, A4	9	Private Reserve
Parque Nacional Mburucuyá	Corrientes	17,680	A1, A2, A3	7	National Park
Albardón del río Aguapey	Corrientes	60,000	A1, A2, A3	7	
Concepción	Corrientes	200,000	A1, A2, A3	8	
Reserva Natural Iberá	Corrientes	1,300,000	A1, A2, A3, A4	14	Provincial Reserve
Bañado Mora Cué	Corrientes	ca.15,000	A1, A2, A3	6	
Parque Nacional El Palmar	Entre Ríos	8,500	A1, A3	9	National Park
Gualeguaychú	Entre Ríos	ca.3,000	A1, A3	10	
Ceibas	Entre Ríos	ca.20,000	A1, A3, A4	5	
Perdices	Entre Ríos	ca.10000	A1, A3	11	
Estancia Guaycolec	Formosa	25,000	A1, A3	3	Private Reserve
Reserva Ecológica El Bagual	Formosa	3,900	A1, A3	10	Private Reserve
Reserva Natural "Federico Wildermuth"	Santa Fé	1,300	A1, A3	4	Private Reserve

¹ IBA criteria: A1= globally threatened species, A2= globally endemic species, A3= biome indicator species, A4= congregatory species.

issues and it is important to enhance co-operation among institutions and researchers. It was these ideas that guided Aves Argentinas to promote a workshop for scientists and conservation institutions. Fortunately, there are several organizations that share the same objectives with whom the workshop was co-hosted. These organizations included: the National Institute for Agricultural Technology (INTA), the Foundation for Argentine Wildlife (FVSA), the National Parks Administration (APN), and the National Biodiversity Group supported by the South America Regional Office of the International Union for Conservation of Nature and Natural Resources (IUCN). As a result of the workshop the participating organizations decided to call the project "Interorganization Committee for the Conservation of Pampas Biodiversity (BIOPAMPA)." BIOPAMPA consists of a participatory and coordinated effort of an increasing number (>30) of official and private organizations that are oriented towards the evaluation, conservation and sustainable management of the biological diversity of the Pampas eco-region. The philosophy of this initiative is to build on the convergence of common interests, the ambitions of government and private institutions, public participation, solidarity, and a consensus of clear ideas. This is very important as the IBA program is starting to become known on a national scale, and as a concept it has already been adopted by several researchers, environmental consultants, and decision makers.

Researchers use the IBA program as a way to value different areas objectively, by assessing the bird life. Decision makers use the IBA program as a fundamental tool with which to discuss and make decisions about environmental issues. The number of potential sites that might be nominated as IBAs could increase to approximately 200. This could be a difficult number for the small conservation community in the region to manage in the limited time available, particularly considering the limitations of budget, personnel, and logistical difficulties such as inaccessibility and the great distances between sites. A goal is that Aves Argentinas, through the IBA program, can contribute to regional development by studying, valuing, and conserving the biological and cultural richness that the natural environment and its flora and fauna represent for Argentina.

Future Plans

The tools that are used currently in Argentina are also being utilized in neighboring countries. Besides Aves Argentinas, the Brazil Program Office, Guyra Paraguay, and Aves Uruguay represent the BirdLife network in the region. The Brazil BirdLife Program has identified ten IBAs in the state of Rio Grande do Sul

with threatened birds of the grasslands. Guyra Paraguay has identified several parks and reserves in east of the country with important populations of grassland birds. Aves Uruguay has identified ten IBAs, with five of them identified for their relevance to grassland bird conservation.

Together these organizations are attempting to launch an international cooperative project focusing on grassland IBA identification and conservation from a regional perspective. The IBA approach allows for the integration of information regionally, and should increase the participation of ornithological institutions in the conservation of natural resources. The establishment of a regional legal framework to protect IBAs is an important goal for the BirdLife International Partnership in southern South America. Mercosur, the free trade agreement among Argentina, Brazil, Paraguay and Uruguay, could provide such a framework in the near future, as NAFTA is helping to integrate conservation action among the countries of North America.

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