

BIRDWATCHING IN THE MAMIRAUÁ LAKE AS AN APPEAL TO  
ECOTOURISTS/BIRDWATCHERS.  
OBSERVAÇÃO DE AVES NO LAGO MAMIRAUÁ COMO ATRATIVO PARA  
ECOTURISTAS/BIRDWATCHERS.

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KEY WORDS:

Sustainable Development  
Reserve;  
Uakari Lodge;  
Amazon;  
Varzea Forest.

ABSTRACT

The Mamirauá Sustainable Development Reserve fits the profile of a good destination for birdwatching, because it has high species diversity, bilingual guides, updated bird lists, field guides and adequate infrastructure. In this paper we present the bird species observed during a regular type of tourist activity held in Uakari Lodge and also relate the richness and diversity of birds to fluctuations in water level during several months. The study was conducted between June 2009 and September 2011, and it took a total of 68 boat trips, 480 ecotourists, adding up to a total of 238 hours. 134 bird species were recorded, which corresponds to 37% of the number of species that occurs in the Mamirauá SDR. Large-billed Tern (*Phaetusa simplex*) and Striated Heron (*Butorides striata*) were seen at all the trips. Yellow-rumped Cacique (*Cacicus cela*) and Black-collared Hawk (*Busarellus nigricolis*) were observed 62 times. Horned Screamer (*Anhima cornuta*) and Hoatzin (*Opisthocomus hoazin*) came right after, with 61 sightings. The distribution of observations of attractive species really provide the more informed ecotourist some real entertainment, as to which would be the best time of year to visit the Mamirauá SDR.

PALAVRAS-CHAVE:

Reserva de Desenvolvimento  
Sustentável;  
Pousada Uacari;  
Amazônia;  
Floresta de Várzea.

RESUMO

A Reserva de Desenvolvimento Sustentável Mamirauá se enquadra no perfil de um bom destino para observação de aves, pois possui elevada riqueza de espécies, guias bilíngues, listas atualizadas, guias de campo e infraestrutura adequada. No presente trabalho procuramos apresentar as espécies de aves observadas durante uma atividade turística regular realizada na Pousada Uacari e relacionar a riqueza e diversidade da avifauna com as flutuações do nível da água durante os meses. O estudo foi realizado entre junho de 2009 e setembro de 2011, em 68 passeios de barco, feitos com 480 ecoturistas, num total de 238 horas. Ao todo foram registradas 134 espécies de aves, totalizando 37% do número de espécies que ocorrem na RDS Mamirauá. Trinta-réis-grande (*Phaetusa simplex*) e socozinho (*Butorides striata*) foram avistados em todas as saídas a campo. Xexéu (*Cacicus cela*) e gavião-belo (*Busarellus nigricolis*) foram observados 62 vezes. Anhuma (*Anhima cornuta*) e cigana (*Opisthocomus hoazin*) vieram na sequência, com 61 avistamentos. A distribuição das observações de espécies atrativas ilustra ao ecoturista interessado em ver alguma delas a melhor época do ano para visitar a RDS Mamirauá.

## INTRODUCTION

Birdwatching is one of the most expanding branches of ecotourism in the world (FIGUEIREDO, 2003). Birdwatchers is the group of animal observers that has gathered more followers on the planet nowadays (MOURÃO, 2004).

It is considered a low-impact environmental tourist activity, being also educational and sustainable, not to mention the plus of involving the local populations (FARIAS; CASTILHO, 2007). It mobilizes approximately 80 million people around the world (SANTOS, 2006), from which 70 million are from the USA alone and about 1 million are from the UK (PIVATTO; SABINO, 2005). In Brazil, it's less than 1% of the Brazilian population practice birdwatching - about 15.000 people (Pers. Com. Alyson V. de Melo).

The Mamirauá Sustainable Development Reserve (Mamirauá SDR) fits the profile of a great destination site for birdwatching, because it contains all the important characteristics described by Mourão (1999), such as high species diversity, bilingual guides, updated bird lists, special field guides and adequate infrastructure (PERALTA et al., 2010).

Since 1998 there has been an ecotourism program at the Mamirauá SDR which promotes environment preservation as well as generation of income to local communities (PERALTA, 2002). Birdwatching activities are restricted to the Ecotourism Special Management Zone, an area created in order to reduce pressure over natural resources and which also regulates tourist activities at the Mamirauá SDR (IDSM, 2010).

One of the main attractions and reasons for such tourist appeal is that at Mamirauá SDR is the rich and easy-to-see fauna (PERALTA, 2002). The várzeas at the reserve contain a rich variety of vertebrates, and endemism rates are high (AYRES; JOHNS, 1987, apud PERALTA, 2002).

This essay contains several bird species observed during a regular tourist activity at the Uakari Lodge; along with the relationship between the richness of the bird fauna and fluctuations of water level throughout the months.

## MATERIAL AND METHODS

### Study area

The Mamirauá Sustainable Development Reserve is located in the Amazonas state's mid-west area (03°08'S, 64°45'W and 02°36'S, 67°13'W), near the city of Tefé. It covers 1,124,000 hectares of seasonally flooded forest (várzea), limited by the Solimões, Japurá and Auati-Paraná rivers. This ecosystem represents 200,000 km<sup>2</sup>, or around 2% of all the Amazon Forest (JUNK, 1983). The weather is tropical humid, with an average annual rainfall of 2350 mm (AYRES, 1993).

The aquatic environment at the Mamirauá SDR is marked by a great seasonal water level variation. The rain season starts in November, causing the forest to flood in March and from that on up until the beginning of May, while the dry season starts in mid July, and then up until September. It rains most intensely from December to March, and the driest period is from August to October (IDSM, 2009). The area suffers periodic floods due to water level variation, which peaks at 10 to 14 meters. At this peak, all the Mamirauá SDR is covered with water (IDSM, 2010).

The ecotourism area is located at the confluence of the Japurá and Solimões rivers and covers an area of 35 km<sup>2</sup> of Mamirauá SDR's territory. In this area, lies the Mamirauá lake, about 10 km long, but only 400 m wide (Figure 1). A low bushy vegetation, intertwined with secondary and exuberant forests cover the river margins territory (AYRES, 1993).

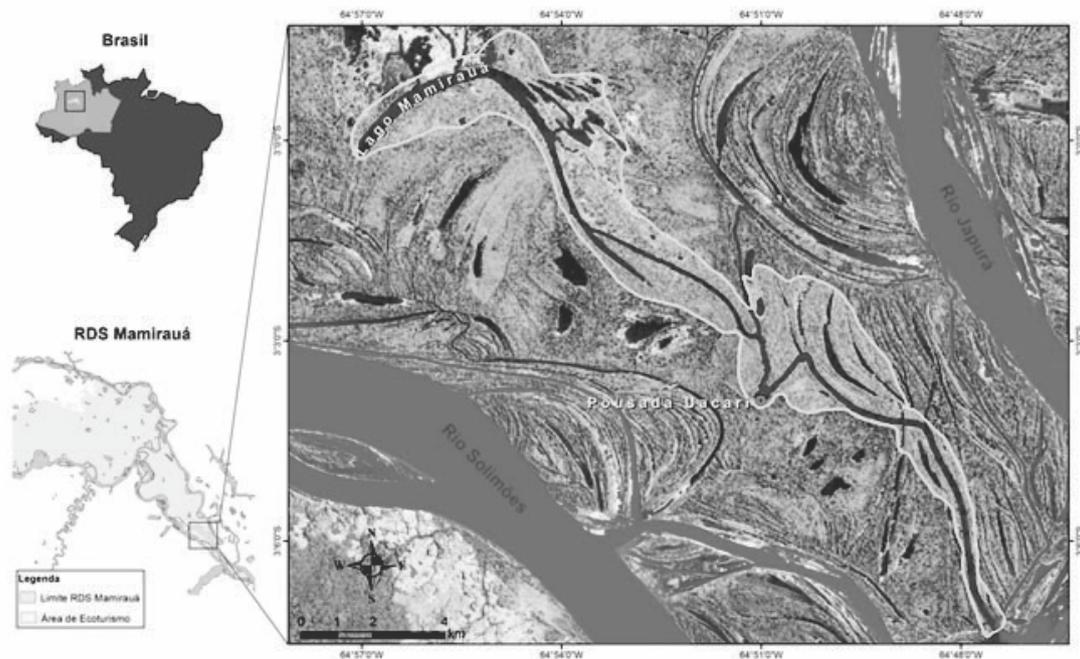


Figure 1 - Especial Ecotourism Handling Zone, Mamirauá SDR.

## Data collection

Studying of the birds is comprised of quality samples obtained during the boat trip, along with the regular tourist visitations at the Mamirauá SDR. The entire journey is made aboard a wooden motor boat (20 or 15 hp), with capacity for about 11 people, including the pilot, local guide and naturalist guide. The observations were made by naturalist guides, with binoculars, rarely with the help of the local guide,

The trip started at Uakari Lodge, at around 3:30 pm, with observations being noted from that moment on, excluding the birds along the lodge surroundings.

The water track started at a channel (from the lodge) which grants access to the Mamirauá

Lake (03°06'55"S e 64°47'50"W), generally with a longer stop at the lake's entrance, for a brief explanation, and another stop at the end of the lake, for appreciation of the sunset, adding up to the journey a total of 38.5 km there and back. The way back to the lodge, at dusk and beginning of the night, was also part of data collection, which ended at 07:00 pm;

All birds observed, or heard, were reported, even the species that had been previously noted. For the record, air space was also considered, which is noted here as the zone above the tallest vegetations, where birds carry through with their flights. Movement was registered (in flight, standing or inside of the water) and also stratus (below, in the canopy, or above of the canopy) wherever the first individual of a species was observed. When it

was not possible to identify the species, the genus was noted. Taxonomy followed the Brazilian Committee of Ornithological Registers (2011).

Since the research was conducted along with the tourist activities, the search for birds was not exclusive, and whenever something considered interesting was observed (i.e. a group of monkeys), the boat would stop for observations and photos. The same occurred for any animal, plants or any situation in which the tourist desired to observe calmly. Therefore the boat not only did not sail in constant speed, it also didn't keep the same distance from the edge of the forest all the time.

Some birds had been lost at moments of talking/ explanations to the tourists, due to the noise from the engine and/or speed of the boat. Therefore, the central idea was the observation of species on a regular tour, along with heterogeneous tourist groups, where some liked birds more than others. With this, it was made possible to have singular register of what can be observed in this type of tour at any and each time of the year.

The observations had been separated per month and the months were divided according to the water level. When there are two popular names for the same cited species, the first one is the official name, in accordance to the CBRO (2011) and the second is the name by which the bird is known in the region.

## RESULTS AND DISCUSSIONS

Data collection started in June 2009 and it went on until September 2011, adding to a total of 25 months, 68 samplings, a total of 238,5 hours, and the presence of 480 visitors. There were no

observations in February nor in March 2010, and in March 2011. 134 bird species have been observed (Attachment) and this number did not become stable near the date of the last monitoring (Figure 2).

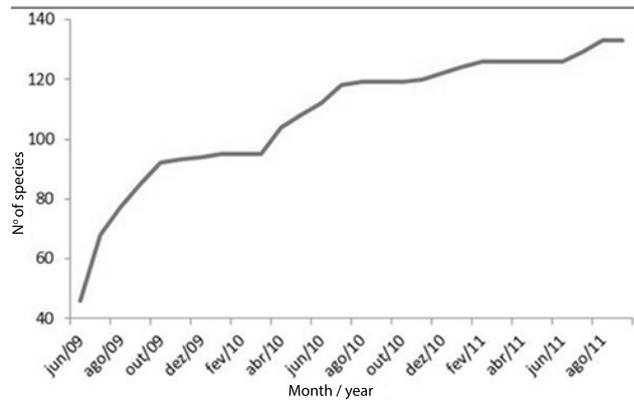


Figure 2 - Record of bird species number during the study.

The observations, restricted to Mamirauá Lake, limited the number of species seen. Most species observed lives near aquatic environments, along forest edges or is aquatic. However, high richness in species is observed, a total of 37% of 361 species that occur in the Mamirauá SDR.

The possibility of observation of each species depends on factors such as ecology and species behavior, which include the areas that the animal frequents, the migration in accordance with the water level, visibility, and luck.

The species Large-billed Tern (*Phaetusa simplex*) and Striated Heron (*Butorides striata*) had been sighted in all trips, but others, such as the Mealy Parrot (*Amazona farinosa*) and the Cream-colored Woodpecker (*Celeus flavus*), were seen only once.

Amongst the species observed during the research, the Yellow-rumped Cacique (*Cacicus cela*) and the

Black-collared Hawk (*Busarellus nigricolis*) had the most number of observations, adding a total of 62 times. Horned Screamer (*Anhima cornuta*) and Hoatzin (*Opisthocomus hoazin*) come right after, being spotted 61 times.

Observation of these four species was possible throughout all the months.

20 species were highlighted as having strong tourist appeal, with a minimum of 20% observations.

**Horned Screamer** (*Anhima cornuta*), one of the most observed species way along the Mamirauá Lake. It has great association with aquatic environments, especially lakes full of macrophytes, where it feeds and reproduces (SICK, 1997).

**Great Egret** (*Ardea alba*), very common in the Mamirauá SDR and observed throughout the year. However, they are even more frequent and extraordinary in quantity during the low water period, when the food supply is greater.

**Neotropic Cormorant** (*Phalacrocorax brasilianus*) calls visitors' attention during the dry season, when they congregate by the thousands in Mamirauá Lake region. This period of the year is the time of highest abundance for aquatic birds, because the fish are trapped into small pools of water or in shallow water.

**The Hoatzin** (*Opisthocomus hoazin*), as well as the Horned Screamer, are species observed throughout the year (Figure 3). They living on the margins of lakes and lowland rivers, where they feed and build their nests. It is a very noisy bird which makes its observation easy. During the drought, the Hoatzin is almost sure to be spotted.

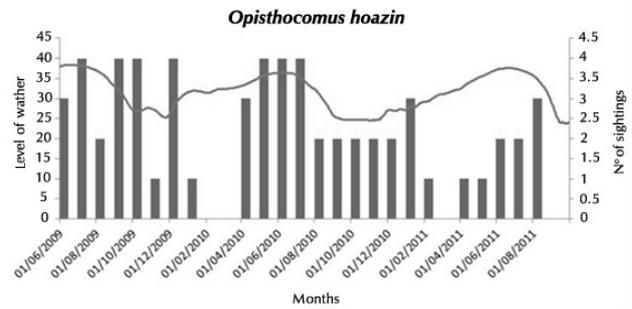


Figure 3 - Seasonality of the Hoatzin in the Mamirauá lake.

**Wattled Jacana** (*Jacana jacana*), a quite common species in the edges of the Mamirauá Lake. With very prominent color is even more attractive during the dry season, when it is possible to see hundreds of these birds together.

**Purple Gallinule** (*Porphyrio martinica*) is a specie that occurs around the canals and lakes of the Mamirauá SDR and is found frequently throughout the Mamirauá Lake. Its shining colors really call the visitors' attention.

**Osprey** (*Pandion haliaetus*) was observed mainly in the months of flooding (Figure 4). It is a northern migratory bird, appearing in the Southern Hemisphere during the spring and the summer, from the drought to the middle of the flooding in the Amazon (SICK, 1997). Thus, months of greater sightings are from October to February.

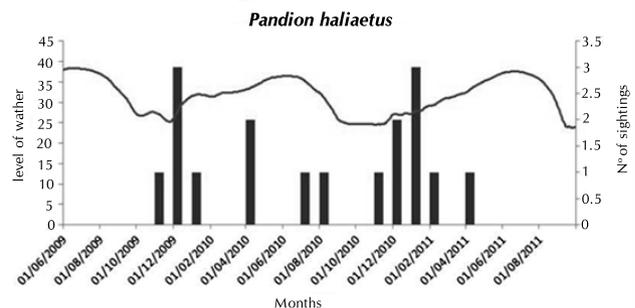


Figure 4 - Seasonality of the Osprey in the Mamirauá Lake.

**Black-collared Hawk** (*Busarellus nigricolis*) is a species that lives in strong association with aquatic or flooded environments, very common along rivers and lakes (SICK, 1997), therefore along the margins of the canal and at the Mamirauá Lake.

**Sunbittern** (*Eurypyga helias*) was observed mainly in the receding waters and in the drought months (Figure 5). The species is associated with the bushes alongside rivers, but it is also usually found in beaches and dry areas.

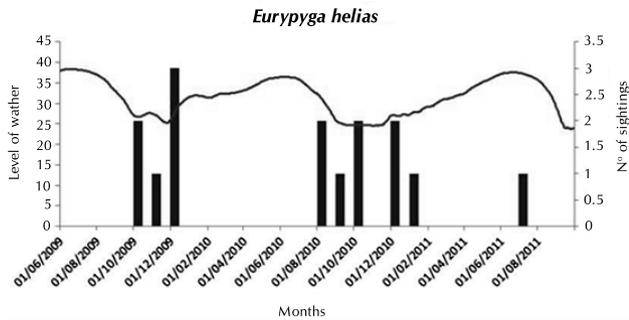


Figure 5 - Seasonality of the Sunbittern in the Mamirauá Lake.

**Black Skimmer** (*Rynchops niger*) a migratory species (DEGRAAF; RAPPOLE, 1995) appeared during the ebbs and droughts (Figure 6), feeding off of fish and other small animals living near the water surface. In the Mamirauá Lake area, it is easy to obtain food during the driest periods, and this period is their nesting period. They always lay their eggs in river beaches.

**Tui Parakeet** (*Brotogeris sanctithomae*) was observed throughout the whole year, but sightings peaked three times during the floodings in 2009 and 2010. The peaks observed during the flood are due to maturation of *mungunba* fruits (*Pseudobombax munguba*), a tree typical of water streams and one of the birds favorites during the high waters.

**Short-tailed Parrot** (*Graydidascalus brachyurus*) peaked three times during drought, flooding and high waters. It is a psittaciform directly related to varzea environments and very common along the Mamirauá SDR

**Scarlet Macaw** (*Ara macao*) was mostly spotted during the floods in 2009 and 2011 and in the flooding in 2010 (Figure 7), probably due to increased availability of fruits. It is the bird that occupies the highest forest stratus and it is quite commonly seen in flight.

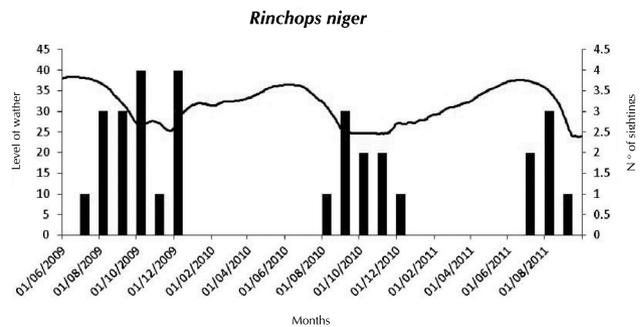
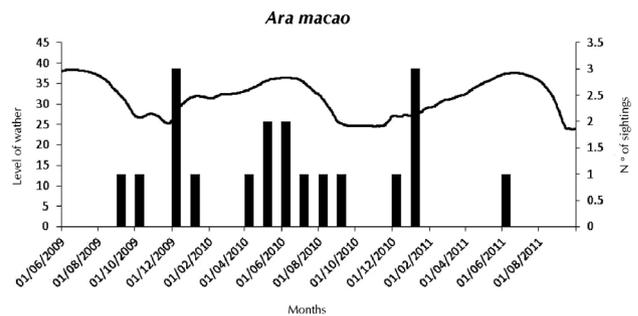


Figure 6 - Seasonality of the Black Skimmer in the Mamirauá Lake.



Picture 7 - Seasonality of the Scarlet Macaw in the Mamirauá Lake.

**Festive Parrot** (*Amazona festiva*) also had a steady number of observations. It is a bird directly related to varzea environments and quite common along the Mamirauá SDR.

**Scarlet-crowned Barbet** (*Capito aurovirens*) was sighted during an entire year (Figure 8). It is found both in the forest, and in its borders, associated to varzea areas, and, despite not being one of the most common birds at the Mamirauá SDR, it can be seen with some frequency in the area along the Mamirauá Lake.

**White-throated Toucan** (*Ramphastos tucanus*) was spotted in different periods of the year, peaking during the 2009 and 2011 flooding (Figure 9). This bird inhabits different habitats at the Mamirauá SDR, but it is not a very common species, although it is possible to observe it during all periods of the year.

**Bare-necked Fruitcrow** (*Gymnoderus foetidus*) was noted mainly during the flooding, and the first months of the ebb flow, when water level is still high. (Figure 10), probably due to the larger availability of fruits during this period. (SNOW, 1982).

**Red-capped Cardinal** (*Paroaria gularis*) there were 3 moments of peak sightings, during the drought, the flooding and the high waters. It is closely related to water streams, but, since it is a small bird, its observation depends a little on the distance it is to this environment. Nevertheless, this is a regular bird.

**Yellow-rumped Cacique** (*Cacicus cela*) is a bird found in practically any area of the Mamirauá SDR, and most of its nests are found near lakes and rivers, therefore, easy to be seen.

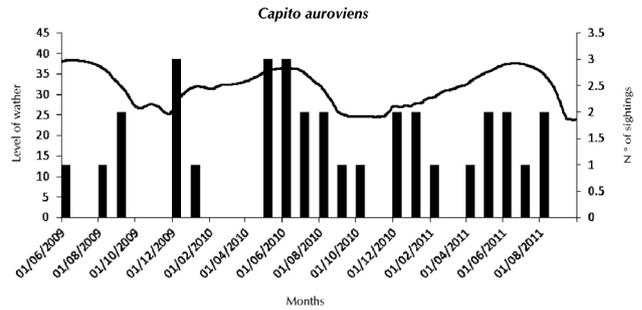


Figure 8 - Seasonality of the Scarlet-crowned Barbet in Mamirauá Lake.

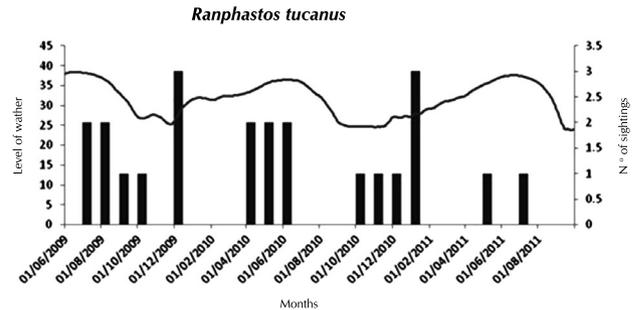


Figure 9 - Seasonality of the White-throated Toucan in the Mamirauá Lake.

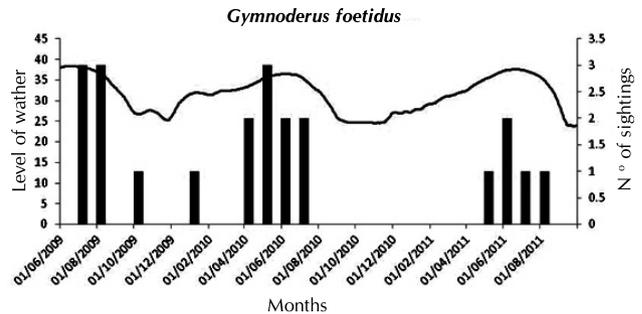


Figure 10 - Seasonality of the Bare-necked Fruitcrow in the Mamirauá Lake

**Yellow-hooded Blackbird** (*Chrysomus icterocephalus*) is a very attractive bird, due to its colors, and for flying around in flocks that indeed call the attention of visitors. During the beginning of the flooding, they follow the fluctuating vegetations, in search for seeds, and often flock right in front of the Uakari lodge.

The distribution of those 20 species observed informs to an interested ecotourist when is the best time of year to visit the Uakari Lodge is.

Among the recorded birds along the Mamirauá Lake, Bernardon; Nassar (2011) mentioned some species considered to be more attractive to the birdwatchers, such as: Horned Screamer, Razor-billed Curassow (*Pauxi tuberosa*), Wattled Curassow (*Crax globulosa*), Agami Heron (*Agamia agami*), Purple Gallinule, Sungrebe (*Heliornis fulica*), Scarlet Macaw, Festive Parrot, Hoatzin, White-eared Jacamar (*Galbalcyrhynchus leucotis*), Scarlet-crowned Barbet, White-throated Toucan, Long-billed Woodcreeper (*Nasica longirostris*), and Yellow-hooded Blackbird.

The bird monitoring along the Mamirauá SDR Special Ecotourism Management Zone is important in order to assess the possible impact such activities may have on the birds, along with the fact that the Uakari Lodge is located inside a preservation area where threatened species occur. Besides, standardized bird fauna studies during the ecotourism activities are yet another attraction to visitors at the Reserve (BERNARDON; NASSAR, 2011).

“The Mamirauá SDR protects globally threatened species, such as the Wattled Curassow and the Harpy Eagle (*Harpia harpyja*) and is a stop for migrating species” (BERNARDON; NASSAR, 2011).

The first was spotted only four times during the study and the second was not recorded during this study, but it had been photographed by a researcher in the field.

## CONCLUSION

The Mamirauá SDR has an incredible potential for birdwatching activities. The motor boat sail is only one of the options for sighting, and still, it has been proved very productive in terms of capturing the richness and species diversity. Besides, distribution and abundance of some species vary according to seasons, as well as the pulse of the flooding in the region.

This paper focused only in a restricted area of the reserve, and with the participation of non-specialized birdwatching tourists and yet, showed very interesting results. Thus, if there's any effort in a broader divulgation to attract birdwatchers as well as a diversification in the activities, visitors may see plenty of the species that occur in the Mamirauá SDR.

## ACKNOWLEDGMENTS

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## LITERATURE CITED

- AYRES, J. M. C. **As Matas de várzea do Mamirauá**. Brasília: MCT-CNPq, Tefé: SCM. 127 p. 1993.
- AYRES, J. M.; JOHNS, A. D. Conservation of white Uakaries in Amazonian várzea. **Oryx**, v. 21, n. 2, p. 74 - 80. 1987.
- BERNARDON, B.; NASSAR, P. M. Aves do Lago Mamirauá, Reserva de Desenvolvimento Sustentável Mamirauá (RDS Mamirauá), Amazonas. In: CONGRESSO BRASILEIRO DE ORNITOLOGIA, 16. **Resumos**. Cuiabá, 2011.

- CBRO. Comitê Brasileiro de Registros Ornitológicos **Listas das aves do Brasil**. 10. ed. São Paulo: CBRO, 2011. Disponível em: <<http://www.cbro.org.br>>. Acesso em: 23/05/2011.
- DEGRAAF, R. M.; RAPPOLE, J. H. **Neotropical migatory birds: natural history distribution, and population change**. Ithaca, New York, USA: Cornell University Press, 1995. 676 p.
- FARIAS, G. B.; CASTILHO, C. J. M. Observação de aves e ecoturismo em Itamaracá (PE): instrumentos para o desenvolvimento sustentável. **Revista Sociedade & Natureza**, v. 18, p. 35 - 53, 2007.
- FIGUEIREDO, L. F. **A Observação de aves**. Centro de estudos ornitológicos. Disponível em: <<http://www.ceo.org.br/>>. Acesso em: 11/04/2012.
- IDSM. Instituto de Desenvolvimento Sustentável Mamirauá. **Banco de dados fluviométricos da Reserva de Desenvolvimento Sustentável Mamirauá**. Tefé-AM: IDSM, 2009. Disponível em: <<http://www.mamiraua.org.br/fluviometrico/>>. Acessado em: 12/04/2012.
- IDSM. Instituto de Desenvolvimento Sustentável Mamirauá. **Plano de gestão da Reserva de Desenvolvimento Sustentável Mamirauá**. Versão para consulta pública. Tefé-AM: IDSM, 2010.
- JUNK, W. J. Wetlands of tropical South America. In: WHIGHAM, D. F.; HEJNY, S.; DYKYJOVA, D. (Ed.). **Wetlands of the world**. The Netherlands: Kluwer Publishers, 1983. p. 679 - 739.
- MOURÃO, R. M. F. (Org.). **Manual de melhores práticas para o ecoturismo - turismo sustentável: atividades na natureza**. Rio de Janeiro: FUNBIO; Instituto ECOBRASIL, 2004. 58 p.
- PERALTA, N. B. Implantação do programa de ecoturismo na Reserva de Desenvolvimento Sustentável Mamirauá, Amazonas, Brasil. **Revista Ciência e Tecnologia**, v. 2, p. 1 - 21, 2002.
- PERALTA, N. B.; OZÓRIO, R.; MARTINS, E. Ecoturismo de base comunitária na Reserva de Desenvolvimento Sustentável Mamirauá, Estado do Amazonas. **Série Turisol de Metodologias no Turismo Comunitário**, v. 3. São Paulo: Rede Turisol. 2010. 46 p.
- PIVATTO, M. A. C.; SABINO, J. Recomendações para minimizar impactos à avifauna em atividades de turismo de observação de aves. **Atualidades Ornitológicas**, v. 127, p. 7 - 11, 2005.
- QUEIROZ, H. L. A Reserva de Desenvolvimento Sustentável Mamirauá. **Revista de Estudos Avançados IEA-USP**, v. 19, n. 54, 2005. Dossiê Amazônia II.
- SANTOS, A. S. R. **Observando as aves. Programa Ambiental: A última arca de Noé**, 2006. Disponível em: <[www.aultimaarcadenoe.com.br](http://www.aultimaarcadenoe.com.br)>. Acesso em: 11/04/2012.
- SICK, H. **Ornitologia brasileira**. Uma Introdução. Rio de Janeiro: Nova Fronteira, 1997. 862p.
- SNOW, D. W. **The Cotingas**. Ithaca, New York: Cornell University Press. 1982. 203 p.

## ATTACHMENT

## Birds of Mamirauá Lake, Mamirauá SDR, Amazonas

TAXON	POPULAR NAME	NAME IN ENGLISH
<b>Tinamiformes</b>		
<b>Tinamidae</b>		
<i>Crypturellus undulatus</i>	jaó	Undulated Tinamou
<b>Anseriformes</b>		
<b>Anhimidae</b>		
<i>Anhima cornuta</i>	Anhuma or alencorne	Horned Screamer
<b>Anatidae</b>		
<i>Dendrocygna autumnalis</i>	asa-branca	Black-bellied Whistling-Duck
<i>Cairina moschata</i>	pato-do-mato	Muscovy Duck
<b>Galliformes</b>		
<b>Cracidae</b>		
<i>Pauxi tuberosa</i>	mutum-cavalo	Razor-billed Curassow
<i>Crax globulosa</i>	mutum-de-fava or mutum-piurí	Wattled Curassow
<b>Suliformes</b>		
<b>Phalacrocoracidae</b>		
<i>Phalacrocorax brasilianus</i>	Biguá or mergulhão	Neotropic Cormorant
<b>Anhingidae</b>		
<i>Anhinga anhinga</i>	biguatinga	Anhinga
<b>Pelecaniformes</b>		
<b>Ardeidae</b>		
<i>Tigrisoma lineatum</i>	socó-boi	Rufescent Tiger-Heron
<i>Agamia agami</i>	garça-da-mata or socó-azul	Agami Heron
<i>Cochlearius cochlearius</i>	arapapá	Boat-billed Heron
<i>Nycticorax nycticorax</i>	savacu	Black-crowned Night-Heron
<i>Butorides striata</i>	socozinho or socoí	Striated Heron
<i>Bubulcus ibis</i>	garça-vaqueira	Cattle Egret
<i>Ardea cocoi</i>	garça-moura	Cocoi Heron
<i>Ardea alba</i>	garça-branca-grande	Great Egret
<i>Pilherodius pileatus</i>	garça-real	Capped Heron
<i>Egretta thula</i>	garça-branca-pequena	Snowy Egret
<b>Threskiornithidae</b>		
<i>Mesembrinibis cayennensis</i>	coró-coró	Green Ibis

Continua

Continuação

<b>Cathartiformes</b>		
<b>Cathartidae</b>		
<i>Cathartes aura</i>	urubu-de-cabeça-vermelha	Turkey Vulture
<i>Cathartes burrovianus</i>	urubu-de-cabeça-amarela	Lesser Yellow-headed Vulture
<i>Cathartes melambrotus</i>	urubu-da-mata	Greater Yellow-headed Vulture
<i>Coragyps atratus</i>	urubu-de-cabeça-preta	Black Vulture
<b>Accipitriformes</b>		
<b>Pandionidae</b>		
<i>Pandion haliaetus</i>	águia-pescadora or águia-caipira	Osprey
<b>Accipitridae</b>		
<i>Chondrohierax uncinatus</i>	caracoleiro	Hook-billed Kite
<i>Ictinia plumbea</i>	sovi	Plumbeous Kite
<i>Busarellus nigricolis</i>	gavião-belo or gavião-panema	Black-collared Hawk
<i>Rostrhamus sociabilis</i>	gavião-caramujeiro	Snail Kite
<i>Helicolestes hamatus</i>	gavião-do-igapó	Slender-billed Kite
<i>Buteogallus schistaceus</i>	gavião-azul	Slate-colored Hawk
<i>Urubitinga urubitinga</i>	gavião-preto	Great Black-Hawk
<i>Rupornis magnirostris</i>	gavião-carijó	Roadside Hawk
<b>Falconiformes</b>		
<b>Falconidae</b>		
<i>Milvago chimachima</i>	carrapateiro	Yellow-headed Caracara
<i>Herpetotheres cachinnans</i>	acauã	Laughing Falcon
<i>Falco deiroleucus</i>	falcão-de-peito-laranja	Orange-breasted Falcon
<b>Eurypygiformes</b>		
<b>Eurypyidae</b>		
<i>Eurypyga helias</i>	pavãozinho-do-pará or pavãozinho	Sunbittern
<b>Gruiformes</b>		
<b>Aramidae</b>		
<i>Aramus guarana</i>	carão	Limpkin
<b>Rallidae</b>		
<i>Aramides cajanea</i>	saracura-três-potes	Gray-necked Wood-Rail
<i>Porphyrio martinica</i>	frango-d'água-azul	Purple Gallinule
<b>Heliornithidae</b>		
<i>Heliornis fulica</i>	picaparra or patinha-do-igapó	Sungrebe
<b>Scolopacidae</b>		

Continua

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<i>Tringa solitaria</i>	maçarico-solitário	Solitary Sandpiper
<b>Jacaniidae</b>		
<i>Jacana jacana</i>	jaçanã	Wattled Jacana
<b>Sternidae</b>		
<i>Sternula superciliaris</i>	trinta-réis-anão	Yellow-billed Tern
<i>Phaetusa simplex</i>	trinta-réis-grande or gaivota	Large-billed Tern
<b>Rynchopidae</b>		
<i>Rynchops niger</i>	talha-mar or corta-água	Black Skimmer
<b>Columbiformes</b>		
<b>Columbidae</b>		
<i>Patagioenas cayennensis</i>	pomba-galega	Pale-vented Pigeon
<i>Patagioenas plumbea</i>	pomba-amargosa	Plumbeous Pigeon
<i>Patagioenas subvinacea</i>	pomba-botafogo	Ruddy Pigeon
<i>Leptotila rufaxilla</i>	juriti-gemeadeira	Gray-fronted Dove
<b>Psittaciformes</b>		
<b>Psittacidae</b>		
<i>Ara ararauna</i>	arara-canindé	Blue-and-yellow Macaw
<i>Ara macao</i>	Araracanga or arara-vermelha	Scarlet Macaw
<i>Ara severus</i>	maracanã-guaçu	Chestnut-fronted Macaw
<i>Aratinga leucophthalma</i>	periquitão-maracanã	White-eyed Parakeet
<i>Forpus xanthopterygius</i>	tuim	Blue-winged Parrotlet
<i>Brotogeris sanctithomae</i>	periquito-testinha	Tui Parakeet
<i>Graydidascalus brachyurus</i>	curica-verde or curica	Short-tailed Parrot
<i>Amazona festiva</i>	papagaio-da-várzea or papa-cacau	Festive Parrot
<i>Amazona farinosa</i>	papagaio-moleiro	Mealy Parrot
<b>Opisthocomiformes</b>		
<b>Opisthocomidae</b>		
<i>Opisthocomus hoazin</i>	Cigana	Hoatzin
<b>Cuculiformes</b>		
<b>Cuculidae</b>		
<i>Piaya cayana</i>	alma-de-gato	Squirrel Cuckoo
<i>Coccyzus melacoryphus</i>	papa-lagarta-acanelado	Dark-billed Cuckoo
<i>Crotophaga major</i>	anu-coroca	Greater Ani
<i>Crotophaga ani</i>	anu-preto	Smooth-billed Ani
<i>Tapera naevia</i>	saci	Striped Cuckoo

Continua

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<b>Strigiformes</b>		
<b>Strigidae</b>		
<i>Glaucidium brasilianum</i>	caburé	Ferruginous Pygmy-Owl
<b>Caprimulgiformes</b>		
<b>Nyctibiidae</b>		
<i>Nyctibius grandis</i>	mãe-da-lua-gigante	Great Potoo
<i>Nyctibius griseus</i>	mãe-da-lua	Common Potoo
<b>Caprimulgidae</b>		
<i>Hydropsalis leucopyga</i>	bacurau-de-cauda-barrada	Band-tailed Nighthawk
<i>Hydropsalis albicollis</i>	bacurau	Pauraque
<i>Hydropsalis climacocerca</i>	acurana	Ladder-tailed Nightjar
<i>Chordeiles minor</i>	bacurau-norte-americano	Common Nighthawk
<b>Apodiformes</b>		
<b>Apodidae</b>		
<i>Chaetura cinereiventris</i>	andorinhão-de-sobre-cinzento	Gray-rumped Swift
<i>Chaetura brachyura</i>	andorinhão-de-rabo-curto	Short-tailed Swift
<b>Trochilidae</b>		
<i>Anthracothorax nigricollis</i>	beija-flor-de-veste-preta	Black-throated Mango
<b>Trogoniformes</b>		
<b>Trogonidae</b>		
<i>Trogon melanurus</i>	surucuá-de-cauda-preta	Black-tailed Trogon
<i>Trogon curucui</i>	surucuá-de-barriga-vermelha	Blue-crowned Trogon
<b>Coraciiformes</b>		
<b>Alcedinidae</b>		
<i>Megaceryle torquata</i>	martim-pescador-grande	Ringed Kingfisher
<i>Chloroceryle amazona</i>	martim-pescador-verde	Amazon Kingfisher
<i>Chloroceryle americana</i>	martim-pescador-pequeno	Green Kingfisher
<b>Galbuliformes</b>		
<b>Galbulidae</b>		
<i>Galbalcyrhynchus leucotis</i>	ariramba-vermelha	White-eared Jacamar
<i>Galbula tombacea</i>	ariramba-de-barba-branca	White-chinned Jacamar
<i>Jacamerops aureus</i>	jacamaraçu	Great Jacamar
<b>Bucconidae</b>		
<i>Monasa nigrifrons</i>	chora-chuva-preto	Black-fronted Nunbird

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<b>Piciformes</b>		
<b>Capitonidae</b>		
<i>Capito aurovirens</i>	capitão-de-coroa, capitão-do-mato or uru	Scarlet-crowned Barbet
<b>Ramphastidae</b>		
<i>Ramphastos tucanus</i>	tucano-grande-de-papo-branco or tucano-assoviador	White-throated Toucan
<i>Ramphastos vitellinus</i>	tucano-de-bico-preto	Channel-billed Toucan
<i>Pteroglossus inscriptus</i>	araçari-miudinho-de-bico-riscado	Lettered Aracari
<i>Pteroglossus castanotis</i>	araçari-castanho	Chestnut-eared Aracari
<b>Picidae</b>		
<i>Melanerpes cruentatus</i>	benedito-de-testa-vermelha	Yellow-tufted Woodpecker
<i>Celeus flavus</i>	pica-pau-amarelo	Cream-colored Woodpecker
<i>Campephilus melanoleucos</i>	pica-pau-de-topete-vermelho	Crimson-crested Woodpecker
<b>Passeriformes</b>		
<b>Thamnophilidae</b>		
<i>Thamnophilus doliatus</i>	choca-barrada	Barred Antshrike
<b>Dendrocolaptidae</b>		
<i>Campylorhamphus trochilirostris</i>	arapaçu-beija-flor	Red-billed Scythebill
<i>Nasica longirostris</i>	arapaçu-de-bico-comprido	Long-billed Woodcreeper
<b>Furnariidae</b>		
<i>Certhiaxis cinnamomeus</i>	curutié	Yellow-chinned Spinetail
<i>Certhiaxis mustelinus</i>	joão-da-canarana	Red-and-white Spinetail
<i>Synallaxis gujanensis</i>	joão-teneném-becuá	Plain-crowned Spinetail
<i>Cranioleuca vulpina</i>	arredio-do-rio	Rusty-backed Spinetail
<b>Tityridae</b>		
<i>Tityra semifasciata</i>	anambé-branco-de-máscara-negra	Masked Tityra
<b>Cotingidae</b>		
<i>Gymnoderus foetidus</i>	anambé-pombo	Bare-necked Fruitcrow
<b>Tyrannidae</b>		
<i>Myiopagis gaimardii</i>	maria-pechim	Forest Elaenia
<i>Attila bolivianus</i>	bate-pára	Dull-capped Attila
<i>Legatus leucophaeus</i>	bem-te-vi-pirata	Piratic Flycatcher
<i>Myiarchus ferrox</i>	maria-cavaleira	Short-crested Flycatcher
<i>Pitangus sulphuratus</i>	bem-te-vi	Great Kiskadee

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<i>Philohydor lictor</i>	bentevizinho-do-brejo	Lesser Kiskadee
<i>Myiodynastes maculatus</i>	bem-te-vi-rajado	Streaked Flycatcher
<i>Megarynchus pitangua</i>	neinei	Boat-billed Flycatcher
<i>Myiozetetes similis</i>	bentevizinho-de-penacho-vermelho	Social Flycatcher
<i>Tyrannus melancholicus</i>	suiriri	Tropical Kingbird
<i>Tyrannus savana</i>	tesourinha	Fork-tailed Flycatcher
<i>Arundinicola leucocephala</i>	freirinha	White-headed Marsh Tyrant
<b>Hirundinidae</b>		
<i>Stelgidopteryx ruficollis</i>	andorinha-serradora	Southern Rough-winged Swallow
<i>Progne subis</i>	andorinha-azul	Purple Martin
<i>Tachycineta albiventer</i>	andorinha-do-rio	White-winged Swallow
<i>Riparia riparia</i>	andorinha-do-barranco	Bank Swallow
<i>Hirundo rustica</i>	andorinha-de-bando	Barn Swallow
<b>Troglodytidae</b>		
<i>Campylorhynchus turdinus</i>	catatau	Thrush-like Wren
<i>Cantorchilus leucotis</i>	garrinchão-de-barriga-vermelha	Buff-breasted Wren
<b>Donacobiidae</b>		
<i>Donacobius atricapilla</i>	japacanin	Black-capped Donacobius
<b>Thraupidae</b>		
<i>Tangara mexicana</i>	saíra-de-bando	Turquoise Tanager
<i>Paroaria gularis</i>	cardeal-da-amazônia, cardeal-de-cabeça-vermelha or tangará	Red-capped Cardinal
<b>Emberizidae</b>		
<i>Ammodramus aurifrons</i>	cigarrinha-do-campo	Yellow-browed Sparrow
<i>Sicalis columbiana</i>	canário-do-amazonas	Orange-fronted Yellow-Finch
<i>Sporophila americana</i>	coleiro-do-norte	Wing-barred Seedeater
<i>Sporophila lineola</i>	bigodinho	Lined Seedeater
<i>Sporophila castaneiventris</i>	caboclinho-de-peito-castanho	Chestnut-bellied Seedeater
<b>Icteridae</b>		
<i>Psarocolius angustifrons</i>	japu-pardo	Russet-backed Oropendola
<i>Psarocolius decumanus</i>	japu	Crested Oropendola
<i>Cacicus cela</i>	Xexéu or japiim	Yellow-rumped Cacique
<i>Chrysomus icterocephalus</i>	irataúá-pequeno or tangará-de-cabeça-amarela	Yellow-hooded Blackbird
<i>Molothrus oryzivorus</i>	iraúna-grande	Giant Cowbird

Continua

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<i>Sturnella militaris</i>	polícia-inglesa-do-norte	Red-breasted Blackbird
<b>Fringillidae</b>		
<i>Euphonia chlorotica</i>	fim-fim	Purple-throated Euphonia
<b>Number of orders</b>	<b>22</b>	
<b>Number of families</b>	<b>49</b>	
<b>Number of species</b>	<b>134</b>	

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