## First documented record of the Blue-cheeked Amazon Amazona dufresniana (Psittacidae) in Brazil

## Iubată Paula de Faria<sup>1</sup> and Thiago Henrique Gomide Alvim<sup>2</sup>

- <sup>1</sup> Programa de Pós Graduação em Ecologia e Conservação, Centro de Ciências Biológicas e da Saúde, Universidade Federal do Mato Grosso do Sul. Cidade Universitária s/n, CEP 79070-900. Campo Grande, MS, Brazil. Corresponding author: E-mail: iuba1@yahoo.com.br
- <sup>2</sup> Centro de Estudos Ecológicos e Educação Ambiental (CECO), Praça dos Estudantes n/23, Santa Emília, CEP 36800-000, Carangola, MG, Brazil.

Received 8 April 2013. Accepted on 26 July 2013.

**ABSTRACT**: Amazona dufresniana is an endemic species to the Guiana Shield, and its occurrence in Brazil lacks documented evidence. Here, we report the first documented record for Brazil, which was made in the Saracá-Taquera National Forest, Trombetas River region, northwest of Pará. Three parrots were recorded on two occasions, in May and October 2012. These records not only document the occurrence of Amazona dufresniana in Brazil, but they also extend its distribution to about 420 km south of previously known records.

KEY -WORDS: Amazona dufresniana, geographical distribution, Guiana Shield, Pará, Rio Trombetas basin.

The Blue-cheeked Amazon Amazona dufresniana (Shaw, 1812) is an endemic species of the Guiana Shield (Wege & Collar 1991), an important area of endemism in the northern South America (Haffer 1974, Cracraft 1985, Hollowell & Reynolds 2005, Silva et al. 2005). The species ecology and habitat are poorly known, but its occurrence has been documented in tropical humid and wet lowland forests in Venezuela, Guyana, Surinam, and French Guiana (see Wege & Collar 1991, Forshaw 2006). Besides the lowland habitats in Guyana (altitude between 3 to 560 m), the species also inhabits foothill forests in the Gran Sabana plateau up to 1,700 m of altitude in Venezuela (Wege & Collar 1991, Hilty 2003).

The occurrence of Blue-cheeked Amazon in Brazil has been considered unchecked by specialists. It was based only upon a personal communication by hunters who allegedly shot a pair of birds near the French Guiana and Brazilian border at the state of Amapá (see Wege & Collar 1991, Collar 1995). However, no additional information was provided since then and the occurrence of the species in Brazil remains hypothetical (see CBRO 2011).

Here we report the first documented records of *Amazona dufresniana* in the Brazilian territory. The species was observed in Bela Cruz, a local plateau at Saracá-Taquera National Forest (01°21'S; 56°22'W), a 441,282 ha sustainable use reserve within the limits of the township of Oriximiná, northwest Pará (Figure 1).

The reserve is located in the Rio Trombetas watershed. The vegetation at the Saracá-Taquera National Forest is classified as typical of the dense rainforest region and Amazon low plateaus sub-region (IBGE 1992, Salomão *et al.* 2012). Within the area there is significant mining of bauxite on plateaus, which influences the landscape and creates a mosaic of upland forest amid small and medium tributaries of the Rio Trombetas with heterogeneous reforestation and mining zones.

During fauna monitoring activities in the surroundings of the mining zone, in a total sampling effort of 397 days, between May 2009 and October 2012, we observed three individuals of Blue-cheeked Amazon in two occasions in the Bela Cruz plateau.

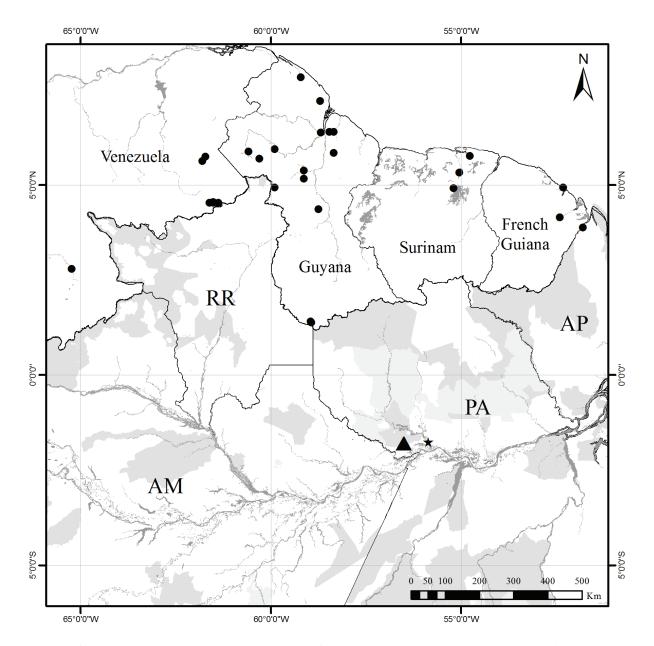
The first record was on May 13th of 2012, at 9 h, when T. H. G. A. observed and photographed one individual perched (Figure 2) about 30 m high on a rubber tree Hevea guianensis (Euphorbiaceae), together with a flock of five Mealy Amazon Amazona farinosa, on the forest edge of the plateau (01°48'09"S; 56°30'23"W, elevation 172 m). The second record was on the 1st of October of 2012, at 07:20 h, during a windy morning with sparse rain showers, when I. P. F. observed (for 10 min) two very quiet and silent parrots perched in the canopy of upland forest at 01°47'53"S and 56°29'44"W (altitude 189 m). All three birds observed had a gray beak with a pink-red at base, and green plumage. The forehead and lores were orange-yellow, with forecheeks beneath eye bright blue, while lower cheeks to ear-coverts blue, in agreement with Forshaw (2006) and Grantsau (2010).

These observations extend the range of Bluecheeked Amazon to northern Brazil. The Saracá-Taquera National Forest is about 420 km from Acary Mountains on Guyana's southern border, 760 km southeast from the Brownsberg Nature Park, 820 km southwest from the Pied Saut on the Fleuve Oyapock, and 840 km southeast from the Kopinang camp, four localities reported for the species by Wege & Collar (1991), Ridgely *et al.* (2005), O'Shea *et al.* (2007), and Robbins *et al.* (2007).

The species may also be present in the state of Roraima (Brazil), although Naka *et al.* (2006) have not provided any records of them. However, its presence in the Iwokrama and Kopinang camp (Guyana), and Gran Sabana (Venezuela), and the biogeographic patterns of the region suggest their occurrence in the Brazilian state of Roraima (Ridgely *et al.* 2005, O'Shea *et al.* 2007, Crease 2009, Naka 2011). It is possible that the species is not being noticed because of its associated with *Amazona* 

farinosa (a common and widely distributed parrot). Alternatively, our effort indicates that Blue-cheeked Amazon is rather rare in the Saracá-Taquera National Forest, which is probably the case for the other areas (Ridgely *et al.* 2005, Robbins *et al.* 2007).

However, to evaluate if Blue-cheeked Amazon occurs in the area throughout the year and make population estimates, new surveys are recommended in the Saracá-Taquera National Forest. Surveys in other nearby reserves, which were only briefly surveyed and no records of the Blue-cheeked Amazon were obtained, such as the Rio Trombetas Biological Reserve, the Trombetas State Forest, the Faro State Forest, and the Grão Pará Ecological Station (see Aleixo *et al.* 2011), are also highly recommended.



**FIGURE 1.** Map of northern South America indicating the township of Oriximiná (star), and the Saracá-Taquera National Forest (triangle), where the first records of *Amazona dufresniana* for Brazil were made. Species records (circles) based on literature (Wege & Collar 1991, Ridgely *et al.* 2005, O'Shea *et al.* 2007, Robbins *et al.* 2007, Crease 2009) are also included. The gray areas indicate the Brazilian Conservations Units according to CNUC/MMA (2012), and the Brazilian states with acronyms: Roraima (RR), Amazonas (AM), Pará (PA), and Amapá (AP).



FIGURE 2. Blue-cheeked Amazon (Amazona dufresniana, right) and Mealy Parrot (A. farinosa, left) observed on a rubber tree, Saracá-Taquera National Forest, Pará, Brazil (Photo by T. H. G. A.).

## **ACKNOWLEDGMENTS**

We are grateful to Ivan Souza, Rafael Ribeiro, Sergio Morato, and Guilherme Ferreira for their help during fieldwork. Carlos Bianchi, José Fernando Pacheco, Thiago Orsi Laranjeiras, Marcos Robalinho Lima, and an anonymous reviewer provided helpful comments on the manuscript. Welington Coelho helped us with the map. The Center for the Conservation of Brazilian Birds (CEMAVE) and ICMBio granted permits to the study at the Saracá-Taquera National Forest. Fieldwork was supported by Mineração Rio do Norte S.A., STCP Engenharia de Projetos, Eco Systema Projetos e Consultoria Ambiental Ltda, Universidade Federal de Goiás, and Fundação de Apoio à Pesquisa (FUNAPE).

## **REFERENCES**

Aleixo, A.; Poletto, F.; Lima, M. F. C.; Castro, M.; Portes, E. & Miranda, L. S. 2011. Notes on the Vertebrates of northern Pará, Brazil: a forgotten part of the Guianan Region, II. Avifauna. *Boletim do Museu Paraense Emílio Goeldi, Ciências Naturais* 6(1): 11-65.

CBRO - Comitê Brasileiro de Registros Ornitológicos. 2011. Listas das aves do Brasil. 10<sup>th</sup> Edition. Available at <a href="http://www.cbro.org.br">http://www.cbro.org.br</a>. Access on: [25 March 2013].

CNUC/MMA - Cadastro Nacional de Unidades de Conservação/ Ministério do Meio Ambiente. 2012. <a href="www.mma.gov.br/cadastro\_uc">www.mma.gov.br/cadastro\_uc</a>. Update on 12/12/2012 (access on 20 June 2013).

**Collar, N. J. 1995.** On the possible occurrence of *Amazona dufresniana* in Brazil (Psittaciformes: Psittacidae). *Ararajuba*, 3: 70.

**Cracraft, J. 1985.** Historical biogeography and patterns of differentiation within the South American avifauna: areas of endemism. *Ornithological Monographs*, 36: 49-84.

**Crease, A. 2009.** Avian range extensions from the southern headwaters of the río Caroní, Gran Sabana, Bolívar, Venezuela. *Cotinga*, 31: OL 5-19.

**Forshaw, J. M. 2006.** *Parrots of the World: an identification guide.* New Jersey and Osfordshire: Princeton University Press, Princeton and Oxford.

**Grantsau, R. 2010.** *Guia completo para identificação das aves do Brasil,* v. 1. São Carlos: Vento Verde.

Haffer, J. 1974. Avian speciation in tropical South America. With a systematic survey of the toucans (Ramphastidae) and jacamars (Galbulidae). *Publications of the Nuttall Ornithological Club*, 14: 1-390.

Hilty, S. L. 2003. Birds of Venezuela. Princeton: Princeton University Press.

Hollowell, T. & Reynolds, R. P. 2005. Checklist of the Terrestrial Vertebrates of the Guiana Shield. Bulletin of the Biological Society of Washington, 13.

IBGE - Instituto Brasileiro de Geografia e Estatística. 1992. *Manual Técnico da Vegetação Brasileira*: 1-92. Rio de Janeiro: IBGE (Série Manuais Técnicos em Geociências, 1).

**Naka, L. N. 2011.** Avian distribution patterns in the Guiana Shield: implications for the delimitation of Amazonian areas of endemism. *Journal of Biogeography*, 38: 681-696.

- Naka, L. N.; Cohn-Haft, M.; Mallet-Rodrigues, F.; Santos, M. P. D. & Torres, M. F. 2006. The avifauna of the Brazilian state of Roraima: Bird distribution and biogeography in the Rio Branco basin. *Revista Brasileira de Ornitologia*, 14: 197-238.
- O'Shea, B. J.; Milensky, C. M.; Claramunt, S.; Schmidt, B. K.; Gebhard, C. A.; Schmitt, C. G. & Erskine, K. T. 2007. New records for Guyana, with description of the voice of Roraiman Nightjar Caprimulgus whitelyi. Bulletin of the British Ornithologists' Club, 127: 118-128.
- Ridgely, R. S.; Agro, D. & Joseph, L. 2005. Birds of Iwokrama Forest. Proceedings of the Academy of Natural Sciences of Philadelphia, 154: 109-121.
- Robbins, M. B.; Braun, M. J., Milensky, C. M., Schmidt, B. K., Prince, W., Rice, N. H., Finch, D. W. & O'Shea, B. J. 2007. Avifauna of Upper Essequibo River and Acary Mountains, Southern Guyana. *Ornitologia Neotropical*, 18: 339-368.
- Salomão, R. P.; Santana, A. C.; Brienza Jr., S. & Gomes, V. H. F. 2012. Análise fitossociológica de floresta ombrófila densa e determinação de espécies-chave para recuperação de área degradada através da adequação do índice de valor de importância. Boletim do Museu Paraense Emílio Goeldi (Ciências Naturais), 7: 57-102.
- Silva, J. M. C.; Rylands. B. & Fonseca, G. A. B. 2005. The fate of Amazonian areas of endemism. *Conservation Biology*, 19(3): 689-694.
- Wege, D. C. & Collar, N. J. 1991. The Blue-cheeked Amazon Amazona dufresniana: a review. Bird Conservation International, 1: 317-328.

Associate Editor: Luciano N. Naka.