



Miscellaneous ornithological observations from the Cerrado de Laguna Blanca IBA, San Pedro department, Paraguay, with behavioural notes on *Eleothreptus* nightjars

Observaciones ornitológicas misceláneas del AICA Cerrados de Laguna Blanca, departamento San Pedro, Paraguay, con notas sobre el comportamiento de atajacaminos del género *Eleothreptus*

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Abstract.- Ten new bird species records are reported for Cerrado de Laguna Blanca IBA, San Pedro department, Paraguay. Reports of a further ten poorly known and migrant species in the area are also provided, suggesting that the locality is an important flyway for birds, and additional observations of ornithological interest are documented. The total number of species reported from the locality is now 329.

Keywords: conservation, migration, Sickie-winged Nightjar, White-winged Nightjar

Resumen.- Se reportan registros de diez nuevas especies de aves del AICA Cerrados de Laguna Blanca, departamento San Pedro, Paraguay. Reportamos datos de registros significantes de diez especies migrantes o pobremente conocidas, resaltando la importancia de la localidad para la migración de las aves. Un total de 329 especies están documentadas en esta localidad.

Palabras clave: conservación, *Eleothreptus anomalus*, *Eleothreptus candicans*, migración

The “Cerrado de Laguna Blanca” IBA (S 23° 46' 48”, W 56° 17' 29”) covers an area of approximately 2,449 ha in the department of San Pedro, Paraguay focused on the Rancho Laguna Blanca (formerly Reserva Natural) property and adjacent areas (Clay *et al.*, 2008). Long identified as an area of unique, cross-taxa biodiversity, its long term conservation should be considered one of the national conservation priorities (Smith *et al.*, 2016a). The avifauna of the locality is well studied (Smith *et al.*, 2005, 2012, 2016b) and 319 species have been recorded to date, including 8 threatened and 4 near threatened species (Clay *et al.*, 2008; Smith *et al.*, 2016b).

Material and methods

Study site

Rancho Laguna Blanca (S 23° 48', W 56° 17'), the focal point of the Cerrado de Laguna Blanca IBA, is a private 804 ha property that held

private reserve status until this was cancelled by the proprietors in February 2015. Over half of the property consists of well-preserved Cerrado savanna with a sandy-substrate and the four main ecotopes all represented (Eiten, 1972, 1978). An area of heavily degraded Alto Paraná Atlantic Forest (*sensu* Morrone (2001)) conjoins semi-deciduous, semi-humid gallery forest on the shores of a 157 ha freshwater lake (Clay *et al.*, 2008). The lake is low in nutrients with a sandy bed, with areas of tall, wet grassy vegetation and sandy beach. The IBA includes the catchment area of the reserve, which encompasses the courses of several rivers and streams including Río Aguaray Guasu, Río Verde and Arroyo Clementina (Clay *et al.*, 2008). These waterways flood regularly in some areas to form extensive grassy marshes reminiscent of the vegetation of the Humid Chaco region. Agricultural areas on the outskirts of the reserve include *Eucalyptus* and



soybean plantations, and cattle ranches.

Results

Photographs and data documenting nine new locality records at Laguna Blanca during April to October 2016 are presented here (with an additional species Sickle-winged Nightjar treated in more detail under “Additional observations of interest”). With these ten new records the total number of species now recorded at Laguna Blanca IBA is 329. New data on a further eight species that were previously known from single records at this locality are also provided, with observations during the same time period, as well as some ecological notes on further rare species that occur in the reserve.

New locality records

These are species not previously reported from the “Cerrado de Laguna Blanca” IBA. Additional comments are included for some species that are uncommon in the area.

White-cheeked Pintail
Anas bahamensis (Anatidae)
(Fig 1)

A juvenile was seen on a temporary pond on 30 July 2016, and presumably the same bird was seen again in flooded campo limpio Cerrado on 29 October 2016 (KG). There are very few records east of the Paraguay River (del Castillo & Clay, 2005), and this is the first documented record of the species in San Pedro department. There are two previous undocumented and unpublished reports from this department, one at Camapaña Alegría between 25 May and 1 June 2001 (Alejandro Bodrati) and another at Estancia Yukery on 21 January 2006 (Hugo del Castillo *in litt.*).

Pavonine Cuckoo
Dromococcyx pavoninus (Cuculidae)
(Fig 2)

Calling constantly over this study period, one

individual was eventually seen on 30 July 2016 at the edge of the Atlantic Forest (KG, PS). The last recorded sighting was on 30 September 2016 (KG).

Rufous-sided Crake
Laterallus melanophaius (Rallidae)
(Fig 3)

At least three individuals were heard on 15 April 2016 and one bird was seen (KG, PS) and photographed. Subsequently heard frequently but seen rarely on a temporary flooded pond at the edge of Atlantic Forest. High counts of three birds on 15 April, 10 May and 26 May 2016. It was not recorded after 8 June 2016, suggesting that the birds were not permanent residents.

Blackish Rail
Pardirallus nigricans (Rallidae)
(Fig 4)

Heard frequently but seen rarely between 6 April and 15 October 2016 on a temporary flooded pond at the edge of Atlantic Forest. The highest count was of three birds on 6 June 2016.

Pinnated Bittern
Botaurus pinnatus (Ardeidae)
(Fig 5)

One individual in reed-beds on the southeastern side of the Lagoon 6 June 2016 (KG). This is presumed to be a wandering individual.

Black-collared Hawk
Busarellus nigricollis (Accipitridae)
(Fig 6)

An adult observed on the southeastern margins of the lagoon on 6 October 2016 was present until at least 29 October 2016 (KG).

Green-and-rufous Kingfisher
Chloroceryle inda (Alcedinidae)
(Fig 7)

One individual was seen on 15 April 2016,

fishing on a temporary pond at the edge of Atlantic Forest (KG, PS). It was subsequently observed at the same location on 26 May and 6 October 2016.

Black-backed Water Tyrant
Fluvicola albiventer (Tyrannidae)
(Fig 8)

First recorded was an individual hawking for insects at the edge of a temporary pond on 16 October 2016 and it was seen again at the same site on 28 October 2016 (KG).

Saffron-billed Sparrow
Arremon flavirostris (Emberizidae)
(Fig 9)

A pair of vocalising birds were observed at Atlantic Forest edge on 13 May 2016 (KG).

Significant new records

These are additional records of species previously known from single or very few records at this site according to Smith *et al.*, (2016b).

Masked Duck
Nomonyx dominicus (Anatidae)

Observed regularly on a temporary flooded pond with the first observation 15 July 2016. A high count of five birds (1 male, 4 females) was observed on 21 September 2016 and four birds were present on 11 October 2016. Previously known only from a report of a single female on 23 November 2005 (PS, Hemme Batjes, Brian Wainwright) (Smith *et al.*, 2005).

Limpkin
Aramus guarauna (Aramidae)

Three additional records of this species: 19 August and 20 September 2016 of single birds on the lagoon, and two birds on a temporary pond on 6 October 2016. The only previous report was documented in Smith *et al.* (2016b).

Lesser Yellowlegs
Tringa flavipes (Scolopacidae)

Three birds flew east over the lagoon on 25 May 2016 (KG). The only previous report was documented in Smith *et al.* (2016b).

Anhinga
Anhinga anhinga (Anhingidae)

One individual observed in flight on 16 September 2016. This is the second record of this species at Laguna Blanca, the only previous record being a sighting by Carol Foss on 11 November 2003.

Osprey
Pandion haliaetus (Pandionidae)

Four records (2 June, 21 August, 26 and 29 September 2016) suggesting that the species may be fairly regular and that Laguna Blanca may be an important navigational and feeding point for the species during movements. This species is typically associated with large rivers in Paraguay, and the fact that this conspicuous species was not observed more frequently is suggestive that the birds were present only temporarily.

Mississippi Kite
Ictinia mississippiensis (Accipitridae)

Smith *et al.* (2016b) provided details of the first records of this species at Laguna Blanca. Further observations of this poorly known Nearctic migrant are provided here. On 24 April 2016 at 1500 hrs an individual was observed in flight heading northeast over the lagoon. Several significant movements were observed during October 2016.

10 October: 4 birds using thermals flying north at 1355hrs, 18 using thermals northwest at 1520 hrs and 3 using thermals flying north at 1530 hrs.

23 October: 12 using thermals flying northeast at 1600 hrs.

28 October: 2 birds flying east at 0850 hrs and a further 3 flying east at 0930 hrs.



Figures 1-6. Birds recorded from the Cerrado de Laguna Blanca IBA. **1)** Juvenile White-cheeked Pintail *Anas bahamensis* (30 July 2016). **2)** Pavonine Cuckoo *Dromococcyx pavoninus* (30 July 2016). **3)** Rufous-sided Crake *Laterallus melanophaius* (15 April 2016). **4)** Blackish Rail *Pardirallus nigricans* (26 May 2016). **5)** Pinnated Bittern *Botaurus pinnatus* (6 June 2016). **6)** Black-collared Hawk *Busearellus nigricollis* (6 October 2016). [All the photographs taken in Rancho Laguna Blanca by Kevin Guest].



Figures 7-12. Birds recorded from the Cerrado de Laguna Blanca IBA. **7)** Green-and-rufous Kingfisher *Chloroceryle inda* (15 April 2016). **8)** Black-backed Water Tyrant *Fluvicola albiventer* (16 October 2016). **9)** Saffron-billed Sparrow *Arremon flavirostris* (13 May 2016). **10)** White-winged Nightjar *Eleothreptus candicans*, female in distraction posture (27 September 2014). **11)** Flock of Cliff Swallow *Petrochelidon pyrrhonota* (13 May 2016). **12)** Yellow-billed “eclipse” male of Plumbeous Seedeater *Sporophila plumbea* (13 August 2014). [**7-9 and 11)** Rancho Laguna Blanca, by Kevin Guest. **10 and 12)** Agroforestal Rio Verde. **10)** by Stig Larsen. **12)** by Melvin Browne].

Barred Forest-Falcon

Micrastur ruficollis (Falconidae)

An adult in Atlantic Forest on 27 April 2016 is the third record for the locality. Previous reports were documented in Smith *et al.* (2016b).

Collared Forest-Falcon

Micrastur semitorquatus (Falconidae)

Heard vocalising regularly in Atlantic Forest between 16 April and 24 August 2016. Apparently fairly common. Previous reports were documented in Smith *et al.* (2016b).

Additional observations of interest

White-winged Nightjar

Eleothreptus candicans (Caprimulgidae)

Whilst walking at night at Agroforestal Rio Verde (S 23° 45', W 56° 19') on 27 September 2014 a female White-winged Nightjar unexpectedly flew from a grassy area and landed on bare sandy ground within a few metres of a group of observers (PS, JS, Stig Larsen, Jon Lehmborg). It subsequently adopted a strange body posture with fluffed plumage, relaxed, half-open wings and bobbing head (Fig 10). This behaviour was clearly designed to attract attention, as head-bobbing increased in frequency with the attention of the observers. It was considered that this was likely a kind of distraction display, probably related to the unwitting proximity to an active nest, although we were unable to locate a nest during a brief search of the area. This display differs considerably from the distraction displays described by Clay *et al.*, (2014) and Pople (2014).

JS observed a female behave in a similar manner as he approached a known nest in the same habitat on 27 October of 2015. The female fluffed its feathers and positioned its wings up and back, increasing its apparent size, whilst simultaneously bobbing its head. Once the attention of the observer was gained the female ceased the posturing and sidled

slowly away from the nest, always maintaining a position facing the observer. After distancing itself from the nest, the female resumed the posture and reinitiated the head bobbing. The display culminated with the female rapidly charging forward c. 10 cm on the ground directly towards the observer, at which point he retreated to minimise stress.

A similar display involving similarly conspicuous, attention-seeking behaviour and wing-fanning was also observed during the day in Rufous Nightjar *Antrostomus rufus* at Lagunita, Reserva Natural del Bosque Mbaracayú, Canindeyú department on 30 September 2015 (see photograph 152 p.93 of Smith *et al.*, 2017), in that case a nest with eggs was also located nearby.

A male White-winged Nightjar was flushed from its day roost in campo sucio Cerrado at the same locality on 14 March 2014 by PS and JS, and an opportunistic predation attempt by Aplomado Falcon *Falco femoralis* was observed. The nightjar was flushed four times, each time relocating at a distance of between 10 to 40 m, landing on bare, sandy ground under the overhanging stalks of large tufts of grass. On the first three occasions the nightjar flew more or less in a straight line from where it was flushed to where it subsequently settled. On the fourth flushing the nightjar attracted the attention of the falcon, which attempted an aerial attack, causing the nightjar to rapidly and repeatedly bank from left to right, before ditching suddenly downwards into cover. Perhaps unable to locate the well-camouflaged nightjar on the ground, the falcon lost interest and flew away.

On the morning of the 12 January 2015, JS tracked a radio-tagged female White-winged Nightjar to a large tuft of grass using the tracking equipment. The female nightjar was located at a day roost which consisted of a small tunnel of grass 27 cm deep with an entrance 15 cm high by 27 cm wide, and leading to the centre of the grass tuft. Upon the approach of

the observer, the nightjar walked towards the entrance of the roost, fluffed its plumage and bobbed its head. The bird eventually took flight and landed awkwardly on a neighbouring tuft of grass, approximately 2 m away. From here, the nightjar walked down to the ground and quickly directed itself under the cover of the overlapping grass. This process was observed on several occasions, with the bird unwilling to take flight until it was eventually captured several meters from the original location.

Sickle-winged Nightjar

Eleothreptus anomalus (Caprimulgidae)

Two individuals of this species were observed by JS at Agroforestal Rio Verde on 31 July 2015 in close proximity to a male White-winged Nightjar, representing the first record of sympatry in these two species. The White-winged Nightjar was observed approximately 40 cm from the ground on a small twig, the Sickle-winged Nightjar was sat up higher on a larger shrub about 120 cm from the ground. With a diffuse beam on the two individuals, neither moved for 7 minutes at which point a closer approach was attempted by the observer but resulted in the flushing of both individuals from their perches simultaneously. After just a few seconds of flight, the Sickle-winged Nightjar dived abruptly to the ground. The White-winged Nightjar flew away from the observer but circled back towards the site where the Sickle-winged Nightjar had been observed going to ground, diving sharply down at the same spot and rapidly returning into the air again at a steep angle. Though it was not possible to observe any physical contact between the two birds, it was assumed that this was an aggressive act from the resident White-winged Nightjar against the transient Sickle-winged Nightjar. A male Sickle-winged Nightjar was captured, prepared and deposited as a skin and skeleton (Colección Zoológica de Para La Tierra, CZPLT-A 008).

Cliff Swallow

Pygochelidon pyrrhonota (Hirundinidae)

(Fig 11)

Large flocks of this migrant, storm-following swallow (early September to late April) (del Castillo & Clay, 2005) were driven down for refuge in the reedbeds and under the roof of the boat house at the edge of Laguna Blanca on 11 January 2011. The flocks consisted of hundreds of adult and juvenile birds, all apparently of the nominate subspecies. Contreras (1995) reported a similar-sized flock of between 500 and 700 individuals on the Rio Paraguay at Pilar, Ñeembucú department between 14 and 18 January 1982, with remarkable coincidence of seasonality with our observation. Evidently this species suffers during extreme weather, with an individual (Colección Zoológica de Para La Tierra, CZPLT-A 0062) found dead on the beach following a cold snap on 27 April 2014 (Col. Jorge Ayala), at a time when most individuals have already migrated north.

Plumbeous Seedeater

Sporophila plumbea (Thraupidae)

(Fig 12)

On 13 August 2014 an adult male with a pale dull yellow bill and white tail tips was photographed by Melvin Browne and observed by PS at Agroforestal Rio Verde (S 23° 45', W 56° 19'). The species is common in the open bushy Cerrado at this locality and the photographed individual was part of a flock of c.30 individuals all of which were "typically plumaged" with black-billed males. With the recent description of the highly-localised, yellow-billed Tropeiro Seedeater (*S. beltoni*), a split from *S. plumbea* that occurs in the highlands of southern Brazil (Repenning & Fontana, 2013), it is important to recognize that a yellow-billed form of *S. plumbea* does occur and that field identification of these species should not be based on bill colour alone. Repenning & Fontana (2013) attributed such dull yellow colouration of the bill in

Plumbeous Seedeaters to an eclipse plumage acquired by some male individuals during the non-breeding season.

Discussion

Laguna Blanca is a comparatively well-watched site and an IBA (Clay *et al.*, 2008; Smith *et al.*, 2005, 2012, 2016b) yet new species of birds continue to be added to the reserve list, illustrating that much still remains to be learned about the avifaunal community of this significant locality. The year in which most of the new record observations took place (2016) was notable for being extremely wet, with significant road-building projects in the area accompanied by insufficient drainage allocation leading to considerable local flooding. As a result, areas of Cerrado were under water for several months. It is of note that many of the species reported here for the first time are birds associated with aquatic habitats. We consider that many of these new reports are a direct result of these unusual conditions, and are likely to represent vagrant or nomadic individuals attracted by the novel habitat, rather than permanent populations of species that have been previously overlooked. Exceptions to this are species such as Pavonine Cuckoo and Saffron-billed Sparrow which are inconspicuous residents that have potentially been overlooked by previous observers because of the low density at which they occur in the area.

The report of sympatry between the endangered Cerrado endemic White-winged Nightjar and the near threatened Sickie-winged Nightjar is the first for these two congeneric species and the first record of the latter species in San Pedro department. It is of considerable interest because it suggests that Sickie-winged Nightjar undertakes movements that are probably not migratory (based on dates), but may be related to post-breeding dispersal. Indeed, such movements may explain other “extralimital” winter records of the species,

some of which have in the past been questioned (Contreras & González Romero, 1989). These two species are ecologically rather similar, with both species favouring rolling grasslands close to streams in their Paraguayan range. Neither species is particularly vocal, and both are presumed to reproduce using a highly-localised exploded lekking system that relies on visual displays by the males to attract a mate (Pople, 2003; Bodrati *et al.*, 2019). As a consequence of this specialized system, dispersion of some birds must occur between metapopulations in order to avoid genetic bottlenecking (Bradbury *et al.* 1986) and we suggest that this may occur along river systems, providing the greatest chance of encountering another lek. Radio-tracking studies of both species are required to confirm or disprove this theory, which could have potentially important consequences for their conservation and management.

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