

SHORT COMMUNICATION

Noteworthy bird records at Lagoa Santa, southeastern Brazil

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ABSTRACT. Lagoa Santa, a small town in southeastern Brazil where naturalist Peter Lund lived, is regarded nowadays as an important historical site for the biological sciences. From 1847 to 1855, J.T. Reinhardt, hosted by Lund, collected 343 bird species. This material is an outstanding reference for many modern ornithological studies. The present paper reports the occurrence of some rare and threatened birds for the region of Lagoa Santa between 1998 and 2005. In this account I list the Rusty-margined Guan *Penelope superciliaris* Temminck, 1815; the Roseate Spoonbill *Platalea ajaja* Linnaeus, 1758; the Maguari Stork *Ciconia maguari* (Gmelin, 1789); the Wood Stork *Mycteria americana* Linnaeus, 1758; the Black Hawk-eagle *Spizaetus tyrannus* (Wied, 1820) and the Turquoise-fronted Parrot *Amazona aestiva* (Linnaeus, 1758). It is also reported the southernmost record for the Blue-and-yellow Macaw *Ara ararauna* (Linnaeus, 1758) and the range extension of the Crowned Slaty flycatcher *Griseotyrannus aurantioatrocristatus* (d'Orbigny and Lafresnaye, 1837). These data can be used as a baseline for studies of colonization and extinction. **KEY WORDS.** Biodiversity; Cerrado; extinction; range extension; threatened species.

RESUMO. Registros notáveis de aves em Lagoa Santa, sudeste do Brasil. Lagoa Santa, cidade onde viveu Peter Lund é um dos sítios de maior importância histórica para as ciências biológicas. Durante os anos de 1847 e 1855, J.T. Reinhardt, a convite de Lund, coletou 343 espécies de aves que são hoje referência para vários estudos ornitológicos. O presente artigo relata a ocorrência de algumas aves raras e/ou ameaçadas para a região de Lagoa Santa, entre 1998 e 2005. A lista de espécies inclui a jacupemba *Penelope superciliaris* Temminck, 1815, o colhereiro *Platalea ajaja* Linnaeus, 1758, a maguari *Ciconia maguari* (Gmelin, 1789), a cabeça-seca *Mycteria americana* Linnaeus, 1758, o gavião-pega-macaco *Spizaetus tyrannus* (Wied, 1820); e o papagaio-verdadeiro *Amazona aestiva* (Linnaeus, 1758). Relata-se também a ocorrência mais meridional da arara-canindé *Ara ararauna* (Linnaeus, 1758), e a expansão da distribuição geográfica do peitica-de-chapéu-preto *Griseotyrannus aurantioatrocristatus* (d'Orbigny and Lafresnaye, 1837). Estes dados poderão ser usados como referência nos estudos de colonização e extinção de espécies de aves. **PALAVRAS-CHAVE.** Biodiversidade; Cerrado; distribuição geográfica; espécies ameaçadas; extinção.

Lagoa Santa, in the central region of the state of Minas Gerais, is one of the most important sites of South America regarding aspects relevant to natural history. In the ornithological realm Johannes Theodor Reinhardt made an impressive collection of bird skins from Lagoa Santa and surroundings, nowadays housed at the Zoological Museum of Copenhagen, a source of inestimable importance (WARMING 1896, PINTO 1952, SILVA 1995, CHRISTIANSEN & PITZER 1997, RODRIGUES & GOMES 2004, RODRIGUES & MICHELIN 2005). The number of species collected at that time is well above those numbers gathered in recent studies, not only for the Cerrado region (e.g. RODRIGUES *et al.* 2005), but also for surveys conducted in other South American biomes such as the Atlantic forest (e.g. NAKA *et al.* 2002), the Caatinga (OLMOS *et al.* 2005) or even for the Amazon (BORGES 2004).

Reinhardt explored the region from 1847 to 1855 and recognised 343 bird species, some considered now to be locally extinct such as the Greater Rhea *Rhea americana* (Linnaeus, 1758), the Solitary Tinamou *Tinamus solitarius* (Vieillot, 1819), the Dwarf Tinamou *Taoniscus nanus* (Temminck, 1815), the Harpy Eagle *Harpia harpyja* (Linnaeus, 1758), the Spot-winged Wood-quail *Odontophorus capueira* (Spix, 1825), the Blue-bellied Parrot *Trichloria malachitacea* (Spix, 1824), the Black-necked Aracari *Pteroglossus aracari* (Linnaeus, 1758), the Spot-billed Toucanet *Selenidera maculirostris* (Lichtenstein, 1823), the Red-breasted Toucan *Ramphastos dicolorus* Linnaeus, 1766, the Robust Woodpecker *Campyphilus robustus* (Lichtenstein, 1818), the Bare-throated Bellbird *Procnias nudicollis* (Vieillot, 1817), and the Lesser Seed-finch *Sporophila (Oryzoborus) angolensis* (Linnaeus, 1766) (CHRISTIANSEN & PITZER 1997, RODRIGUES & GOULART 2005).

There are two published surveys after the work of Reinhardt which appeared in WARMING (1896). CHRISTIANSEN & PITTER (1997) studied three forest fragments and compared its species composition to Reinhardt list. They found 107 species, being ten species with very low population, another 13 species locally extinct and the colonization of seven new species for the region (CHRISTIANSEN & PITTER 1997, RODRIGUES & GOULART 2005). A new thoroughly survey was conducted by LINS *et al.* (1998) in 1995 and 1996. They visited several vegetation types and their list consists of 216 species. Also, they confirmed the disappearance of those species listed by CHRISTIANSEN & PITTER and found another 61 species not recorded by Reinhardt.

In this paper I describe the occurrence of some rare and threatened birds as well as new occurrences observed in the region of Lagoa Santa.

Lagoa Santa (19°37'40"S, 43°53'30"W) is a small town of nearly 40,000 people in south-eastern Brazil. The town lies in the periphery of the Brazilian central plateau, a region dominated by the Cerrado biome (WARMING 1896, EITEN 1972). The climate is tropical, highly seasonal with a dry period ranging from May to October, annual rainfall varying from 1,200 to 1,600 mm depending on year (NIMER 1979).

The region stands at 700 to 800 m above sea level and holds a large amount of depressions surrounded by rocky outcrops composed mainly by granite. Some of these depressions are seasonally flood. Most of the area lies within a federal environmental protection site called 'APA Carste de Lagoa Santa', a 35,600 ha area with restricted land use implemented in 1998 (HERMANN *et al.* 1998).

Once, the region of Lagoa Santa also harboured a large area of semi-deciduous forest, typical of the interior forests of the Atlantic Forest biome, eastern Brazil, as revealed by its avifauna composition in the 1860's (WARMING 1896, PINTO 1952, CHRISTIANSEN & PITTER 1997, HERMANN *et al.* 1998).

The first settlers, from the XVII to the XIX centuries were engaged in mining activities, mainly gold found in 'Rio das Velhas' (see BURTON 1869). The XIX and XX centuries were marked by land cleaning for cattle rising and charcoal industry. Nowadays, the main economic activity of Lagoa Santa is the granite extraction for the Portland cement industry. The impact of such an activity left a legacy of environmental degradation. Therefore one can imagine that the region is somehow different from that as it was lived by Lund, Reinhardt and Warming in the 1860's.

The observations were made sporadically along 1998 through April 2005 using 10 x 40 Zeiss binoculars while I visited most vegetation types around Lagoa Santa. Also, I made observations in historical sites visited by Reinhardt such as the former 'Fazenda do Jacques', nowadays 'Jacques Ville' (19°36'S, 43°54'W), 'Morro do Cruzeiro' (19°36'S, 43°52'W), and 'Lagoa do Sumidouro' (19°32'S, 43°47'W). Taxonomy and systematic order follows the Brazilian Committee of Ornithological Records (CBRO 2005).

SPECIES ACCOUNT

Rusty-margined Guan *Penelope supercilialis* Temminck, 1815

I observed a group of six Rusty-margined guan at 'Jacques Ville' at the edge of a disturbed small gallery forest in July 1998. It was in the dry season, and the birds were nearby an artificial pond probably searching for water. Since then, despite several times I returned to this local and sampled all around the 'Jacques Ville' locality, I was not able to detect this species again. The Rusty-margined Guan was recorded by Reinhardt (WARMING 1892), CHRISTIANSEN & PITTER (1997) and LINS *et al.* (HERMANN *et al.* 1998). In southeastern Brazil, deforestation and hunting have drastically reduced this species population (SICK 1993). Even in large areas such as 'Parque Nacional da Serra do Cipó', some 40 km north of Lagoa Santa, the Rusty-margined Guan, once common, has been ecologically extirpated (RODRIGUES *et al.* 2005).

Roseate Spoonbill *Platalea ajaja* Linnaeus, 1758

I have been monitoring a small population of about 10-20 birds at 'Lagoa do Sumidouro', the largest natural lake of the region (RODRIGUES & MICHELIN 2005). The population actually consists of one flock that remains in the lake from October to January (wet season). However, a few individuals were seen at the dry season of 2001. The maximum number of birds, twenty, were recorded in November and December of 2002. The Roseate Spoonbill is threatened within the state of Minas Gerais (MACHADO *et al.* 1998). It seems that the spoonbill was a common bird at the region due to the historic records of WARMING (1896) who mentioned 'flocks of noisy roseate herons' (HERMANN *et al.* 1998).

Maguari Stork *Ciconia maguari* (Gmelin, 1789)

Three birds were seen only once in November 2000 at 'Lagoa do Sumidouro'. It is possible that its range is shrinking due to marshes extirpation for agriculture purposes (RODRIGUES *et al.* 2005). The species was recorded by Reinhardt but not recorded by LINS *et al.* (HERMANN *et al.* 1998) and nowadays is considered rare in the state of Minas Gerais (RODRIGUES & MICHELIN 2005).

Wood Stork *Mycteria americana* Linnaeus, 1758

I observed two to four Wood Storks in November of 2000, 2001, and 2002 at 'Lagoa do Sumidouro'. The species was recorded by Reinhardt but not recorded by LINS *et al.* (HERMANN *et al.* 1998). The species is considered rare in the state of Minas Gerais (RODRIGUES *et al.* 2005).

Black Hawk-eagle *Spizaetus tyrannus* (Wied, 1820)

I saw the black hawk-eagle on the 11th of April 2004 at 'Morro do Cruzeiro', a mountain top (880 m a.s.l.) neighbourhood 2 km north from Lagoa Santa down town. Not recorded by Reinhardt (WARMING 1896) neither by LINS *et al.* (HERMANN *et al.* 1998).

It is known that the Black Hawk-eagle hunts mammals more than birds, such marmosets and bats (SICK 1993). It is also known that marmosets such as *Callitrix penicillata* Geoffroy, 1812

are very common and abundant in the region (HIRSCH & COSTA 2005, personal observation). It is not known if the Black Hawk-eagle is resident in the region of Lagoa Santa. The species needs a large territory as predicted by its body mass and diet (SCHOENER 1968) and possibly, the forest fragments of the region are within the home range of this bird.

Blue-and-yellow Macaw *Ara ararauna* (Linnaeus, 1758)

I observed a pair of the Blue-and-yellow Macaw for the first time in July of 1998, near the end of the day at approximately 5:30 p.m., flying high over 'Jacques Ville'. I could see them perfectly because I was set in a 12 m high tower where I had a 360 degrees sight of the whole region. The macaws were flying from Southeast to Northwest, in the direction of 'Rio das Velhas'. I observed them for two consecutive days.

One year later in July of 1999, I had a second sight of the Blue-and-yellow Macaw, exactly in the same situation, and again the observations were made for two consecutive days. The third sight was in August of 2000 at the same site and hour, and the birds were doing the same path, for two consecutive days. I had never seen the macaws again since then, despite my intensive attention at the area.

Neither Reinhardt (WARMING 1892), nor CHRISTIANSEN & PITTER (1997) and LINS *et al.* (1998) recorded the Blue-and-yellow Macaw. Recently, Fernando F. Goulart saw four individuals near 'Parque Nacional da Serra do Cipó', some 40 km from Lagoa Santa (RODRIGUES & GOULART 2005, RODRIGUES *et al.* 2005).

The Blue-and-yellow Macaw is considered threatened in the state of Minas Gerais (MACHADO *et al.* 1998) and it is known that the species still occurs at the Northwest of Minas Gerais, where 'buriti groves', its main habitat, still remains despite its destruction by large cattle and *Eucalyptus* farms settled in the region after the 1960s (M. RODRIGUES unpublished data). It is also known that these macaws are suffering a population decline due to both habitat loss and illegal pet trade (MACHADO *et al.* 1998, BIRDLIFE INTERNATIONAL 2000). Recently, CAPARROZ *et al.* (2001) have shown a low genetic variability in some populations of this macaw, probably related to reproductive isolation and low number of reproductive active birds.

This is the southernmost record of the Blue-and-Yellow Macaw for the state of Minas Gerais, where most of palm groves have been extirpated. I emphasise that 'buriti groves' needs some kind of legal protection, because it harbours not only macaws, but also many other birds such as the Point-tailed Palmcreeper *Berlepschia rikeri* (Ridgway, 1886) and the Fork-tailed Palm-swift *Tachornis squamata* (Cassin, 1853), as well as other parrots that depend on this habitat (see SICK 1993).

Turquoise-fronted Parrot *Amazona aestiva* (Linnaeus, 1758)

I have found an overnight roosting site that holds more than 60 Turquoise-fronted Parrots near 'Jacques Ville'. The species was previously recorded by Reinhardt (WARMING 1896) and LINS *et al.* (1998). There are reports of smugglers acting in these and other dormitories. Besides this, these birds breed on cavi-

ties formed by the calcareous rocky outcrops spread around the region (personal observation). The species is threatened in the region not only by smugglers, but also by the destruction of most calcareous outcrops to sustain the Portland cement industry. The Turquoise-fronted Parrot figures out as the main parrot illegally trade that arrives in the US market (BRIEN 1996).

Crowned Slaty flycatcher *Griseotyrannus aurantioatrocristatus* (d'Orbigny and Lafresnaye, 1837)

I have seen for eight consecutive years (1998 to 2005) two pairs of Crowned Slaty flycatcher nesting in a residential garden at 'Jacques Ville'. The birds arrive every year in September and leave the area in January. The nest is always built in a fork of a 'pequi' tree (*Caryocar brasiliense*). Reproductive success is always accomplished since I observed young out of the nests being fed by the parents. A second brood was observed in the years of 1999, 2000 and 2002. The Crowned Slaty-flycatcher appears in Reinhardt list (WARMING 1896). Despite of this fact, the species has been persistently overlooked by recent standard compilations on bird distribution such as RIDGELY & TUDOR (1994) and DEL HOYO *et al.* (2005). The historical records of Reinhardt and these present records confirm the range for the species in central Minas Gerais expanding the previously reported range in approximately 700 km. The species was also recorded breeding in the 'Parque Nacional da Serra do Cipó', some 40 km Northwest of Lagoa Santa (RODRIGUES *et al.* 2005). An adult specimen was collected at Felixlândia, 120 km Northwest of Lagoa Santa and is deposited (DZ 4382) at the ornithological collection of the Department of Zoology of the University of Minas Gerais.

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