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A NEW BREEDING COLONY OF THE SAFFRON-COWLED BLACKBIRD (*XANTOPSAR FLAVUS*) IN RIO GRANDE DO SUL, BRAZIL

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Uma nova colônia de reprodução de Veste-amarela (*Xantopsar flavus*) no Rio Grande do Sul, Brasil.

Key words: Rio Grande do Sul, breeding, Neotropical, endangered, Saffron-cowled Blackbird, *Xantopsar flavus.*

INTRODUCTION

The Saffron-cowled Blackbird (*Xantopsar flavus)* is endemic of the Neotropical region and is distributed in the states of southern Brazil (Rio Grande do Sul and Santa Catarina), and also in the neighboring countries, Paraguay, Uruguay and Argentina (Narosky & Yzurieta 1987, Ridgely & Tudor 1989, Belton 1994, Sick 1997, Azpiroz 2001). Usually, Saffron-cowled Blackbirds are found associated with Black-and-white Monjitas (*Heteroxolmis dominicana*) both at breeding and foraging sites (Fontana 1994, Fraga *et al.* 1998, Azpiroz 2000).

According to Collar *et al.* (1992) the Saffron-cowled Blackbird populations are decreasing all over their breeding distribution. The species is listed as vulnerable (BirdLife International 2000) and is considered a research priority by Collar *et al.* (1992) and Stotz *et al.* (1996). In Argentina, the decrease of populations was mainly due to the destruction of wetlands where the species was breeding (Fraga *et al.* 1998). There are few known breeding sites of this species. The largest colony with 24 nests has been recorded in Argentina (Fraga *et al.* 1998). In Brazil and Uruguay, there are records of only isolated nests (Belton 1994, Fontana 1994, Azpiroz 2000, Dias & Mauricio 2002). According to Azpiroz (2000), the finding of only isolated nests in Uruguay might be the consequence of a probable population decline that frevents the formation of breeding colonies. Azpiroz (2000) pointed out the importance of protecting breeding sites to enable the conservation of the species. The objective of this paper is to provide information about the breeding sites of Saffron-cowled Blackbirds in Rio Grande do Sul, Brazil.

STUDY AREA AND METHODS

The study area is in the tablelands of Rio Grande do Sul, specifically in the region of the Araucarias Plateau, known as Campos de Cima da Serra. The region has altitudes ranging from 500 to 1800 m above sea level. The

TABLE 1. Density (per m^2) of *Ludwigia* plants, average height of vegetation (m), and number of nests per quadrant.

Quadrants	Density of *Ludwigia*	Average height of vegetation	Number of nests
1	9.0	1.60	-
2	30.0	1.80	1
3	20.0	1.80	6
4	4.0	1.50	-
5	16.0	1.40	2
6	12.0	1.30	1
7	9.0	1.20	1
8	10.0	1.50	2
9	6.0	1.30	2
10	1.4	1.20	-
11	-	1.20	-
12	0.8	1.20	-
Total	-	-	15

cold climate favors the associations of perennial conifers with latifolious, tropical and deciduous species (Glufke 1999). The area is mostly covered with fields intersected by Araucaria (*Araucaria angustifolia*) woodlands and wetlands (Rambo 1994). Field vegetation is mainly composed of high clustering gramineous species, besides several other plants and *Baccharis* bushes, as well as ferns (Reitz *et al.* 1988).

We searched for breeding and roosting sites of the Saffron-cowled Blackbird, beginning with the northeastern border of the known distribution of the species in Rio Grande do Sul. We made several trips by car at low speed through secondary roads of the Cambará do Sul district, searching for all possible signs of the presence of the species. In December 2001, we found the first breeding site and made of it the central point for collecting data.

We visited the site seven times: twice in December (2001), twice in January (2002), once in February (2002), once in March (2002), and once in April (2002). During each visit, 15 min after the arrival of the observer, we counted all individuals from a standing point in the field, higher than the breeding site.

After the breeding season, the whole site was measured and divided into 10 x 12 m quadrants. In each quadrant, all plant species > 60 cm were counted, measured and determined. The quadrants were individually searched for abandoned nests. Using a caliper rule, we measured each nest (internal diameter and depth) according to Hansell (2000). We also measured the height of the nest above the ground and the total height of the bush where it was found. All plant species which supported nests were also determined.

Eggs and chicks were not measured and no specimen was captured or marked given the population status of the species, and to avoid losses caused by research activities that

TABLE 2. Mean ± SD and range of nests height above ground, total height of the vegetation where nests were built, depth and internal diameter (cm) of nests in of the Saffron-cowled Blackbird.

	N	Mean ± SD	Range
Nest height (cm)	13	57.08 ± 11.06	38.00-74.00
Vegetation height (cm)	13	94.00 ± 18.12	(70.00-133.00
Nest depth (cm)	13	6.19 ± 0.78	4.50-7.20
Nest internal diameter (cm)	13	6.21 ± 0.83	4.40-7.80

could aggravate even more the threat on the species.

RESULTS

We searched 500 km of secondary roads intersecting field regions and wetlands of Cambará do Sul district, where a breeding site was located on a private property. The nests were distributed in an area of approximately 3600 m^2 at 830 ma.s.l., with bushy vegetation and small pounds surrounded by pastures. The dominant vegetation was *Eryngium* sp., followed by *Ludwigia* sp. (Table 1). The density of *Eryngium* was over 6 plants/m^2 what made the establishment of other species difficult. The second and third quadrants had the largest density of *Ludwigia* sp. with over 30 plants/m^2, and had the highest vegetation. Besides that, the third quadrant had the highest number of nests.

We found 15 nests, of which 13 were measured (Table 2). Two were not measured because they were partially damaged by cattle. The 13 measured nests were attached on *Ludwigia* branches, about 94 cm above the ground. The vegetation below the *Ludwigia* bushes where the nests were found was dominated by *Eryngium* plants.

The observations on the breeding site started in December 2001 when the colony was already established and the adults were alternating the task of feeding the chicks. They were forming small groups with approximately six individuals, both males and females, to bring food, while other groups were resting on the higher *Eryngyum* and *Ludwigia* branches near or on the breeding site. The quadrants 9, 10, 11 and 12, in which no nests were found, were used as ground places for the groups. When a group arrives with food, it goes directly to the nests while another group that was resting leaves the colony. During December through January, we recorded flocks of 23 to 30 individuals. In February, March and April, already out of the breeding season, we recorded flocks of 11 to 13 individuals, late in the afternoon.

Nine other bird species were also found at the same breeding site. The two most common species were the Black-and-white Monjita (*Heteroxolmis dominicana*), with nine birds resting and foraging in association with Saffron-cowled Blackbirds, and five resting Black-bellied Seedeaters (*Sporophila melanogaster)* . Most of the species were resting and none were the object of agonistic behavior from the Saffron-cowled blackbirds, except for Yellow-rumped Marshbird *(Pseudoleistes guirahuro)* that were chased in flight.

DISCUSSION

The physiognomic characteristics of the studied breeding site of Saffron-cowled Blackbirds in Rio Grande do Sul, Brazil, are similar to those reported for Uruguay and Argentina. Fraga *et al.* (1998) and Azpiroz (2000) have shown that Saffron-cowled Blackbirds nest in

wetlands rich in bushy vegetation, associated with *Eryngyum* sp. Such sites are used not only for breeding, but also for roosting. In Brazil, *Eryngyum* was a dominant plant species, but all nests were built on *Ludwigia* branches, what shows the importance of *Ludwigia* bushes for breeding Saffron-cowled Blackbirds. During the breeding season, *Ludwigia* bushes are flowering, thus probably resulting in better camouflage for the birds, since both are predominantly yellow.

According to Jaramillo & Burke (1999), Saffron-cowled Blackbirds build their nests on less than a meter above the ground. The same was the case in Brazil, even where higher vegetation was available. The measurements of Brazilian nests fell within the limits reported by Azpiroz (2000) and Fraga *et al.* (1998) for Uruguay and Argentina.

The presence of other species of birds such as the Yellow-rumped Marshbird and the Black-and-white Monjita together with Saffron-cowled Blackbirds was also recorded by Fontana (1994), Fontana & Voss (1995), Fraga *et al.* (1998), Jaramillo & Burke (1999) and Azpiroz (2000). One species found in association with the Saffron-cowled Blackbird in Brazil, the Black-bellied Seedeater, is considered as almost endangered (BirdLife International 2000).

The population decline suffered by Saffron-cowled Blackbirds is clearly illustrated by the low number of recorded nests and breeding colonies (Azpiroz 2001). In Brazil, there are no records of other breeding colonies of the Saffron-cowled Blackbird, except for few isolated nests mentioned by Belton (1994), Fontana (1994), Dias & Mauricio (2002), what does not mean less risk for the species. The main threat for the species in the studied area results from the presence of cattle that eventually steps on the nests, and from the use of pesticides on the neighboring cultivated fields that can contaminate the population of Saffron-cowled Blackbirds.

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