

First records of European Starling *Sturnus vulgaris* in Brazil

Fabio Cavitione e Silva^{1,3}, Josiani da Motta Pinto¹, Aurelea Mäder¹ & Valério Antônio Teixeira de Souza²

¹ ARDEA Consultoria Ambiental. Rua Botafogo 1287/202, Menino Deus, 90150-053, Porto Alegre, RS, Brazil.

² Rua Maria Barcelos, 387, Centro, 97390-000, Lavras do Sul, RS, Brazil.

³ Corresponding author: fabiocavitione@gmail.com

Received on 29 May 2017. Accepted on 05 December 2017.

ABSTRACT: We present the first records of *Sturnus vulgaris* in Brazil. Here we report the occurrence of the species at three localities of Rio Grande do Sul state. We photographed and recorded five juvenile specimens feeding in grasslands at the municipality of Santa Vitória do Palmar, 30 specimens at the municipality of Chuí and a single adult in breeding plumage at the municipality of Lavras do Sul. Our most recent record reveals the probable establishment of this species in the country.

KEY-WORDS: Common Starling, conservation, ecology, exotic birds, invasive species.

The European Starling *Sturnus vulgaris* Linnaeus, 1758 belongs to the Sturnidae family, native from Europe and Asia. It is regarded as a highly successful invader, currently introduced in Africa, the Americas and Oceania (Feare 1984, Ifran & Fiorini 2010). In Latin America, its southernmost distribution is documented to the southern portion of Uruguay (Mazzulla 2013) and central and northeast of Argentina (Peris *et al.* 2005).

Its size can range between 20.5 and 25 cm. It has an elongated bill, short tail and reddish legs (Howell & Webb 1995, de la Peña & Rumboll 1998, Azpiroz 2012). Its plumage is quite variable, presenting distinct characteristics between adults/breeding and adults/non-breeding. During non-breeding season (fall-winter) the bill is dark and the plumage presents white dots all over the body which will disappear, totally or partially, as the breeding season approaches. At breeding season (spring-summer), the bill is yellow. The plumage is black with violet shades on the head and greenish on the rest of its body. The youngsters have a totally grayish brown plumage, with back darker than the belly, white throat and dark bill. The tail is shorter compared to adults (Howell & Webb 1995, Azpiroz 2012). Its vocalization is a sequence of sharp notes, rough and noisy (Aspiroz 2012). Its diet is essentially omnivorous, eventually feeding on small invertebrates, fruits and cereals (Wood 1924, Feare 1984).

The aim of this study is present the first documented records of *S. vulgaris* in Brazil. A first sighting of *S. vulgaris* in Brazil occurred in Rio Grande do Sul state, on 10 October 2014, at the municipality of Lavras do

Sul (30°35'35.56"S; 53°50'17.15"W), available on Wikiaves (Souza 2014). This record was of a single adult in breeding plumage. However, the discovery was not properly documented in the scientific literature.

Our current records of *S. vulgaris* took place on 07–08 December 2016 around 18:30 h at the municipality of Santa Vitória do Palmar (33°37'42.84"S; 53°20'24.06"W). The individuals were photographed, filmed and had their vocalization recorded. The photographs were posted in the Wikiaves image collection (Silva 2016a) and the vocalization record in the Xenocanto digital collection under accession number XC345984 (Silva 2016b). At the first day, the flock with five juvenile specimens flew in circles over a eucalyptus forest while vocalizing (calling) and landed on the trees (Fig. 1). The birds moved in aggregate form to another forest where they remained vocalizing. The next day at 11:10 h the same specimens were detected flying over the field at the same location, landing to feed on the ground. Another flock with 30 juvenile specimens flying in circles and landing to feed on the ground were observed on 29 October 2017 around 8:00 h at the municipality of Chuí (33°40'14.56"S; 53°24'38.68"W).

The native fields of the region where the species was registered foraging was occupied by cattle and sheep and are characterized by the invasive Gorse (*Ulex europaeus*), vegetation native from Europe, in addition to *Eucalyptus* spp. Furthermore, the rice cultivation is the main agricultural activity at this region. When the registers were carried out, the rice crops were 20 cm tall and the species interaction with crops were not detected.



Figure 1. Flock with juvenile Starlings *Sturnus vulgaris* recorded at Santa Vitória do Palmar, Rio Grande do Sul state, Brazil, on 07 December 2016. Photo Author: Josiani M. Pinto.

However, it is known that cereals play an important role on diet of Starlings, and that they cause serious damage to the agriculture in the United States and Europe (Feare 1984, 1989, Feare *et al.* 1992, Pimentel *et al.* 2000).

The *S. vulgaris* expansion capacity is alarming. According to Peris *et al.* (2005), in Argentina, the bird had dispersed in a progression of 7.5 km/year. In Australia and Europe, there are several studies and reports addressing the competition problems for nesting sites with native species (*e.g.*, Wood 1924, Pazzucconi 1997, Pell & Tidemann 1997, Wiebe 2003). According to Wood (1924), Starlings show advantage over native species where there was competition, as they can outcompete for nest cavities.

The reproduction of *S. vulgaris* in landscapes such as Santa Vitória do Palmar, in the Pampa Biome, may be harmful to native species, since the Starling builds its nests, preferable, in trunk cavities, *i.e.* as secondary cavity nesters (Wood 1924, Feare 1984, Pazzucconi 1997), similar to several native species in this region.

ACKNOWLEDGEMENTS

Thanks are due to Valério Souza for information on the location of previous Starlings records. We are also

grateful to Maura Kimura Scott and Paulo Tomasi Sarti for the support in translation to English and language review.

REFERENCES

- Azpiroz A.B. 2012. *Aves de las pampas y campos de Argentina, Brasil y Uruguay: una guía de identificación*. Nueva Helvecia: Pressur.
- de la Peña M.R. & Rumboll M. 1998. *Birds of southern South America and Antarctica*. New Jersey: Princeton University Press.
- Feare C.J. 1984. *The Starling*. Oxford: Oxford University Press.
- Feare C.J. 1989. The changing fortunes of an agricultural bird pest: the European Starling. *Agricultural Zoology Reviews* 3: 317–342.
- Feare C.J., de Franssu P.D. & Peris S.J. 1992. The Starling in Europe: multiple approaches to a problem species, p. 83–88. In: Borrecco J.E. & Marsh R.E. (eds.). *Proceedings of the 15th Vertebrate Pest Conference*. Davis: University of California.
- Howell S.N.G. & Webb S. 1995. *A guide to the birds of Mexico and northern Central America*. Oxford: Oxford University Press.
- Ifran N.R. & Fiorini V.D. 2010. European Starling (*Sturnus vulgaris*): population density and interactions with native species in Buenos Aires urban parks. *Ornitología Neotropical* 21: 507–518.
- Mazzulla J. 2013. Primeros registros de Estornino Pinto *Sturnus vulgaris* (Linnaeus, 1758) (Aves, Passeriformes, Sturnidae) en Uruguay. *Achará, 2^a Época* 3: 13–17.
- Pazzucconi A. 1997. *Uova e nidi degli uccelli d'Italia*. Bologna: Calderini Ed.
- Pell A.S. & Tidemann C.R. 1997. The impact of two exotic hollow-nesting birds on two native parrots in savannah and woodland in eastern Australia. *Biological Conservation* 79: 145–153.
- Peris S., Soave G., Camperi A., Darrieu C. & Aramburu R. 2005. Range expansion of the European Starling *Sturnus vulgaris* in Argentina. *Ardeola* 52: 359–364.
- Pimentel D., Lach L., Zoniga R. & Morrison D. 2000. Environmental and economic costs of nonindigenous species in the United States. *BioScience* 50: 53–65.
- Silva F.C. 2016a. [WA2398724, unidentified]. <http://www.wikiaves.com/2398724> (access on 28 May 2017).
- Silva F.C. 2016b. [XC345984, *Sturnus vulgaris*] <http://www.xeno-canto.org/345984> (access on 28 May 2017).
- Souza V.A. 2014. [WA1498234, unidentified]. <http://www.wikiaves.com/1498234> (access on 28 May 2017).
- Wiebe K.L. 2003. Delayed timing as a strategy to avoid nest-site competition: testing a model using data from Starlings and Flickers. *Oikos* 100: 291–298.
- Wood C.A. 1924. The Starling family at home and abroad. *Condor* 26: 123–136.

Associate Editor: Gustavo S. Cabanne.