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Third record of the Critically Endangered Brazilian Merganser *Mergus octosetaceus* in São Paulo state, south-east Brazil, after almost two centuries

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SUMMARY.—Brazilian Merganser *Mergus octosetaceus* is one of the most endangered bird species in the Americas and one of the rarest ducks in the world. We photographed the species in August 2017, at Serra do Mar State Park, Salesópolis, in eastern São Paulo state. This is the third documented record in São Paulo, but the first for approximately 200 years.

Brazilian Merganser *Mergus octosetaceus* is considered one of the rarest bird species in the Americas and among the most threatened waterfowl in the world, being currently considered Critically Endangered (Collar *et al.* 1992, BirdLife International 2018). It is adapted to watercourses in montane regions, inhabiting clear-water rivers especially those with rapids, and the species feeds on fish, aquatic insects and molluscs (Sick 1997, Carboneras *et al.* 2018).

Originally found across south-central Brazil and adjacent Argentina and Paraguay, the species' range is now drastically reduced (Collar *et al.* 1992), despite its more recent discovery further north than previously known (Braz *et al.* 2003). Intolerant of impacts



Figure 1. Male Brazilian Merganser *Mergus octosetaceus*, rio Claro, Salesópolis, São Paulo, Brazil, 25 August 2017 (Fabiana Dias Pereira)



Figure 2. Locality where observations were made in August and November 2017, rio Claro, Salesópolis, São Paulo, Brazil (Miguel Nema Neto)

to its environment and sensitive to human disturbance, activities such as agricultural expansion, pollution, dams and loss of riverine vegetation can all negatively impact the species (Hughes *et al.* 2006). Recent sightings evidence its survival in Argentina (Misiones) and perhaps even in Paraguay, but in Brazil it is considered extinct in the states of Mato Grosso do Sul, São Paulo, Rio de Janeiro and Santa Catarina (Collar *et al.* 1992, Lamas & Lins 2009, Carboneras *et al.* 2018). In Paraná, recent field work has failed to confirm the species' presence and the last record was now more than 20 years ago, in 1995 (Lamas & Lins 2009, Carboneras *et al.* 2018). Indeed, in recent decades *M. octosetaceus* has been recorded at just a few locations in Brazil, mainly within protected areas, especially Serra da Canastra National Park (Minas Gerais), Chapada dos Veadeiros National Park (Goiás) and Jalapão State Park (Tocantins) (Braz *et al.* 2003, Bianchi *et al.* 2005, Lamas 2006). It has also been reported in western Bahia state, although subsequent searches of this area were unsuccessful (Lamas & Lins 2009). Occasional records elsewhere in Minas Gerais perhaps involve wandering or dispersing birds (Lamas & Lins 2009), although to date there is no definitive evidence that the species moves far from its natal areas (Ribeiro *et al.* 2011).

In the state of São Paulo, the only well-documented record of the species involves a female (from a pair) collected by J. Natterer in August 1820, at Itararé (24°07'S, 49°20'W), on the border with Paraná, and now in the Natural History Museum, Tring, UK (Collar *et al.* 1992). In addition Stresemann (1954), repeated by Collar *et al.* (1992), mentioned that in the previous year, 1819, Frederick Sellow took specimens (now in Berlin) during his travels through Rio de Janeiro, Minas Gerais and São Paulo, including in the last-named state, although Partridge (1956) insisted that these were likely to have all emanated from Minas Gerais. Another specimen (in the Museu de Zoologia de São Paulo), until recently often reported in the literature as originating from São Paulo state (e.g. Pinto 1938), collected at either Salto Grande or Fazenda Caiuá, on the rio Paranapanema, on 30 May 1903, is in fact from Paraná (Straube *et al.* 2002).

We made the third record of *M. octosetaceus* in São Paulo, almost two centuries after the specimens mentioned above. On 25 August 2017, a male was photographed (Fig. 1)



Figure 3. Study area of Padre Dória, Serra do Mar State Park, Salesópolis, São Paulo, Brazil.

on the rio Claro, in the Alto Tietê basin, Salesópolis. This river lies within a system of dams established in 1973 that provides water to 1.1 million people in the metropolitan region of São Paulo (SABESP 2017). The location is included within Important Bird Area SP04 (Bencke *et al.* 2006), forms part of Serra do Mar State Park (Fig. 3) and is very close to Boracéia Biological Station, whose avifauna has been studied for >60 years, and in this respect is one of the best-known locations in south-east Brazil (Cavarzere *et al.* 2010). It is also c.110 km from São Paulo city, the most populous urban area in Latin America, while the town of Salesópolis is well known among ornithologists for the recently described São Paulo Antwren *Formicivora paludicola* (Buzzetti *et al.* 2013).

The bird was seen swimming and diving next to the riverbank, in a 10-m stretch of slow-moving river, with clear, cold, very shallow (c.1 m deep) water, and a sandy bottom (Fig. 2). The bird was seen again, but not photographed, in the same place on 23 November 2017, perhaps indicating that it was territorial, although there have been no subsequent records despite regular visits to the area.

As previously mentioned, changes in hydrology caused by damming of rivers represents a significant threat to this globally endangered species. The rio Claro is a tributary of the rio Tietê, and the nearest dam is the Ribeirão do Campo, on the rio do Campo, which flows into the rio Claro. Nevertheless, upstream of the dam, the rio Claro extends for many kilometres through the Serra do Mar State Park, making it easier for the bird to move locally. Further work is needed to determine whether there is a population in this area, or this individual was a wanderer. But, for now it appears that Brazilian Merganser is not regionally extinct.

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