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

by Miguel Nema Neto, Fabiana D. Pereira, Ana L. M. Wuo & Carlos Zacchi Neto

Received 11 February 2018; revised 24 April 2018; published 22 June 2018

http://zoobank.org/urn:lsid:zoobank.org:pub:9163F1AD-EC6C-495F-A068-59C2067983CD

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...
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, Frederich 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)
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.

**Acknowledgements**

We especially thank the management and staff of Serra do Mar State Park, Núcleo Padre Dória, for logistical support, Jamile El Kassis Marangoni and Marcos Salvador Mathias Júnior for translating the text, researchers at the “Instituto Florestal”, Marina Mitsue Kanashiro for the map, and Alexsander Z. Antunes for suggestions concerning the manuscript. The manager of the North Shore Forestall Foundation, Leandro de Oliveira Caetano, and Larissa Araújo Nema encouraged us to publish this observation.
References:

Bencke, G. A., Mauricio, G. N., Develey, P. F. & Goerck, J. M. (eds.) 2006. Áreas importantes para a conservação de aves no Brasil, vol. 1. SAVE Brasil, São Paulo.

Bianchi, C. A., Brant, S., Brandão, R. A. & Brito, B. F. 2005. New records of Brazilian Merganser Mergus octosetaceus in the rio das Pedras, Chapada dos Veadeiros, Brazil. Cotinga 24: 72–74.

BirdLife International. 2018. Species factsheet: Brazilian Merganser Mergus octosetaceus. http://datazone.birdlife.org/species/brazilian-merganser-mergus-octosetaceus (accessed 14 January 2018).

Braz, V. S., Abreu, T. L. S., Lopes, L. E., Leite, L. O., França, F. G. R., Vasconcellos, M. M. & Balbino, S. F. 2003. Brazilian Merganser Mergus octosetaceus discovered in Jalapão State Park, Tocantins, Brazil. Cotinga 20: 68–71.

Buzzetti, D. R. C., Belmonte-Lopes, R., Reinert, B. L., Silveira, L. F. & Bornschein, M. R. 2013. A new species of Formicivora Swainson, 1824 (Thamnophilidae) from the state of São Paulo, Brazil. Rev. Bras. Orn. 21: 269–291.

Carboneras, C., Kirwan, G. M. & Sharpe, C. J. 2018. Brazilian Merganser (Mergus octosetaceus). In del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A. & de Juana, E. (eds.) Handbook of the birds of the world Alive. Lynx Edicions, Barcelona (retrieved from https://www.hbw.com/node/52928 on 25 April 2018).

Cavarzere, V., Moraes, G. P. & Silveira, L. F. 2010. Boracéia Biological Station: an ornithological review. Pap. Avuls. Zool., São Paulo. 50: 189–201.

Hughes, B., Dugger, B., Cunha, H. J., Lamas, I., Goerck, J., Lins, L., Silveira, L. F., Andrade, R., Bruno, S. F., Rigueira, S. & Barros, Y. M. 2006. Action plan for the conservation of the Brazilian Merganser Mergus octosetaceus. ICMBio, Brasília.

Lamas, I. R. 2006. Censo de Brazilian Merganser Mergus octosetaceus in the region of Serra da Canastra National Park, Brazil, with discussion of its threats and conservation. Bird Conserv. Intern. 16: 145–154.

Lamas, I. R. & Lins L. V. 2009. Brazilian Merganser (Mergus octosetaceus). In Schulenberg, T. S. (ed.) Neotropical birds online. Cornell Lab of Ornithology, Ithaca, NY. https://doi.org/10.2173/nb.bramer1.01 (accessed 13 January 2018).

Partridge, W. H. 1956. Notes on the Brazilian Merganser in Argentina. Auk 73: 473–488.

Pinto, O. M. O. 1938. Catálogo das aves do Brasil e lista dos exemplares que as representam no Museu Paulista, 1a. parte. Rev. Mus. Paulista 22: 1–556.

Ribeiro, F., Lins, L. V., Gomes, V. M., Nery, F. H. & Reis, E. S. 2011. Dispersão e maturidade sexual de Mergus octosetaceus Vieillot, 1817 na região da Serra da Canastra, Minas Gerais, Brasil. Rev. Bras. Orn. 19: 391–397.

SABESP (Companhia de Saneamento Básico do Estado de São Paulo). 2017. Acesso em 13 de Janeiro de 2018, disponível em SABESP: http://site.sabesp.com.br/site/imprensa/noticias-detalhe.aspx?secaoId=66&id=7437.

Sick, H. 1997. Ornitologia brasileira. Ed. Nova Fronteira, Rio de Janeiro.

Straube, F. C., Willis, E. O. & Oniki, Y. 2002. Aves coletadas na localidade de Fazenda Caiuá (Paraná, Brasil) por Adolph Hempel, com discussão sobre sua localização exata. Ararajuba 10: 167–172.

Stresemann, E. 1954. Ausgestorbene trod Aussterbende Vogelarten, vertreten im Zoologisthen Museum zu Berlin. Mitt. Zool. Mus. Berlin 30: 38–53.

Addresses: Miguel Nema Neto, Rua Horto Florestal 1200, Rio do Ouro, Caraguatatuba, São Paulo, Brazil, CEP 11675-730, e-mail: miguelpesm@gmail.com. Fabiana Dias Pereira, Rodovia Alfredo Rolim de Moura 882, Vila Bueno, Salesópolis, São Paulo, Brazil, CEP 08970-000, e-mail: tiafabii@hotmail.com. Ana Lúcia Morais Wuo, Rua 15 de Novembro 569, Centro, Salesópolis, São Paulo, Brazil, CEP 08970-000, e-mail: analuciawu@gmail.com. Carlos Zacchi Neto, Rua Horto Florestal 1200, Rio do Ouro, Caraguatatuba, São Paulo, Brazil, CEP 11675-730, e-mail: carlospesm@gmail.com

© 2018 The Authors; This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial Licence, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.