

New record of the Harpy Eagle *Harpia harpyja* in the Atlantic Forest of Jequitinhonha Valley, Minas Gerais, Brazil

Harpy Eagle *Harpia harpyja* is one of the largest birds of prey in the world²⁴. It is found in tropical forests from southern Mexico to northern Argentina^{7,29}. Although considered relatively common in the Amazon region, there are only a few recent records in other biomes¹⁴. In Brazil, it has been recorded in the Amazon, Atlantic Forest and gallery forests of the Cerrado and Pantanal biomes^{4,29}. Threatened throughout its range, Harpy Eagle is classified as Vulnerable at both the global⁶ and Brazilian¹⁶ levels, the latter due mainly to fragmentation of primary forests and hunting⁴. In the Atlantic Forest, the Harpy Eagle situation is more alarming, and it is classified as Critically Endangered in most Brazilian states that encompass its range⁵.

The Atlantic Forest is a global biodiversity hotspot¹⁵, with approximately 12% of original cover remaining, mostly restricted to small fragments^{9,21}. This represents a challenge to the viability of the Harpy Eagle population in this biome, given its known dependence on large forested areas¹⁰. In the Atlantic Forest, records of the species in the last 20 years exist in the states of Bahia^{10,19,23,26,28}, Espírito Santo^{1,10,17,19,27}, Rio Grande do Sul^{8,11} and Paraná (www.wikiaves.com/3757314). Here, we provide the first known record of the species in the Jequitinhonha Valley, in north-eastern Minas Gerais.

This new record occurred on the Fazenda Limoeiro, which has c.5,000 ha of forest in an area called Complexo Limoeiro, in the municipality of Almenara (16°04'10.9"S 40°52'05.9"W; Fig. 2)²⁰. On the morning of 15 June 2023, during a field trip to observe birds in the area, OR noticed an adult Harpy Eagle (presumably a male, based on its size; Fig. 1) perched on an *Anadenanthera colubrina* tree (Fabaceae) and drew the attention of the accompanying group of observers to it. The eagle showed no signs of discomfort with the group's presence, remaining motionless on the perch for c.4 minutes, changing position only shortly before taking flight.

Recent records of Harpy Eagle in the Atlantic Forest are generally associated with areas of large forest remnants. In the state of Minas Gerais, the most recent confirmed record of the species occurred in 2006, in the municipality of Tapira, in an ecotone area between the Cerrado and the Atlantic Forest biomes¹⁸. Earlier records from the state include a report of individuals collected by J. T. Reinhart in Lagoa Santa region sometime between 1847 and 1855²²; a specimen from the Mucuri river basin, in the north of the state, collected sometime between 1920 and 1940 (deposited in Museu Nacional do Rio de Janeiro: MNRJ 32531); a record for the municipality of Marliéria, in the Doce river basin, in the west of the state, in 1977²⁵; and a photographic record in the municipality of Cataguases, in 1996¹⁸.



Figure 1. Male Harpy Eagle *Harpia harpyja*, Complexo Limoeiro, Almenara, Minas Gerais, Brazil, 15 June 2023 (Oswaldo Rezende).

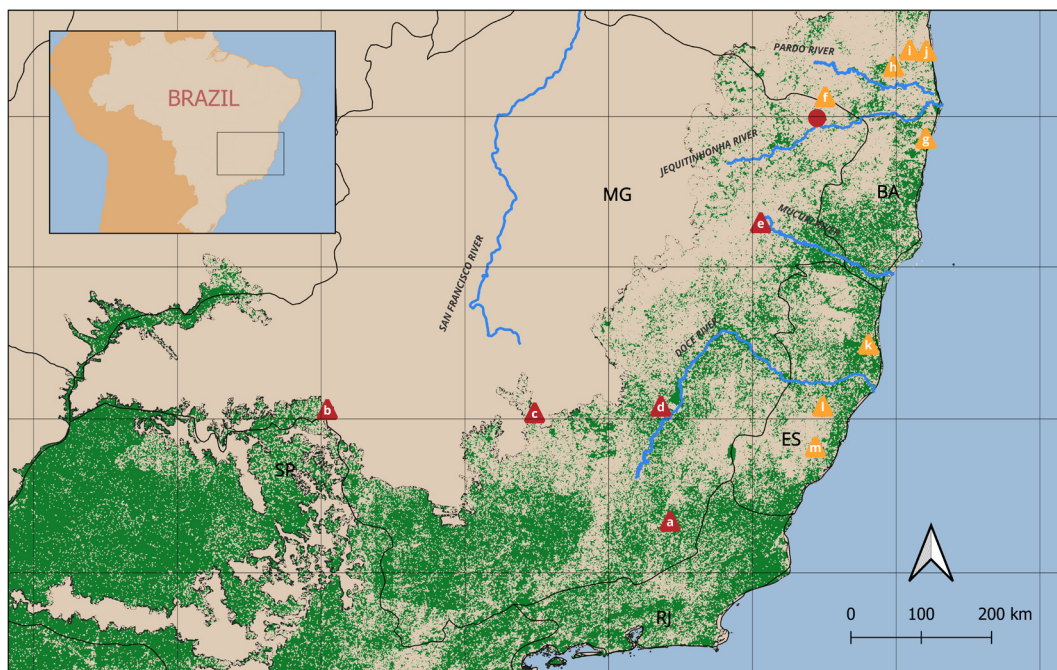


Figure 2. Harpy Eagle *Harpia harpyja* distribution in part of eastern Brazil, showing the location of the new record in Minas Gerais, Brazil, 15 June 2023 (José Alves da Costa Filho). The red circle indicates our record; red triangles indicate previous records in Minas Gerais: a¹⁸, b¹⁸, c²², d²⁴ and e (MNRJ 32531); orange triangles indicate documented records over the last 20 years in Bahia and Espírito Santo: f¹², g^{10,19}, h^{10,23}, i²⁶, j²⁸, k^{1,10,19,27,117} and m (www.wikiaves.com/2925984). State acronyms: BA = Bahia; ES = Espírito Santo; MG = Minas Gerais; RJ = Rio de Janeiro; and SP = São Paulo. Dark green areas are Atlantic Forest fragments. Map created with the free, open source QGIS 3.36.0 software²⁰, and used under the Creative Commons Attribution-ShareAlike 3.0 licence (CC BY-SA).

In adjacent Bahia, a bird was recorded in 2003 at Reserva Particular do Patrimônio Natural Mata do Passarinho¹²: this location is only c.50 km from our record in Complexo do Limoeiro. The forest here is located relatively close to other important conservation units, such as the Reserva Biológica da Mata Escura (Minas Gerais) and the Parque Nacional do Alto Cariri (Bahia). The aforementioned areas have already been identified as important regions for populations of medium and large primates¹³, which are known to provide important elements of the Harpy Eagle diet^{2,28}.

This record in Almenara, besides contributing to a better understanding of the distribution of the Harpy Eagle in Minas Gerais, highlights the scarcity of records of this species in areas of fragmented forest. The Rio Jequitinhonha is likely an important dispersal corridor for the species. There are several records less than 200 km from ours, near the mouth of the Rio Jequitinhonha in the state of Bahia, including in the municipalities of Belmonte, Santa Cruz Cabrália and Porto Seguro, where nests have been monitored by Projeto Harpia – Mata Atlântica (Harpy Eagle Project – Atlantic Forest). Thus,

our record suggests that there is a Harpy Eagle population along the forest corridor formed by forest fragments in private properties and protected areas along the Jequitinhonha Valley, reinforcing the importance of the region for the conservation of the species in the Atlantic Forest biome.

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