NOTES

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Natural History

A record of alopecia in the maned wolf, *Chrysocyon brachyurus* Illiger, 1815, in Southern Minas Gerais state, Brazil

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Resumen

El lobo-guará (*Chrysocyon brachyurus*) es una especie carismática que a menudo se utiliza como especie paraguas para promover la preservación y conservación del medio ambiente. Sin embargo, el contacto con perros domésticos ha facilitado la transmisión de enfermedades que pueden ser fatales para las poblaciones silvestres. Esta nota informa sobre el avistamiento de un lobo-guará en una etapa avanzada de pérdida de pelo, compatible con alopecia, observado el 27 de julio de 2023, alrededor de las 17h00, en una zona rural de São Gonçalo do Sapucaí, sur de Minas Gerais, Brasil. Se sospecha que la afección fue causada por la transmisión de enfermedades de perros domésticos. Como medida preventiva, se recomienda la esterilización de los perros callejeros para reducir su rango de deambulación y el riesgo de transmisión de enfermedades a la fauna nativa. Además, es necesaria una mayor vigilancia por parte de las autoridades, ya que los perros abandonados también pueden servir como reservorios de enfermedades zoonóticas.

Palabras clave: Canidae, Conservación, Enfermedades.

Abstract

The maned wolf (*Chrysocyon brachyurus*) is a charismatic species often used as an umbrella species to promote environmental preservation and conservation efforts. However, contact with domestic dogs has facilitated the transmission of diseases that can be fatal to wild populations. This note reports the sighting of a maned wolf in an advanced stage of hair loss, consistent with alopecia, observed on July 27, 2023, around 17:00, in a

rural area of São Gonçalo do Sapucaí, southern Minas Gerais, Brazil. The condition is suspected to have been caused by disease transmission from domestic dogs. As a preventive measure, it is recommended that stray dogs be neutered to reduce their roaming range and the risk of transmitting diseases to native fauna. Additionally, increased surveillance by public authorities is necessary, as abandoned dogs may also serve as reservoirs of zoonotic diseases.

Key words: Canidae, Conservation, Diseases.

The maned wolf, *C. brachyurus* Illiger, 1815 (Carnivora, Canidae), is the largest canine in South America This species displays striking features, including long, slender legs that are adaptations for moving through tall vegetation in the grasslands and savannas. Its body is slim and covered with dense, reddish fur, with shades ranging from orange-brown to golden, contrasting with its black legs and dark snout. Another distinctive trait is its thick, bushy tail, usually lighter at the tip, which helps with balance and visual communication between individuals. The maned wolf's head is relatively small in proportion to its body, with an elongated snout and large, upright ears that assist with hearing in open environments (Dietz 1985; Queirolo et al. 2011).

The species ranges from the mouth of the Parnaíba River in northeastern Brazil, westward to the Pampas del Heath in Peru, and south through the Paraguayan Chaco to Rio Grande do Sul in Brazil. Its geographical distribution spans over five million square kilometers (Dietz 1985; Queirolo et al. 2011). The broad distribution exacerbates threats, categorizing the species as "Near Threatened" (IUCN 2024) and Vulnerable (Brasil 2022). Literature frequently cites habitat degradation (Paula et al. 2008), roadkill (Rodrigues 2002; Grilo et al. 2025), and diseases (Paula et al. 2013) as threats.

Diseases are acquired when wild canids associate with sick domestic dogs, with documented cases of distemper, parvovirus, rabies, leptospirosis, leishmaniasis (Jorge et al. 2010), and alopecia (this record) in maned wolves. Alopecia is caused by fleas; ticks, or mites that lead to intense itching, hair loss, hemorrhagic crusts, and the appearance of sores (Ferrari et al. 2008). It is common among stray domestic animals that do not receive proper care to prevent or treat various illnesses.

The alopecic pattern has four categories and approximately 50 differential diagnoses (Val & Alves 1999). Excessive hair loss in a short period of time is caused by factors such as fungal and bacterial infections; hormonal diseases (Feldman & Nelson 2004); genetic factors (Cunha 2015) or the presence of ectoparasites such as *Sarcoptes scabiei*, the cause of sarcoptic mange (Fiori et al. 2019).

In this context, this brief report aims to present the record of a maned wolf, *C. brachyurus* Illiger, 1815, with advanced stage canine alopecia in southern Minas Gerais State, Brazil, at São Gonçalo do Sapucaí town, coordinates -21.9511556, -45.4621444 and 1.141 masl (Figure 1).

The record was obtained incidentally in the rural area. São Gonçalo do Sapucaí has a Cwa climate according to the Köppen classification, with rainy summers and dry winters (Alvares *et al.* 2013), and average rainfall ranging from 1.300,00 to 1.700,00 mm (Santos, Neto & Pelegrini 1998). The landscape of the indicated region is multi-composite with coffee,

corn, and soybean cultivation, numerous pastures, semi-deciduous forest fragments, and various types of *Cerrado*.

C. brachyurus has been previously recorded in southern Minas Gerais (Machado *et al.* 2016; Machado *et al.* 2017; Morais *et al.* 2018). The animal in question was sighted several times in April and May 2023 in pastures, showing a gradual reduction in body hair. However, a record made on July 27, 2023, around 17h00, showed a high degree of hair loss (Figure 2). The photo was taken with a Motorola G52 smartphone. The animal recorded with canine alopecia was a male, approximately 65 cm tall at the shoulders. Its body condition was concerning, as it showed an advanced stage of hair loss on its back, left side and the great part on the right side; however, no visible bleeding wounds were present.

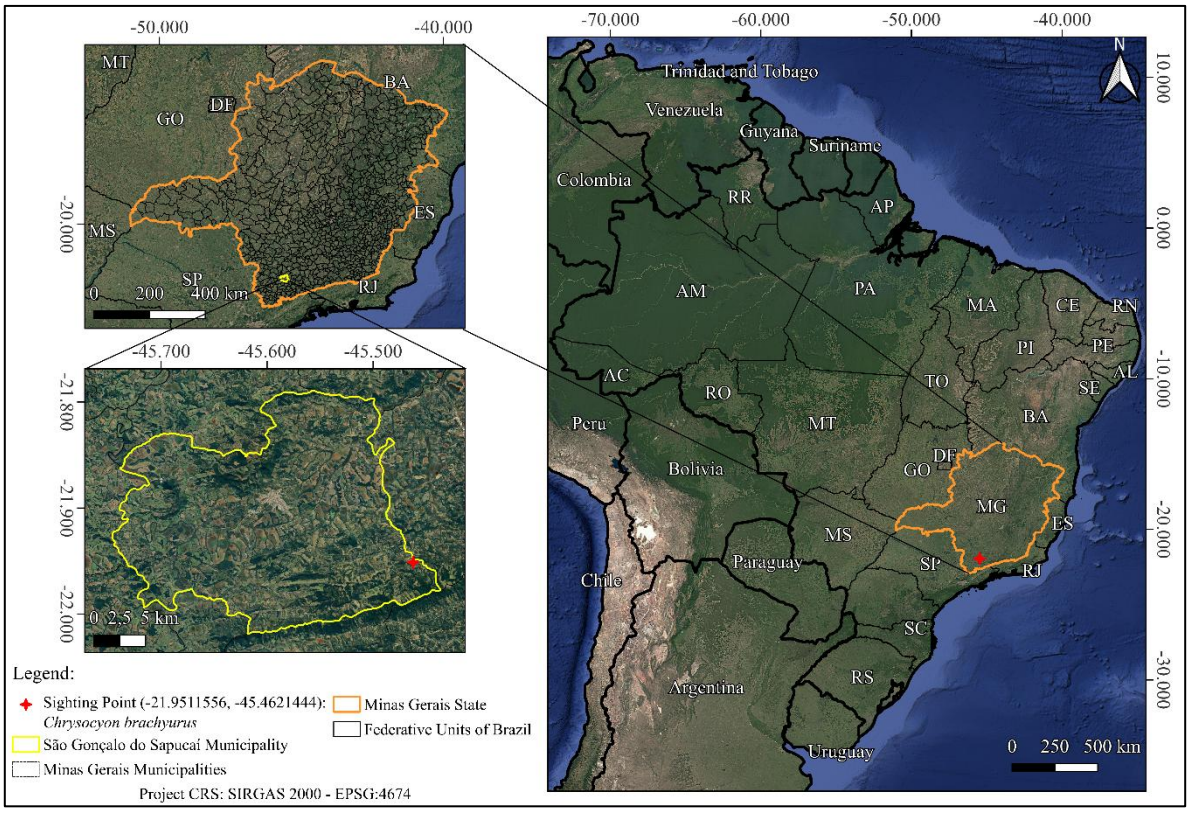

Figure 1. Geographic location of the sighting of *Chrysocyon brachyurus,* in southern Minas Gerais State, Brazil. Source: Authors.

The city of São Gonçalo do Sapucaí was one of the cities cited in a journal with a report of canine alopecia in a maned wolf on social media, with a deadline for registration in March 2023 (Fiori et al. 2019), therefore this is the second record and the first reported on a scientific publication. The registration of the scientific note did not present a diagnosis through clinical laboratory testing. However, the characteristics of the individual in the Figure 2 demonstrated an advanced state of alopecia. The animal was not monitored afterward. We know that a variety of causes, including fungal or bacterial infections, hormonal imbalances, genetic factors, or mange, may be involved. Therefore, greater effort is needed to understand how this disease spreads among canids to ensure the preservation and conservation of wildlife.

FIGURE 2. *Chrysocyon brachyurus*, in an advanced stage of body hair loss caused by canine alopecia. Source: Authors.

Alopecia is caused by the encounter of wild animals with exotic animals, like domestic dogs (Jorge et al. 2010). Domestic dogs; *Canis lupus familiaris* Linnaeus, 1758; are part of the group of animals that have reached an almost worldwide distribution due to their filiation with the human species. However, it is worth noting that domestic dogs are the cause of some of the main conservation problems for native Brazilian species, as they chase, prey, compete and share pathogens (Rosa et al. 2017). Brazil has approximately five million dogs in rural areas with free access to forests (Gompper 2014), increasing the possibility of spreading diseases (as in this report). The wide distribution area of *C. l. familiaris* and the potential for spreading diseases to other canids show the need for government intervention to conserve and preserve native Brazilian mammal species. Mitigation through policies involves first registering dogs within their area, controlling the number of individuals straying onto the streets of urban and rural areas, regulating conscious adoption by residents, and neutering all animals that are not registered for breeding purposes. This last action is one of the most relevant, since after surgery, the domestic dog's living area is reduced (Durr et al. 2017) and reduces the possibility of contact with wild animals. In addition, it prevents new individuals from being introduced into the wild.

Another necessary recommendation for public agencies is to take action to control abandoned dogs in both urban and rural areas. These animals can transmit diseases to wild animals (this report) and to humans (Machado et al. 2016), such as cutaneous and visceral leishmaniasis, significantly increasing public health expenditures. Therefore, the animals need to be sent to kennels, with subsequent neutering and redirection to adoptive homes. This monitoring by public agencies needs to be more active, effective, and constant to prevent the transmission of diseases. This note is intended to highlight the relevance of

documented technical records of alopecia in wild animals, with greater emphasis on cases confirmed by clinical tests. Only in this way will a potential threat to the species be fully understood, mitigated and/or even eradicated.

This case reinforces the urgent need for integrated action between wildlife conservation efforts and public health policies. The presence of advanced alopecia in a maned wolf, likely linked to interactions with domestic dogs, highlights the broader ecological risks posed by unmanaged domestic animal populations in rural areas. The potential transmission of infectious diseases between domestic and wild canids not only threatens the survival of vulnerable native species but also poses risks to human health. Therefore, systematic monitoring, responsible pet ownership, stricter enforcement of animal control policies, and intersectoral collaboration are essential to mitigate these threats. Documenting such occurrences is crucial to raising awareness and guiding effective conservation and public health strategies across Brazil and other regions facing similar challenges.

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