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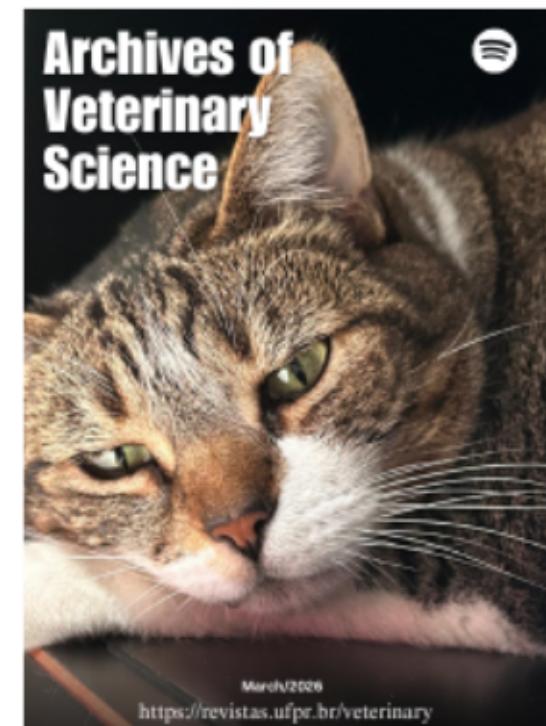
## Clinical and behavioral markers of feather picking in trafficked Golden-capped parakeet (*Aratinga auricapillus*) in Brazil

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Clinical and behavioral markers of feather picking in trafficked Golden-capped parakeet (*Aratinga auricapillus*) in Brazil

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**Abstract:** Feather-damaging behavior (FDB) is a frequent condition in psittacines under human care, with implications for animal welfare and post-rehabilitation evaluation. This case study documents behavioral, clinical, hematological, and sex-related patterns in 10 *Aratinga auricapillus* individuals held at the Wild Animal Screening Center in Vitória da Conquista, Bahia, Brazil. Birds were housed under standardized conditions and assessed using feather condition scoring, molecular sexing, leukocyte profiling, pathogen screening, and open-field tests. Five individuals exhibited plumage damage consistent with self-inflicted feather picking, predominantly affecting the chest, back, and legs. All feather-damaged individuals were female; all males presented intact plumage. Microscopy confirmed structural feather degradation, and no ectoparasites or infectious agents were detected. Feather-damaged birds showed modestly higher heterophil-to-lymphocyte ratios, suggesting increased physiological stress. However, these differences were modest and did not show statistical support for an association with feather condition. Temperament profiles (shy vs. bold) were evenly distributed and showed no apparent relation to feather condition. These findings suggest a sex-biased expression of FDB in *A. auricapillus* and reinforce the utility of integrated clinical, behavioral, and physiological assessments in triage routines. Although preliminary, the present study provides baseline reference data for future evaluations of confiscated psittacines, offering practical guidance for rehabilitation and release programs, based on the presented index of feather degradation.

**Keywords:** behavior; biology; captive birds; hematology; psittacines; sex.

**1. Introduction**

Brazil harbors the second-highest global diversity of psittacine species (IUCN, 2024), many of which are threatened by habitat loss and the illegal wildlife trade. The golden-capped parakeet (*Aratinga auricapillus*), endemic to the Atlantic Forest, is among the psittacines most frequently confiscated by environmental authorities and is regularly admitted to wildlife rehabilitation centers across the country (Destro et al., 2012; Costa et al., 2018; Mendonça et al., 2020).

In Brazil, reintroduction into the wild is the standard institutional goal for seized wildlife, following clinical stabilization and behavioral assessment. This is particularly relevant for Centro de Triagem de Animais Silvestres (CETAS - Wild Animal Screening Center), which serves as a centralized hub for triage and temporary holding of trafficked animals. However, behavioral syndromes developed during captivity, such as stereotypies or self-directed behaviors, may compromise release potential. Among psittacines, psychogenic feather-damaging behavior (FDB), including feather picking and chewing, is one of the most common captivity-induced conditions, often associated with chronic stress, rearing methods, and environmental deprivation (Costa et al., 2016; Ebisawa et al., 2021; Ebisawa et al., 2022).

Understanding the behavioral and physiological profiles of individuals affected by FDB is essential for informing reintroduction decisions and improving animal welfare protocols in captivity. Yet most literature on FDB derives from long-term captives or companion birds, with limited data available for wild-caught individuals undergoing temporary rehabilitation (Acharya and Rault, 2020; Ebisawa et al., 2021; Mahdavi et al., 2023).

This study presents a case series of 10 *A. auricapillus* individuals held at a CETAS facility in Bahia, Brazil, focusing on plumage condition, hematological stress indicators, temperament profiles, and sex. We highlight patterns in the occurrence of FDB and discuss their relevance to rehabilitation management.

The specific objectives of this study were to: (i) assess the body feather condition score of the animals included in the study; (ii) perform molecular sexing of the birds; (iii) evaluate pathogens of significance for psittacines; (iv) determine stress levels through leukocyte-based indicators; and (v) conduct a behavioral assessment of the animals.

**2. Materials e Methods**

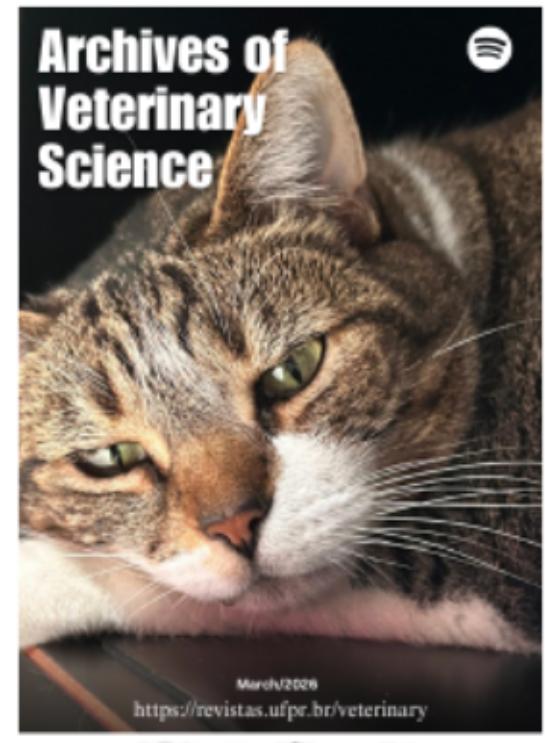
**2.1. Study context and animal housing**

This study was conducted at the CETAS in Vitória da Conquista, Bahia, Brazil, as part of a broader rehabilitation protocol for wild birds destined for reintroduction (Health and Behavioral Assessment of Wild Birds – Contributions to Reintroduction, protocol 093/2021, UFBA Animal Ethics Committee). Ten adult *A. auricapillus* individuals were selected among birds previously seized from wildlife trafficking or voluntarily surrendered by the public. Due to their origins, information on age, time in captivity, and rearing history was unavailable.

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