

Record of *Artocarpus heterophyllus* Lam. (Rosales: Moraceae) consumption by *Melanerpes candidus* (Otto, 1796) (Piciformes: Picidae) in Mato Grosso state, Brazil

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ABSTRACT

The White Woodpecker, *Melanerpes candidus* (Otto, 1796) is widely distributed in South America, it occurs in Argentina, Bolivia, Paraguay, Guiana, Suriname, Uruguay, parts of Peru, and Brazil. The diet of *M. candidus* consists mainly of insects, its larvae, and fruits. It is also occasionally seen on the ground capturing ants, attacking wasp and termite nests, and eating sun-dried meat. We made field observations in the rural area of the municipality of Torixoréu, Mato Grosso state, Brazil. During an avifauna survey, in a rural road in a deforested area, we made the record of consumption of *Artocarpus heterophyllus* Lam. by *Melanerpes candidus*, at coordinates 16°11'30.1"S 52°33'29.3"W, at 3:08 PM on January 20, 2021. The record of this paper points out an opportunistic relationship common in the natural history *M. candidus* and expands the knowledge about its the feeding habits.

Keywords: Behavior; Consumption; Jackfruit; Natural history; Woodpecker.

Registro de consumo de *Artocarpus heterophyllus* Lam. (Rosales: Moraceae) por *Melanerpes candidus* (Otto, 1796) (Piciformes: Picidae) no Mato Grosso, Brasil

RESUMO

O pica-pau-branco, *Melanerpes candidus* (Otto, 1796) também é conhecido pelos nomes populares de birro ou cri-cri, referentes ao seu canto. De ampla ocorrência na América do Sul, possuindo registros na Argentina, Bolívia, Paraguai, Guiana, Suriname, Uruguai, partes do Peru, e Brasil. A alimentação do *M. candidus* consiste principalmente de insetos, suas larvas, e frutas. Casualmente é avistado no solo capturando formigas, atacando ninhos de vespas e cupins, e comendo carne seca estendida ao sol. Realizamos observações de campo na área rural, em uma estrada rural em uma área desmatada do município de Torixoréu, estado de Mato Grosso, Brasil. Durante uma pesquisa de avifauna, o registro de consumo de *Artocarpus heterophyllus* Lam. por *Melanerpes candidus* foi observado nas coordenadas 16°11'30.1"S 52°33'29.3"W, às 15:08 da tarde do dia 20 de janeiro de 2021. O registro deste trabalho aponta uma relação oportunista comumente registrada na história natural de *M. candidus* e expande o conhecimento sobre os hábitos alimentares.

Palavras-chave: Comportamento, Consumo, História natural, Jaca, Pica-pau.

Woodpeckers are birds belonging to the Piciformes order, which in Brazil comprises 8 genera and 59 species (PIACENTINI et al., 2015). The White Woodpecker, *Melanerpes candidus* (Otto, 1796) is widely distributed in South America, it occurs in Argentina, Bolivia, Paraguay, Guiana, Suriname, Uruguay, parts of Peru, and Brazil (SICK, 1997; BIRDLIFE INTERNATIONAL, 2016). In Brazil, the species has been recorded in all biomes (DEL HOYO, 2002; GWYNNE et al., 2010), but only marginally in the Caatinga (NAUMBURG, 1928; SNETHLAGE, 1928; PEREIRA et al., 2012). It occurs in forest borders and open areas, such as fields, wetland borders, and forest patches, or in anthropogenic vegetation, such as plantations, pastures, gardens, cultivars, and parks (SIGRIST, 2009; GWYNNE et al., 2010).

Its nesting consists of dry tree trunks and palm trees, and sometimes uses a natural cavity in rocks (SICK, 1997). Its reproduction consists of 3 to 4 bright white eggs per clutch (CLEMMENTS et al., 2014). The nestlings leave the nest at approximately 35 to 36 days old. During the mating season it performs display flights (SANTIAGO, 2006). It lives in small groups (CLEMMENTS et al., 2014). Its territory is marked with different instrumental sound calls, the drumming (SIGRIST, 2004). The animal chooses dry, hollow, or wormy logs to rhythmically peck at, this way it can vary its repertoire and send different messages: sometimes to attract mates, sometimes to scare away possible rivals (SICK, 1997).

The diet of *M. candidus* consists mainly of insects and its larvae, fruits and it is casually seen on the ground capturing ants, attacking wasp and termite nests, and eating sun-dried meat (WINKLER et al., 1995; SIGRIST, 2009; DE LA PEÑA, 2020). They also like fruits, notably orange, jabuticaba, apple and others that they find when passing through orchards (PATTERER et al., 2003, GWYNNE et al., 2010). There are records of *M. candidus* in flocks taking turns

during foraging consuming portions of meat and sheep fat (NUNES, 2013).

We made field observations in the rural area of the municipality of Torixoréu, Mato Grosso state, Brazil. During an avifauna survey, the record of consumption of *Artocarpus heterophyllus* Lam. by *Melanerpes candidus* (Otto, 1796) was observed at coordinates 16°11'30.1"S 52°33'29.3"W, at 3:08 PM on January 20, 2021. The location is a rural road in a deforested area. Figure 1A shows two individuals of *M. candidus*, one feeding on *A. heterophyllus* fruit while the other was vocalizing. In Figure 1B the vocalizing *M. candidus* started to consume the *A. heterophyllus* fruit. The fruit sticky sap did not seem to bother the *M. candidus*. The video of this report can be watched at https://youtu.be/_aAuzN_H_Bg.



Figure 1. Record of *Artocarpus heterophyllus* consumption by *Melanerpes candidus* in Mato Grosso state, Brazil.

Belonging to the Moraceae family, the jackfruit tree (*Artocarpus heterophyllus*) is an exotic fruit tree native to India (NARASIMHAM, 1990; JOHN; NARASIMHAM, 1993; PERDOMO;

MAGALHÃES, 2007). Brought to Brazil during the colonization period, it adapted very well to the environmental conditions being a plant from hot and humid regions on tropical climate, the jackfruit also develops in subtropical and semi-arid climate regions (OLIVEIRA, 2009). With juicy, aromatic, and tasty fruits, the jackfruit has a sticky sap, large fruits and berries of rigid consistency, its fruit is formed of three parts: pulp, seeds, and skin, reaching from 5 to 50 kg (JOHN; NARASIMHAM, 1993).

Although most woodpeckers are primarily insectivorous, several species include fruits and nectar in their diet, including *Ceolus flavescens*, *Colaptes campestris*, *Campephilus melanoleucos*, *Campephilus robustus*, *Melanerpes flavifrons*, and *Veniliornis affinis* (SICK, 1997; MIKICH, 2002; PIZO, 2004). Previous works have reported that *M. candidus* can consume fruits like *Citrus reticulata* and *Opuntia ficus-indica* (DE LA PEÑA, 2020). Several factors have been pointed out as the causes of this feeding behavior, such as food availability, seasonal variation, breeding season and loss of natural habitat (MIKICH, 2002). Fruits are easier to locate and consume, providing less energy and time spent searching for food (MIKICH, 2002). This frugivorous feeding habit can be important for seed dispersal in degraded habitats, helping the recovery with fruiting plants (PIZO, 2004). The record of this work points out an opportunistic relationship for the natural history of the described species and expands the knowledge about the feeding habits of *M. candidus*.

Acknowledgements

We thank the Clube de Astronomia e Ciências de Rondônia for the support. We thank the Instituto Armando Luvison for the financial support. We thank the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES for the financial support.

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