


New records and frugivory diet of the *Pionus maximiliani* (Aves: Psittacidae) for Pernambuco, Brazil

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Abstract

The occurrence of *Pionus maximiliani* (Kuhl, 1820) in the state of Pernambuco is characterized by few documented reports and little ecological information. Therefore, the aim of this study is to describe new records of the species and provide information about its frugivorous diet and foraging behavior (consumption of pulp and seeds). The observations were carried out in the municipality of Olinda. During the months of November and December 2020 and January 2021 (38 events) The birds were monitored during foraging activity on the fruits of five tree species, including *Mangifera indica* L. and *Psidium guajava* L. These observations contribute to a better understanding of the occurrence and feeding ecology of the Scaly-headed Parrot in the state of Pernambuco.

Keywords: Bird Ecology; Natural History; Neotropics; Psittaciformes.

Novos registros e dieta frugívora de *Pionus maximiliani* (Aves: Psittacidae) para Pernambuco, Brasil

Resumo

A ocorrência de *Pionus maximiliani* (Kuhl, 1820) no estado de Pernambuco é caracterizada por poucos registros documentados e poucas informações ecológicas. Portanto, o objetivo deste estudo é descrever novos registros da espécie e fornecer informações sobre a sua dieta frugívora e o comportamento de forrageamento (consumo de polpa e sementes). As observações foram realizadas no município de Olinda. Durante os meses de novembro e dezembro de 2020 e janeiro de 2021 (38 eventos), as aves foram acompanhadas durante a atividade de forrageamento nos frutos de cinco espécies arbóreas, entre elas, *Mangifera indica* L. e *Psidium guajava* L. Estas observações contribuem para um melhor entendimento da ocorrência e ecologia alimentar da Maitaca-verde no estado de Pernambuco.

Palavras-chave: Ecologia de Aves; Historia Natural; Neotrópicos; Psittaciformes.

The Scaly-headed Parrot, *Pionus maximiliani* (Kuhl, 1820) is a medium-sized parrot (25 to 29 cm in total length) that has a robust body and a short tail. It has a predominantly green plumage with a bluish-gray head, yellowish beak, and red under-tail coverts (Sick, 1997). It has a wide geographical distribution, occurring from northeastern Brazil to northern Argentina and in the central area of Bolivia (Collar 1997; Forshaw 2010). It inhabits a variety of ecosystems, including riparian forests, humid subtropical forests, dry tropical forests, and man-made areas (Sick 1997; Collar 1997; Forshaw 2010; Ridgely, Gwynne, Tudor & Argel 2015), where it feeds mainly on fruits, seeds, flowers, and nectar³. The species is represented by four subspecies, and the nominal is *P. m. maximiliani* (Kuhl, 1820), which is the one occurring in the northeastern region of Brazil (Collar 1997; Forshaw 2010).

In the state of Pernambuco, the occurrence of the Scaly-headed Parrot is characterized by few reports in the literature

and lack of information about its diet. One of the first records was made by Sick (1997), but no specific location was provided. Lyra-Neves, Dias, Azevedo-Júnior, Telino-Júnior e Larrazábal (2005) found the bird in the Gurjaú State Reserve (08°14'20" S; 35°59'00" W), an Atlantic Forest fragment located in the municipality of Cabo de Santo Agostinho. Silva (2022) observed the species in the municipality of Olinda feeding on palm fruits. Dantas et al. (2007) registered two individuals in Parque dos Manguezais, a mangrove area of about 200 ha located in the municipality of Recife. Also in Recife, Almeida (2014) photographed an individual and saw a flock of approximately 4 to 5 individuals. The species was also found in one of the many free markets that sell wild animals in the metropolitan region of Recife (Pereira & Brito, 2005).

In this study, I present new records of the occurrence of the Scaly-headed Parrot in the state of Pernambuco, and

further information about its frugivorous diet. The observations were made in the municipality of Olinda (08°0'34" S, 34°51'19" W). During November and December 2020 and January 2021, I conducted direct visual observation sessions (with a minimum duration of 5 min and a maximum of 45 min) between 5:00 am and 5:30 pm, totaling 7 hours of observations. I used 8 x 32 mm binoculars to observe the feeding events (the moment when the birds arrived in the trees and continued to feed on the fruits) and a camera to record these interactions.

Records were made during 38 frugivory events (Figure 1) in an urban area, where the birds consumed fruits of five tree plant species distributed in four families (Table 1).



Figure 1. Scaly-headed Parrot feeding on the fruits of *Psidium guajava* in the municipality of Olinda, Pernambuco, Brazil (February 17, 2021). Photo: Leonardo B Silva.

On three occasions, two individuals were observed in a group of about 20 individuals of *Brotogeris chiriri* while eating the fruits of *Elaeis guineensis*. In most of the records, only one Scaly-headed Parrot individual was observed ($n = 16$), and in eleven records ($n = 11$) two individuals. The birds remained silent while foraging; vocalizations were only perceived when they were approaching or moving away from the trees.

Table 1. Fruits consumed by Scaly-headed Parrot in the municipality of Olinda, Pernambuco, Brazil.

Family/Especie	Frugivory events	Consumed parts
Anacardiaceae		
<i>Mangifera indica</i> L.	9	Pulp
<i>Schinus terebinthifolius</i> Raddi	5	Seeds
Arecaceae		
<i>Elaeis guineensis</i> Jacq.	6	Pulp
Myrtaceae		
<i>Psidium guajava</i> L.	11	Pulp and Seeds
Oxalidaceae		
<i>Averrhoa carambola</i> L.	7	Pulp and Seeds

This records are important for the construction of ecological knowledge of little-known species, or species with scant documentation in certain areas or ecosystems (Dantas *et al.*, 2007).

The present observations contribute to a better understanding of the occurrence and feeding ecology of the Scaly-headed Parrot in the state of Pernambuco. They also serve as a subsidy for conservation plans, considering that parrots are one of the most coveted groups of birds as pet animals, mainly due to the beauty of their feathers, learning ability, and interaction with humans (Sick, 1997; Collar 1997). In the northeast region, historically the parrots are also victims of hunting by antagonistic interactions (crop predation) (Teixeira, 2017).

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