



THE PURPLISH JAY (*CYANOCORAX CYANOMELAS*) IS A CLEANER OF THE MARSH DEER (*BLASTOCERUS DICHOTOMUS*)

Tiziano Londei

Via San Vincenzo 20, 20123 Milan, Italy. E-mail: londeit@tin.it

Abstract · I observed two Purplish Jays (*Cyanocorax cyanomelas*) foraging on the body of a marsh deer (*Blastocerus dichotomus*) in the Brazilian Pantanal. My observation adds the marsh deer to the very few mammals found to act as clients of the Purplish Jay and suggests that this opportunistic cleaner chooses the client depending on the presence of some forest cover nearby. This may be a reason for the lack of observations of the Purplish Jay and other, more arboreal, corvids as cleaners in the Neotropics.

Resumen · La Urraca Morada (*Cyanocorax cyanomelas*) es una especie limpiadora del ciervo de los pantanos (*Blastocerus dichotomus*)
Observé a dos Urracas Moradas (*Cyanocorax cyanomelas*) alimentándose de ectoparásitos sobre un ciervo de los pantanos (*Blastocerus dichotomus*) en el Pantanal de Brasil. Mi observación agrega a este especie de ciervo a los pocos mamíferos clientes que son limpiados por la urraca y sugiere que esta especie limpiadora oportunista elige a sus clientes cuando se encuentran cerca de cobertura boscosa. Esta podría ser la razón por la cual existen pocas observaciones de la Urraca Morada y otras especies de córvidos arborícolas actuando como especies limpiadoras de mamíferos.

Key words: *Blastocerus dichotomus* · Cleaning · *Cyanocorax cyanomelas* · Opportunistic behavior · Pantanal

The Purplish Jay (*Cyanocorax cyanomelas*) is a recent addition to the several corvids known to clean mammals. Sazima (2015) reported first on this species associated with South American tapir (*Tapirus terrestris*) and gray brocket deer (*Mazama gouazoubira*) in the Brazilian Pantanal (see also Garrigues 2017). The study took into consideration the lack of knowledge of Neotropical deer, compared to deer elsewhere, as clients of “tick-picking birds”, and encouraged observation of marsh deer (*Blastocerus dichotomus*) and Pampas deer (*Ozotoceros bezoarticus*) as possible clients of the Purplish Jay.

On 18 August 2018, 06:38 h, I was observing a marsh deer foraging in an open space (16°36'47"S, 56°44'50"W) near Pousada Rio Claro, Poconé, Mato Grosso, Brazil. When the animal approached a wooded area and momentarily stopped, a Purplish Jay landed on its back and hopped back and forth to inspect the fur near the insertion of the ears and of the tail for about one minute. The deer did not show any reaction either at the first contact or during the movements of the bird on its body, except for turning down the ear closer to the bird, apparently to better expose the area (Figure 1). As soon as the deer resumed walking the bird flew away, but at a further stop of the mammal three minutes later, another Purplish Jay (showing plumage differences in photographs) interacted with the deer in the same manner.

This repeated behavioral sequence seemed more methodical, and even better accepted by the client, than what Fitzpatrick & Woolfenden (1996) described for the interaction of a Florida Scrub-Jay (*Aphelocoma coerulescens*) and a white-tailed deer (*Odocoileus virginianus*). At first glance, my observation reminded of the Piapiac (*Ptilostomus afer*), an African corvid that consistently makes a double use of the body of ungulates, both as a source of food through cleaning and a lookout to catch the insects the mammal flushes from the ground. The Piapiac competes with oxpeckers (*Buphagus*) in steadily riding grazers in open spaces (Londei 2016).

However, although in the same area I observed a Purplish Jay flying from post to post along a fence to inspect the grass below, the birds on the deer did not seem to use it as a lookout, because they interacted with it only when near the trees and did not ride it while it was walking. The Purplish Jay lacks the long stiff tail of the Piapiac, useful to keep balance on the back of a grazing mammal on movement (Londei 2016). Thus, I suppose a less specialized behavior in the Purplish Jay, according to the opportunistic foraging habits of *Cyanocorax* jays (Sazima 2015) and Neotropical cleaner birds in general (Sazima et al. 2012).

In most parts of the world, including the Brazilian Pantanal, domestic herbivorous mammals are replacing wild counterparts. It is interesting that Sazima et al. (2012) did not mention the Purplish Jay as a cleaner of cattle, nowadays common grazers in Brazilian open habitats, including Poconé area. During my one-week visit to this area I frequently observed both Purplish Jays and domestic cattle, the latter usually moving in the open, but only once I found the two species associated, namely near

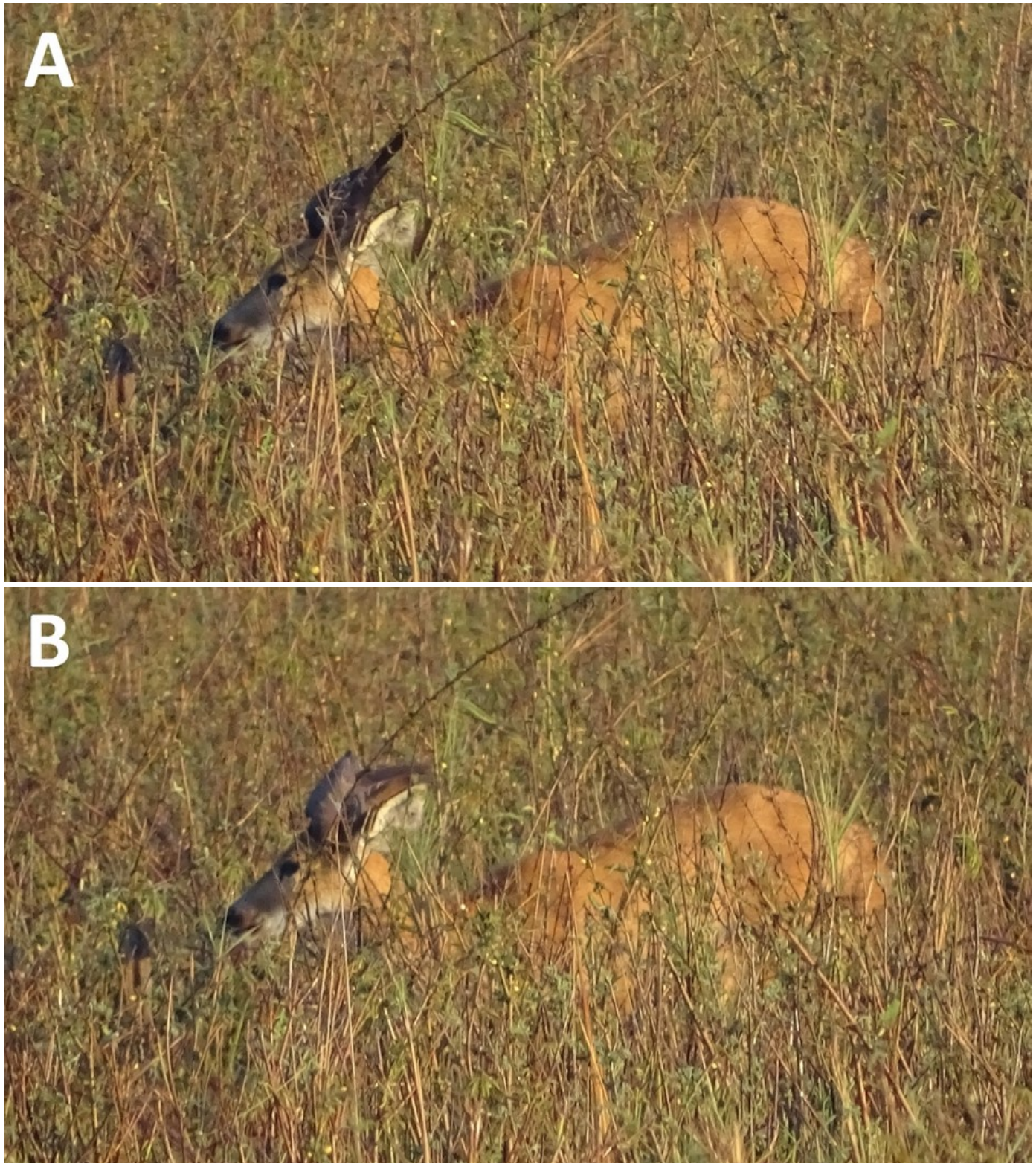


Figure 1. A Purplish Jay (*Cyanocorax cyanomelas*) on a marsh deer (*Blastocerus dichotomus*) in Poconé, Mato Grosso, Brazilian Pantanal. The bird searches for food on the right (A) and left (B) sides of the head of the motionless mammal. Photographs by the author.

Pousada Piuval (16°22'42"S, 56°37'18"W) on 23 August, just at sunrise, when I saw three to five Purplish Jays busy about a cow and her calf who were resting under the cover of a clump of trees. Given the long distance and bad light I could not ascertain whether these birds landed on the cattle bodies to forage on them or inspected the ground around, but their frequent return to the trees was suggestive of the usual tendency of forest birds not to stay in plain sight for long.

From wing and tail proportions of various *Cyanocorax* jays and personal observations of the Purplish Jay's habits,

Anjos & Shibatta (2010) concluded that, although more suitably built to forage in open spaces between forest patches than other genus members, this species would still depend on the forest. It seems likely that this habitat preference constrains its association with those domestic and wild mammals living at the edge of forests. With respect to the current knowledge it is difficult to conclude whether the obvious lack of observations of Purplish Jays interacting with marsh deer is due to the latter's floodplain habitat, being usually too open for the Purplish Jay, the hardly accessible terrain for

observers, and/or the low abundance of the marsh deer (see, e.g., Tomas et al. 2001). However, the tolerant behavior of the marsh deer described in this study, even inviting the Purplish Jays to forage at the base of the ears, suggests a steady association worth of further study to uncover its relevance in the “cleaning web of birds and mammals” (Sazima et al. 2012).

ACKNOWLEDGMENTS

I thank Kaspar Delhey and an anonymous reviewer for useful criticisms and suggestions.

REFERENCES

- Anjos, L & OA Shibatta (2010) On the habitat occupancy of some Neotropical jays in South America, genus *Cyanocorax*. *Semina: Ciências Biológicas e da Saúde, Londrina* 31: 153–158.
- Fitzpatrick, JW & GE Woolfenden (1996) Florida Scrub-Jay forages on back of White-tailed Deer. *The Condor* 98: 422–423.
- Garrigues, R (2017) Video of Purplish Jay *Cyanocorax cyanomelas* at Pouso Alegre Lodge, Brazil. Available at <https://www.hbw.com/ibc/video/purplish-jay-cyanocorax-cyanomelas/bird-deparasitizing-brown-brocket-deer> [Accessed 20 March 2019].
- Londei, T (2016) Piapiacs (*Ptilostomus afer* Linnaeus, 1766) and Yellow-billed Oxpeckers (*Buphagus africanus* Linnaeus, 1766) avoid proximity when on African buffaloes (*Syncerus caffer* Sparrman, 1779). *African Journal of Ecology* 54: 389–391.
- Tomas, WM, SM Salis, MP Silva & G Mourão (2019) Marsh Deer (*Blastocerus dichotomus*) distribution as a function of floods in the Pantanal wetland, Brazil. *Studies on Neotropical Fauna and Environment* 36: 9–13.
- Sazima, C, P Jordano, PR Guimarães, Jr, SF Dos Reis & I Sazima (2012) Cleaning associations between birds and herbivorous mammals in Brazil: structure and complexity. *The Auk* 129: 36–43.
- Sazima, I (2015) The Purplish Jay rides wild ungulates to pick food. *Revista Brasileira de Ornitologia* 23: 365–367.