

Observation of mobbing towards a Common Potoo (*Nyctibius griseus*)

OBSERVACIONES SOBRE CONDUCTAS DE ACOSO CONTRA UN URUTAÚ (*NYCTIBIUS GRISEUS*)

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Abstract

The ornithological literature is rich in anecdotal accounts of birds mobbing their predators, as well as experimental evidence suggesting that some bird species will use mobbing against putative non-predators. This note describes the mobbing of a Common Potoo (*Nyctibius griseus*), which is presumably not a predator of any of the avian species involved.

Keywords: antipredator defense, Brasil, Chalk-browed Mockingbird, social behavior.

Resumen

La literatura ornitológica es rica en observaciones de aves en conductas de acoso contra predadores, así mismo evidencia experimental sugiere que también se presenta este comportamiento ante supuestos no predadores. Esta nota describe la conducta de acoso contra un Urutaú (*Nyctibius griseus*), que presumiblemente no es un predador de ninguna de las especies de aves implicadas.

Palabras claves: conducta de acoso, Brasil, Calandria grande, comportamiento social, defensa contra predadores.

Introduction

Avian mobbing is a widespread behavior in which an individual or a group of birds deliberately confronts a potential predator. Mobbing birds crowd around the predator, approaching and retreating, sometimes even chasing and attacking the predator. They also emit loud repeated calls, which generally attract additional birds of other species to join the mobbing (Sordahl 1990).

Due to the risks of getting close to a predator, the different functional significance for each member of the mob, the diverse outcomes for predators being mobbed, and the great variability in mobbing responses between and within species, this behavior remains intriguing and hard to define (Caro 2005). It is also worthy of note that information about mobbing in Neotropical birds is scant, as most observations and studies about this behavior were carried out in the Nearctic and Palearctic.

The presence of a potential threat is considered to be a necessary condition to elicit mobbing. Mobbing of inoffensive targets has been observed under controlled conditions (Curio et al. 1978), but the literature suggests

that it has not been described or studied properly under natural conditions. Here I provide observations of birds mobbing a Common Potoo (*Nyctibius griseus*) in a residential area of Brasilia, DF, Brazil. My intent is to expand our understanding of mobbing behavior, as well as supplement sparse data available on the Common Potoo (Tate 1994), which has been poorly studied in Brazil (Lopes & Anjos 2005).

On 3 May 2007, at 17:00 hours, I heard loud vocalizations coming from a tree 2 m away from a sidewalk. Upon my approach, I observed two Great Kiskadees (*Pitangus sulphuratus*), three Rufous Horneros (*Furnarius rufus*), and seven Chalk-browed Mockingbirds (*Mimus saturninus*) mobbing a static Common Potoo. The mobbing lasted without interruption for 15 min, until the last birds (*Mimus saturninus*) left the tree.

Ten minutes later, however, the same group of Chalk-browed Mockingbirds returned to the tree and resumed mobbing the potoo, this time more intensely. One individual continuously flew over the potoo, passing within approximately 20 cm. Another Chalk-browed

Mockingbird perched on the same branch occupied by the potoo, approximately 40 cm away, vocalizing and repeatedly holding out both wings (wing-flashing) toward the potoo. The noise attracted other birds, and in less than 5 min the mockingbirds were joined by three Rufous Horneros. Soon after, two Great Kiskadees, two Rufous-collared Sparrows (*Zonotrichia capensis*), and one Tropical Kingbird (*Tyrannus melancholicus*) joined the mobbing. While two horneros vocalized approximately 60 cm from the potoo, the kingbird performed agitated aerial displays about 2 m away from the potoo. The two kiskadees vocalized, and one of them raised the crown feathers into a conspicuous crest. The two sparrows vocalized from a perch about 4 m from the potoo. At no time did any species make physical contact with the potoo, which remained in its typical camouflaged posture: motionless, eyes closed and bill pointing upward (Foster and Johnson 1974, Borrero 1974, Tate 1994, Lopes & Anjos 2005). After 10 min, the mockingbirds left the tree, followed by the other birds. The potoo remained at its perch until at least 21:00 hours.

Discussion

Current hypotheses on mobbing suggest that this complex behavior is related to: 1. Fending off an attack and driving the predator away from the vicinity (Curio 1978); 2. Announcing to an ambush predator that it has been spotted (Gursky 2005); 3. Assessing the motivational state of the predator (Magurran & Pitcher 1987, Graw & Manser 2007); 4. Advertising to the predator the prey's health condition, and then the ability to escape and to defend itself (Cooper 1994, Krama & Krams 2005, Lind et al. 2005); 5. Keeping a close watch over the predator's activity (Bradbury & Vehrencamp 1998); 6. Recognizing the nature of an intruding bird, and to assess the risks it could offer (Lima & Dill 1990); 7. Displaying individual quality to the group, aiming to obtain social prestige (Zahavi 1995, Arnold 2000, Maklakov 2002); 8. Transmitting cultural information for the group regarding the threat posed by a potential

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enemy (Vieth, Curio & Ernst 1980, Maklakov 2002); 9. Serving as a form of parental care, for it is performed most intensely on the reproductive season (Shedd 1982, Shields 1984).

The parental care hypothesis (9) seems not to be valid to explain this mobbing against a potoo. The event documented here happened in a period of the year when the mobbing species are no longer expected to be breeding (Antas & Cavalcanti 1988, Sick 1988, Argel-de-Oliveira 1989). I examined the tree and the surrounding area, and it was not possible to find any nests. Therefore, it is unlikely that these observations represent mobbing as a means of nest defense. The Common Potoo's diet consists only of insects (Skutch 1970, Foster & Johnson 1974, Lopes & Anjos 2005), therefore it is also questionable whether the birds involved were in any danger of being preyed upon. Therefore, hypotheses (1) to (5) seem not applicable to explain the behavior observed. The possibility that potoos are mobbed because they are easily mistaken for owls has been suggested (Hartley 1950, Ficken *et al.* 1967). Yet, it is worth mentioning that there was no apparent reaction of the mobbing birds to an easily visible Burrowing Owl (*Athene cunicularia*), perched nearly 20 m from the tree where the potoo was.

One plausible explanation for the repeated mobbing is that it was intended to assess the possible threat posed by an animal that the mockingbirds, which began the mobbing, were unfamiliar with (hypothesis 6). Because potoos are nocturnal and not commonly seen in the area, the potoo might have represented a novelty for the mobbing birds. Yet, hypotheses (7) and (8) cannot be rejected, as the various hypotheses are not mutually exclusive, and mobbing behavior may serve several functions (Maklakov 2002). Consequently, more studies and observations are needed to further our understanding of the elements that appear to trigger this behavior in an ecological and evolutionary perspective.

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