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Northern Parulas (*Setophaga americana*) mobbing a  
Pearly-eyed Thrasher (*Margarops fuscatus*) depredating  
an adult Bananaquit (*Coereba flaveola*)

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Photo: Ted Gilliland

## Northern Parulas (*Setophaga americana*) mobbing a Pearly-eyed Thrasher (*Margarops fuscatus*) depredating an adult Bananaquit (*Coereba flaveola*)

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**Abstract** Pearly-eyed Thrashers (*Margarops fuscatus*) are known for their aggressive behavior toward other birds. This article provides the first record of Neotropical migratory passerines, Northern Parulas (*Setophaga americana*), mobbing a Pearly-eyed Thrasher while it was depredating an adult Bananaquit (*Coereba flaveola*). This mobbing behavior suggests the Pearly-eyed Thrasher may be a predator of Neotropical migratory passerines. This article also provides the first photographic documentation of a Pearly-eyed Thrasher in the process of depredating an adult bird, which complements previous written accounts.

**Keywords** *Margarops fuscatus*, mobbing, Neotropical migratory passerines, Pearly-eyed Thrasher, predation

**Resumen** *Setophaga americana* acosando a *Margarops fuscatus* mientras depreda un adulto de *Coereba flaveola* • *Margarops fuscatus* es conocido por su comportamiento agresivo hacia otras aves. Este artículo proporciona el primer registro del paseriforme migratorio neotropical, *Setophaga americana*, acosando a un individuo de *Margarops fuscatus* mientras depredaba a un adulto de *Coereba flaveola*. Este comportamiento de acoso sugiere que *Margarops fuscatus* puede ser un depredador de paseriformes migratorios neotropicales. Este artículo también proporciona la primera documentación fotográfica de esta especie en el proceso de depredar un ave adulta, que complementa los relatos escritos anteriores.

**Palabras clave** acoso, depredación, *Margarops fuscatus*, paserinas migratorias neotropicales

**Résumé** Paruline à collier (*Setophaga americana*) harcelant un Moqueur corossol (*Margarops fuscatus*) alors qu'il prédatait un Sucrier à ventre jaune (*Coereba flaveola*) adulte • Les Moqueurs corossols (*Margarops fuscatus*) sont connus pour leur comportement agressif envers les autres oiseaux. Cet article présente la première mention de passereaux migrants néotropicaux, des Parulines à collier (*Setophaga americana*), harcelant un Moqueur corossol alors qu'il prédatait un Sucrier à ventre jaune (*Coereba flaveola*) adulte. Ce comportement de harcèlement suggère que le Moqueur corossol pourrait être un prédateur de passereaux migrants néotropicaux. Cet article fournit également la première documentation photographique d'un Moqueur corossol en train de prédater un oiseau adulte, ce qui complète les comptes rendus écrits précédents.

**Mots clés** harcèlement, *Margarops fuscatus*, Moqueur corossol, passereaux migrants néotropicaux, prédation

Mobbing is a behavior in which one or more species harass a predatory species using vocalizations, rapid and frequent movements, and physical attacks, with possible benefits including acquiring information about the predator (e.g., location and size), deterring the predator from the area, and reducing the probability of the predator returning (Altmann 1956, Sandoval and Wilson 2012). Mobbing also plays a role in the social transmission of information about which species are potential predators (Curio *et al.* 1978), which could be particularly relevant for bird species that migrate from the temperate zone to the tropics where they come into contact with unfamiliar predators. This paper describes an observation of Northern Parulas (*Setophaga amer-*

*icana*) mobbing a Pearly-eyed Thrasher (*Margarops fuscatus*) while it was depredating an adult Bananaquit (*Coereba flaveola portoricensis*), suggesting the parulas may have recognized the Pearly-eyed Thrasher as a predatory threat. Northern Parulas have been documented mobbing other known predators in the West Indies, such as the Puerto Rican boa (*Chilabothrus inornatus*; Mercado *et al.* 2002).

The Pearly-eyed Thrasher, in addition to its well-known role as a nest predator, competes with and preys upon various species of resident adult birds in the West Indies, including members of Columbidae, Trochilidae, Psittacidae, Turdidae, Nesospingidae, Spindalidae, Parulidae, and Thraupidae (Snyder *et al.* 1987, Arendt 2006, Menezes and Marini 2017). Pearly-eyed Thrashers often do not ingest their victims, which suggests their motivation for attacking adult birds is not always to consume them as prey, but may also be to reduce competition for resources (e.g., food or nesting cavities; Snyder *et al.* 1987).

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While documentation of interactions between Pearly-eyed Thrashers and resident species exists, little is known about interactions between Pearly-eyed Thrashers and Neotropical migratory passerines. Existing depredation records suggest the possibility that Pearly-eyed Thrashers may target Neotropical migratory passerines as there are cases of Pearly-eyed Thrashers preying upon passerines (particularly members of Parulidae) and a small Neotropical migratory shorebird (Scolopacidae). Wolcott (1942) gives an account of a Pearly-eyed Thrasher killing and eating a “warbler,” but the species was not specified (Wolcott 1942, as cited in Snyder *et al.* 1987). Seaman (1961) lists the Yellow Warbler (*Setophaga petechia*) as a prey item of the Pearly-eyed Thrasher in the U.S. Virgin Islands, though Yellow Warblers are also common breeding residents in the U.S. Virgin Islands (Seaman 1961, as cited in Arendt 2006, DeGraaf and Rappole 1995). In addition, Pearly-eyed Thrashers have been documented preying upon non-passerine Neotropical migrants. Sorrié (1975) documented a Pearly-eyed Thrasher catching and eating a Spotted Sandpiper (*Actitis macularius*) on Vieques Island, Puerto Rico.

### Observation

At 1720 on 22 December 2019, I observed a Pearly-eyed Thrasher depredating an adult Bananaquit in Parque Nacional Julio Enrique Monagas, an 81-ha park in Bayamón, San Juan, Puerto Rico. The event took place 3 m off the ground at the border of a small picnic area (mowed grass with scattered trees) and secondary forest. The Pearly-eyed Thrasher held the Bananaquit in its bill and thrashed it against a tree branch, similar to how a bird would thrash a larval lepidopteran against a branch before consuming it (Fig. 1 a, b).

During this period, two Northern Parulas that were approximately 6 m away in an adjacent tree approached the thrasher. I focused my attention on one of the parulas. It moved to different positions, watched the thrasher, and gave harsh chip call vocalizations (Fig. 1 c). This behavior lasted for about 1 min; the closest approach to the thrasher was 1 m. The thrasher then dropped the Bananaquit on the ground, perhaps in response to the mobbing. The Bananaquit lay on its side and only lifted its head slightly, suggesting that it was seriously injured. After a moment, the thrasher flew down, grabbed the Bananaquit in its bill, flew back up into the tree, and continued to thrash it against the tree branch. During this period the Northern Parulas moved back into the adjacent tree, began feeding, and continued giving call notes. Shortly thereafter the thrasher moved farther back into the vegetation with the Bananaquit in its bill, at which point I lost view of it. I did not hear any vocalizations made by the Bananaquit or Pearly-eyed Thrasher during this observation.

The Pearly-eyed Thrasher was a younger bird within its first year, also known as a first-cycle formative (FCF) using the Wolf-Ryder-Pyle classification system (Johnson *et al.* 2011), as it had mousy-brown coloration, retained juvenile outer greater secondary coverts, and dull eye color. The thrasher was male, given the contrasting malar streak, fairly white abdomen, extent of white on rectrices, and more defined chevrons (Arendt 2020, W.J. Arendt pers. comm.). The Bananaquit was an after first-cycle juvenile (FAJ) based on the neat gray throat of the Puerto Rican subspecies, dark color of the back, large white patch at the base of the primaries, bright yellow belly, and bold white super-



**Fig. 1.** Depredation and mobbing event. (a, b) Pearly-eyed Thrasher depredating a Bananaquit. (c) Northern Parula mobbing the thrasher (indicated by arrows). The Bananaquit, obscured by leaves, is in the thrasher’s bill. (d) Close-ups of thrasher and one parula (inset). Photographs taken by Ted Gilliland in Bayamón, San Juan, Puerto Rico on 22 December 2019.

cilium stripe (Raffaele *et al.* 2003). Further determination of age was not possible because the preformative molt of the Bananaquit is complete and leads to a plumage that appears similar to adult basic plumage (Johnson and Wolfe 2018). The one Northern Parula observed closely was an FCF, given the green edges on its secondaries and primaries, which are typical of retained juvenile feathers (Pyle 1997, Moldenhauer and Regelski 2020).

### Discussion

The mobbing behavior enacted by the Northern Parulas suggests Pearly-eyed Thrashers could be recognized as a predator by a Neotropical migratory passerine. Given that the Pearly-eyed Thrasher was in the process of depredating the Bananaquit when the Northern Parulas approached it, it is possible the Northern Parulas were attracted to the depredation event itself rather than the specific species of predator, particularly given that mobbing can be a form of knowledge acquisition about which species are potential predators (Curio *et al.* 1978). It is not possible to say with certainty whether this was the case, but this observation warrants further study of such behavioral interactions. The need for future research on this topic is amplified by the increasing abundance and expanding range of the Pearly-eyed Thrasher (Arendt *et al.* 2019) as well as the substantial population declines of many Neotropical migratory passerines (DeGraaf and Rappole 1995).

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### Title Page Illustration

Pearly-eyed Thrasher in Bayamón, San Juan, Puerto Rico on 22 December 2019. Photographed by Ted Gilliland.

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