https://doi.org/10.33800/nc.vi22.344

ISSN versión impresa: 2071–9841 ISSN versión en línea: 2079–0139

# OBSERVATIONS OF UNUSUAL BEHAVIOR IN TWO INVASIVE CARNIVORES IN THE DOMINICAN REPUBLIC: ARBOREAL FORAGING IN THE SMALL INDIAN MONGOOSE (URVA AUROPUNCTATA) AND SEMI-AQUATIC HUNTING IN THE DOMESTIC CAT (FELIS CATUS)

Observaciones de comportamiento inusual en dos carnívoros invasores en la República Dominicana: forrajeo arbóreo en el jurón (*Urva auropunctata*) y cacería semi-acuática en el gato doméstico (Felis catus)

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[Received: May 29, 2023. Accepted: June16, 2023]

### **ABSTRACT**

We report unusual foraging events in two of the most invasive terrestrial predators in the world that are well established in the Caribbean islands: the Small Indian Mongoose (Urva auropunctata), locally known as jurón, and the Domestic Cat (Felis catus). The former is well known to be a ground-dwelling species, whereas the latter usually avoids water. We documented tree-climbing in the mongoose and semi-aquatic hunting in a domestic cat. The observations were recorded in southern Dominican Republic, on the island of Hispaniola.

Keywords: Small Indian Mongoose, Herpestidae, feral cat, domestic cat, invasive carnivores, anthropogenic threats, foraging behavior.

## RESUMEN

Reportamos eventos inusuales de forrajeo en dos de los depredadores terrestres más invasivos del mundo que están bien establecidos en las islas del Caribe: la mangosta (Urva auropunctata), conocida localmente como jurón, y el gato doméstico/asilvestrado (Felis catus). La primera es bien conocida por ser una especie que vive y caza en el suelo, mientras que la última usualmente evita el agua. Documentamos al jurón trepando un árbol y a un gato cazando en el agua. Las observaciones fueron registradas en el sur de la República Dominicana, en la isla Hispaniola.

Palabras clave: jurón, mangosta, Herpestidae, gato doméstico, carnívoros invasores, amenazas antropogénicas, comportamiento de forrajeo.



Alien predators often become invasive in new territories where they become established. Most of these animals are generalists, whose numbers are not greatly limited by the decline of any one prey species (Park, 2004). Several of these are responsible for the extirpation or extinction of many vertebrate species (Courchamp et al., 2003). Some ecological effects, habitat changes, or shifts of native abundance of plant or animal species caused by predation or competition have been reported in at least 40% of mammalian introductions (Ebenhard, 1988 in Courchamp et al., 2003).

The Small Indian Mongoose (Urva auropunctata [Hodgson, 1836]), locally known as jurón, and the Domestic Cat (Felis catus Linnaeus, 1758), are known to be among the most invasive terrestrial predators in the world (Global Invasive Species Database [GISD], 2023). Island biomes are especially susceptible to the threats posed by these non-native predators (Courchamp et al., 2003; Doherty et al., 2016).

The Small Indian Mongoose is an Old World carnivoran that was introduced during the late 1800's on Caribbean and Pacific islands (Horst et al., 2001). An entirely diurnal, very opportunistic omnivore and forager, the mongoose is generally considered to be strictly terrestrial, although they have been seen occasionally climbing into small trees (Baldwin et al., 1952; Barun et al., 2011; Nellis & Everard, 1983).

While conventional wisdom says cats avoid water, instances of them swimming and preying on aquatic avian prey have been reported (Read & Edbon, 1998). Wildcats, the closest relatives of domestic cats, are also known for chasing prey through shallow water and inundated vegetation (Hunter, 2015). Anecdotal observations of domestic cats is being included in a manuscript as part of a monitoring program of a seabird colony (Landestoy et al., in prep.). Herein we present a detailed account on at least one successful predation event that occurred in water.

# Small Indian Mongoose

On the afternoon (1745 h) of July 15, 2019, what appeared to be an adult mongoose was seen crossing (W to E) the Cabo Rojo-Alcoa Road near the intersection with RD 44 (Barahona-Pedernales; 17.97898° N, 71.65062° W; 11 m asl). The mongoose was rather curious about our approach (by car) after we stopped and emitted squeaky high-pitched sounds ("pishing" in birdwatching terminology). The mongoose turned from within the thorn forest and approached the road (MALT, FOR), allowing us to take a series of photographs (Fig. 1). The individual returned to the vegetation, where it climbed into a Mesquite Tree (*Prosopis juliflora* [Sw.] DC.) about 4 m tall, and roughly 6 m from the road's edge. With some agility it climbed among the main stems and branches, reaching an abandoned nest of a Northern Mockingbird (Mimus polyglottos [Linnaeus, 1758]) at a height of 2.5 m above the ground. It then descended and disappeared into nearby vegetation. The main branches were nearly vertical to a height of approximately 2 m. We believe that the acoustic stimulus might have triggered the mongoose's climbing and probing into the nest. Subsequent to this encounter, we have used pishing when a mongoose is detected and it has proven to be an effective tool to get their attention.



#### Domestic Cat

On the nights of the 10 and 16 of June 2022 (at 0510 and 0305 h, respectively) in Las Salinas, Peravia Province, camera traps recorded an adult female cat hunting Black-necked Stilts (Himantopus mexicanus [Statius Müller, 1776]) in artificial salt pans where this and other bird species forage and nest (Fig. 2; 18.22211° N, 70.55154° W; 2 m asl). On at least two different occasions, footage shows the cat jumping into frame returning from the water with its prey secured in its jaws (Fig. 3; links to videos: https://youtu.be/9Yu3cCBmI-8; https://youtu.be/ FH94r6Nuuaw). The cat's appearance after jumping into the frame is preceded by the sound of a splash when it entered the water (from the path) and caught the bird. The cat's belly and legs were visibly wet. The water level at the neighboring salt pan (Fig. 4) is usually over 7 cm deep. That same cat has been repeatedly recorded crouching stealthily, and we have found a number of bird and bat carcasses at the site. This event is significant due to the fact that fences and doors were installed on the trails of the salt pans to prevent predators from reaching the birds and their nests. Several cats have been seen visiting the site, but only one has been recorded hunting. These cats belong to locals whose houses are near the breeding colony.

These rare observations of foraging or hunting behaviors in these invasive predators raise even more concerns about the threats they can pose to local wildlife. Although previous work in the Caribbean region has addressed the impacts of the mongoose (Hedges & Conn, 2012; Pimentel, 1955; Pimentel et al., 1984; Schools et al., 2022), they expressly dismissed or underestimated its ability to climb trees, although it has been observed raiding nests in trees in other regions (Roy, 2001). In the Dominican Republic, the mongoose has been recorded preying on a threatened bird in its nest (cavity) 2 m high on boulders forming the bank of an abandoned pit mine (Townsend, 2006). In Jamaica, tree climbing has also been observed by several biologists, including naturalists and rangers (e.g., S. Koenig, A. Sutton, W. Lee, pers. comm.) Nevertheless, to our knowledge, photographic documentation of climbing in the Small Indian Mongoose is scarce or non-existent. The event reported herein suggests that even arboreal vertebrates might be vulnerable to this predator. Whether climbing mongooses are capable of targeting actively foraging or only stationary prey (e.g., basking or roosting animals, sit-and-wait foragers, or birds on nests or their eggs or young) remains unknown.

A renewed emphasis should focus on managing invasive predators in and around protected areas, or even unprotected areas with known populations of gregarious and/or threatened species in order to avoid irreversible damage. Recently, the mongoose was recorded preying on the adults and nest contents of the endangered Black-capped Petrel (Pterodroma hasitata [Kuhl, 1820]) in the Dominican central highlands (Ernst Rupp, pers. comm.). Successful eradication and control projects have been carried out locally by the Ministry of Environment and Natural Resources in conjunction with NGO's. These include the extraction of donkeys, cows, and cats from Isla Cabritos, rats from Cayos Siete Hermanos, and raccoons from Isla Catalina (Ministerio de Medio Ambiente y Recursos Naturales, 2018).





Figure 1. A Small Indian Mongoose climbing a tree (left) and then probing into a bird nest. Photos taken in the Alcoa road, near the Cabo Rojo area, Pedernales province, by M. A. Landestoy.

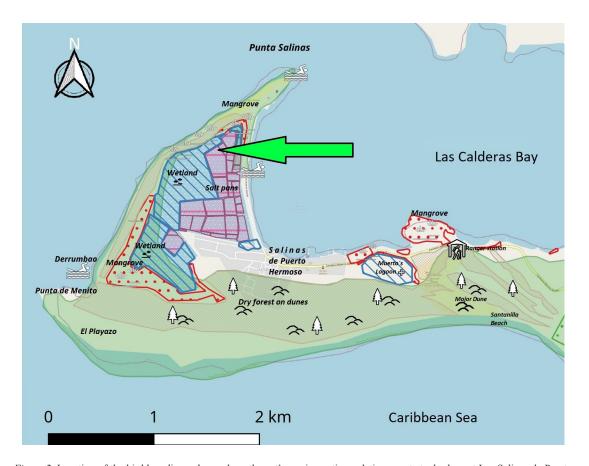


Figure 2. Location of the bird breeding colony where the cat's semi-aquatic predation events took place at Las Salinas de Puerto Hermoso, Baní, Peravia Province.





Figure 3. Sequence of video frame captures showing an adult cat landing after ambushing a Black-necked Stilt in a saltwater pan at Las Salinas de Puerto Hermoso, Peravia.



Figure 4. Pathway where the camera trap was placed. Note the water contained in the salt pan to the right half of the image behind the camera trap. Photo: M. A. Landestoy.

### ACKNOWLEDGEMENTS

We thank our project mates of the Asociación Hispaniolana Francis A. Ortíz, Ana C. Hernández-Oquet, Ydsell Bonilla and Joel R. Espinal for contributing to this note either with fieldwork or with their suggestions to an earlier draft. Christopher Esquea gently made the map in Figure 2. We appreciate the observations provided by our collaborators from Jamaica Vaughan Turland, Ann Sutton, Susan Koenig, Wendy Lee and Roger Thompson. Thanks to Birdlife International for providing funding for our project "Conservación de Especies Amenazadas en el Monumento Natural Las Dunas de Las Calderas, República Dominicana". We also thank Christopher Cambrone for supporting a field trip that resulted in one of the observations presented herein. The local administration of the Las Salinas' salt factory (Freddy Andujar) from the municipality office (major Santo Ramírez, Ayuntamiento de Baní) supported our work in the area, as well as Alex Melo, then-manager of the Monumento Natural Dunas de Las Calderas. The Ministerio de Medio Ambiente y Recursos Naturales provided research permits.



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Citation: Landestoy T., M. A., Reyes, F. O., & Hernández-Rodríguez, I. (2023). Observations of unusual behavior in two invasive carnivores in the Dominican Republic: arboreal foraging in the Small Indian Mongoose (Urva auropunctata) and semi-aquatic hunting in the Domestic Cat (Felis catus). Novitates Caribaea, (22), 109–116. https://doi.org/10.33800/nc.vi22.344

