

Puerto Rican Nightjar *Caprimulgus noctitherus*



Distribution

buceras), gumbo limbo (*Bursera simaruba*), birdcatcher trees (*Pisonia albida*), Caribbean princewood (*Exostema caribaeum*), and big-leaf mahogany (*Swietenia mahagoni*). Some of these trees shed their leaves during certain seasons, and the nightjar uses this leaf litter for nesting.

Diet

The Puerto Rican nightjar feeds on nocturnal moths and other flying insects. During the day, chicks sleep on the ground while adults sleep perched on tree branches. At nighttime, the adults come down to feed the chicks, and continue flying and gliding.

Distribution

In 2010, Puerto Rican nightjar presence was confirmed in 13 municipalities in southern Puerto Rico. Over 55,570 cuerdas along the southern coast are considered potential habitat for the Puerto Rican nightjar, from Guayama to Cabo Rojo. The majority of high-quality habitat for this species is found between the municipalities of Guánica, Sabana Grande, Yauco, Guayanilla, Peñuelas and Ponce. A large part of the areas with suitable habitat potential are in privately-owned land near protected areas such as the Susúa Commonwealth Forest, the El Convento protected area, and Guánica Commonwealth Forest.

Threats

Some the threats faced by this species include:

- Destruction or modification of the habitat for agricultural, residential, and tourism development.
- Predators such as:
 - Pearly-eyed thrasher (*Margarops fuscatus*)
 - Short-eared owl (*Asio flammeus*)
- Red fire ants (*Solenopsis invicta*) – These prey on the nightjar's eggs and hatchlings, since the species nests on the ground.
- Patas monkeys (*Erythrocebus patas*) and Rhesus

Familia: Caprimulgidae

Orden: Caprimulgiformes

Description

The Puerto Rican nightjar is a medium-sized nocturnal bird with a very short, but very wide, beak. Its plumage is mottled with chocolate-brown, gray and black splotches. The male has a wide, white band along the outer edges of its tail. The female has a smaller white band along the outer edges of the tail. The Puerto Rican nightjar nests on the ground, where it camouflages very well with the leaf litter.

Biological Information

Reproduction

The Puerto Rican nightjar does not build an actual nest; rather, it deposits its eggs directly on the leaf litter in densely-vegetated forests. Nesting season lasts from February through July, and both males and females incubate the eggs and feed the hatchlings.

Habitat

The tree species usually found in the Puerto Rican nightjar's habitat include the oxhorn tree (*Bucida*

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monkeys (*Macaca mulatta*) - Although it is speculated that these monkeys could be nightjar predators, it has not been documented.

- Small Indian mongoose (*Herpestes javanicus*) - It predated the nightjar's eggs or hatchlings.

Conservation Measures

The Puerto Rican nightjar was listed under the Endangered Species Act in 1970. In 2010, a quantitative model was developed to allow for the identification of potential habitat for the nightjar. The model estimates the quality of the habitat by using geographical information data.

The Endangered Species Act of 1973, as amended, prohibits the killing, harassing, trapping, purchasing or selling any species, as well as parts and products derived from the species.

Recommendations

Forests must be allowed to mature, since the nightjar needs closed-canopy forests with widely-spaced trees, a structure usually common in mature forests.

The Puerto Rican nightjar is easily confused with the common nighthawk (*Chordeiles minor*), a bird of very similar appearance to the nightjar, which migrates to Puerto Rico during summer. Increasing public awareness in relation to the species might help with the conservation efforts.

The vast majority of suitable nightjar (81.4%) remains under private ownership. Therefore, efforts must be concentrated in acquiring and protecting as much forest habitat as possible in this fairly large tract of coastal dry forest. Also, conservation programs from agencies like the USFWS and Natural

Resources Conservation Service (NRCS) should also be implemented in private lands within this region, aiming to create natural corridors between Guánica, Susúa, La Parguera, Sierra Bermeja, and some places in Sabana Grande and Guayama to ease the nightjar's dispersion.

References

- Irizarry. 2006. A call to protect Sierra Bermeja for future generations. Sociedad Ornitológica Puertorriqueña, San Juan, Puerto Rico.18 Biological Conservation 33: 281-288.
- González, R, 2010, Population estimation and landscape ecology of the Puerto Rican Nightjar. Thesis, Mississippi State University.
- Han, K. L., M. B. Robbins, and M. J. Braun, 2010, A multigene estimate of phylogeny in the nightjars and nighthawks (Caprimulgidae). Molecular Phylogenetics and Evolution 55: 443-453.
- Raffaele, H. A. , 1989, A guide to the Birds of Puerto Rico and the Virgin Islands. Princeton University Press, New Jersey. 254 pp.
- Raffaele, H., et al., 1998, A Guide to the Birds of the West Indies, Princeton University Press, Princeton, New Jersey.
- Torres, J. A., et al., 2001, Seasonal and nocturnal periodicities in ant nuptial flights in the tropics (Hymenoptera: Formicidae). Sociobiology 37: 601-626.20
- U.S. Fish and Wildlife Service, 1984, Puerto Rican Whip-poor-will Recovery Plan. Atlanta, Georgia. 16 pp.
- Vilella, F. J., 1989, Reproductive ecology and population biology of the Puerto Rican Nightjar *Caprimulgus noctitherus*. Dissertation, Louisiana State University.
- Vilella, F. J. 1995. Reproductive ecology and behavior of the Puerto Rican Nightjar *Caprimulgus noctitherus*. Bird Conservation International 5: 349-366.
- Vilella, F. J. 2008. Nest habitat use of the Puerto Rican Nightjar *Caprimulgus noctitherus* in Guánica Biosphere Reserve. Bird Conservation International 18: 1-11.



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Vilella, F. J., 2010, Puerto Rican Nightjar (*Caprimulgus noctitherus*), Neotropical Birds Online (T. S. Schulenberg, Editor). Ithaca: Cornell Lab of Ornithology; retrieved from Neotropical Birds Online: http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=24854

Vilella, F. J., and P. J. Zwank, 1993, Geographic distribution and abundance of the Puerto Rican Nightjar, *Journal of Field Ornithology* 64: 223-238.

Vilella, F. J., and P. J. Zwan., 1993, Ecology of the small Indian mongoose in a coastal dry forest of Puerto Rico where sympatric with the Puerto Rican Nightjar. *Caribbean Journal of Science* 29: 24-29.

Vilella, F. J., and R. González, 2009, Geographic distribution of the Puerto Rican Nightjar: a patch occupancy approach. Final report, Cooperative Agreement 011406-001. USGS

Wilson, M. D., and B. D. Watts. 2006. The effect of moonlight on detection of Whip-poor-wills: implications for long-term monitoring strategies. *Journal of Field Ornithology* 77: 207-211.

Additional Information

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