

## PREY REMAINS OF THE JAMAICAN OWL (*PSEUDOSCOPS GRAMMICUS*)

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**Abstract:** Dietary information for the Jamaican Owl (*Pseudoscops grammicus*) is limited to several brief reports beginning with the account of Philip Henry Gosse in *The Birds of Jamaica* (1847). Regurgitated pellets recently recovered near a roost in Kingston contained the remains of Black Rat (*Rattus rattus*) and Greater Antillean Grackle (*Quiscalus niger*). This is the first conclusive evidence that the Jamaican Owl preys on passerine birds. Collectively, data from stomach contents and pellets suggest that the owl is a generalist predator of large invertebrates, frogs, lizards, introduced murid rodents, and passerine birds.

**Key words:** Black Rat, Greater Antillean Grackle, Jamaica, Jamaican Owl, owl pellets, *Pseudoscops grammicus*, *Quiscalus niger*, *Rattus rattus*

**Resumen:** RESTOS DE PRESAS DEL BÚHO JAMAICANO (*PSEUDOSCOPS GRAMMICUS*). La información sobre la dieta del Búho Jamaicano (*Pseudoscops grammicus*) está limitada a varios registros breves que comienzan con el de Philip Henry Gosse en *The Birds of Jamaica* (1847). Los bolos regurgitados recién recobrados cerca de una percha en Kingston contienen restos de *Rattus rattus* y de *Quiscalus niger*. Esta es la primera evidencia conclusiva sobre el uso de aves paseriformes como presas en el Búho Jamaicano. En conjunto, los datos de los contenidos estomacales y de los bolos sugieren que el búho es un depredador generalista de invertebrados de gran tamaño, ranas, lagartos, roedores muridos introducidos y aves paseriformes.

**Palabras clave:** bolos de búho, Búho Jamaicano, Jamaica, *Pseudoscops grammicus*, *Quiscalus niger*, rata, *Rattus rattus*

**Résumé :** LES PROIES DU HIBOU DE LA JAMAÏQUE. Les informations sur le régime alimentaire du Hibou de la Jamaïque (*Pseudoscops grammicus*) se résument à quelques brefs rapports débutant avec l'apport de Philip Henry Gosse dans *The Birds of Jamaica* (1847). Les pelotes de réjection trouvées récemment près d'un reposoir à Kingston contenaient des restes de Rat noir (*Rattus rattus*) et le Quiscale noir (*Quiscalus niger*). C'est la première confirmation que le Hibou de la Jamaïque se nourrit de passereaux. Globalement, les données des contenus stomacaux et des pelotes suggèrent que le Hibou de la Jamaïque est un prédateur généraliste de grands invertébrés, de grenouilles, de lézards, de rongeurs introduits et de passereaux.

**Mots-clés :** Hibou de la Jamaïque, Jamaïque, pelotes de réjection, *Pseudoscops grammicus*, Quiscale noir, *Quiscalus niger*, Rat noir, *Rattus rattus*

THE ECOLOGY of the Jamaican Owl (*Pseudoscops grammicus*) and other endemic Caribbean owls is poorly known. Brief accounts of the Jamaican Owl's diet have appeared in *The Birds of Jamaica* (Gosse 1847) and in the *Gosse Bird Club Broadsheet* (Downer 1973, Johnston 1976, Lewis 1976, Sutton and Sutton 1988). The Broadsheet reports have been overlooked in the secondary literature on owls (del Hoyo et al. 1999). Here I summarize the dietary data contained in past reports and document the presence of a passerine bird and rat in regurgitated pellets recently recovered near a Jamaican Owl roost in Kingston.

Philip Henry Gosse (1847) examined the stomach contents of three female specimens. An adult's stomach (p. 21) was "stuffed with the hair and bones of a portion of rat, and the legs of a large spider: a *Lycosa*, as I believe—certainly a ground

spider." The stomach of an immature (p. 21) contained "an immense quantity of slender bones, which appeared to be Anoles, as I discovered by the iguaniform teeth of at least five sets of jaws of various sizes there were also the remains of beetles, and of orthopterous insects." A second immature (p. 22) contained the remains of mice and the elytra of small beetles. Gosse also mentioned second-hand reports that the owl entered pigeon coops to take squabs.

With the exception of a sight record of an adult owl with a large frog at Marshall's Pen, Manchester Parish (Sutton and Sutton 1988), the Broadsheet references present data from regurgitated pellets (Downer 1973, Johnston 1976, Lewis 1976). Disintegrated pellets recovered by Robert Sutton and Downer at an unnamed location contained fragments of pseudophylline katydids and the bones

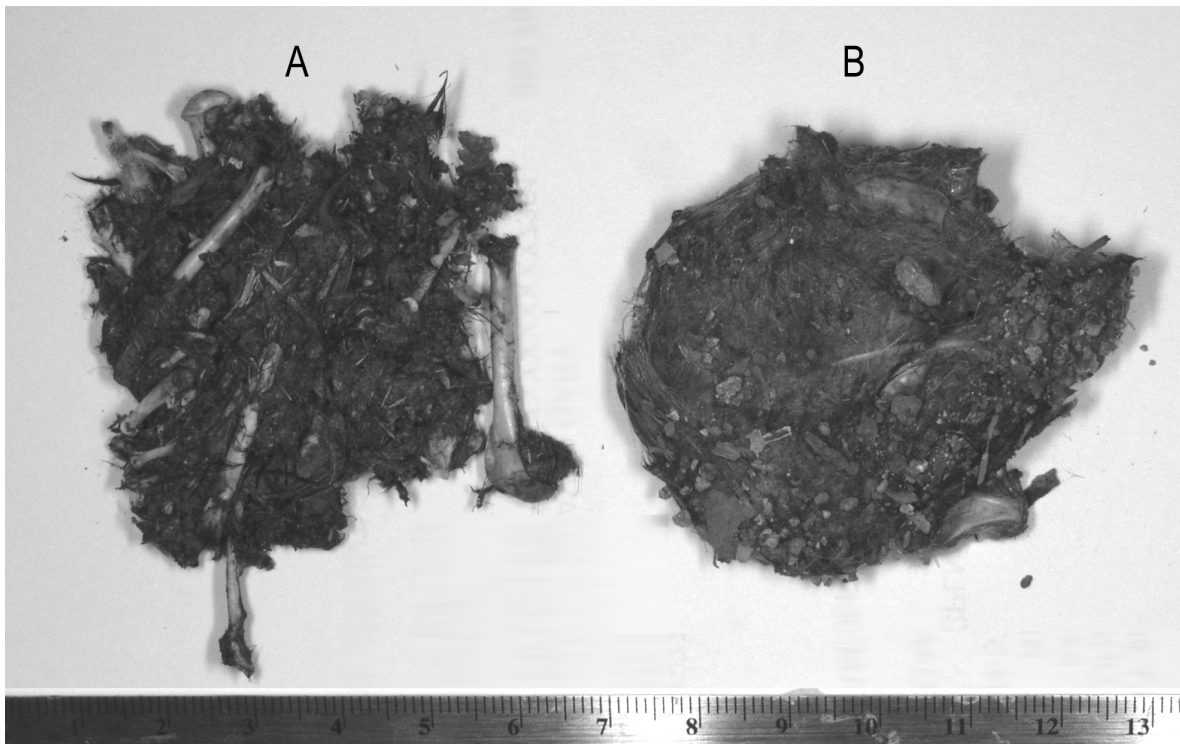


Fig. 1. Jamaican Owl (*Pseudoscops grammicus*) pellets. Skeletal elements of a Greater Antillean Grackle (*Quiscalus niger*) protrude from pellet A.

of *Anolis lineatopus* (Downer 1973). Johnston (1976) reported the contents of two pellets from Glenrock, St. Thomas Parish, and three pellets from Camberwell, St. Mary Parish. The Glenrock pellets included the remains of Black Rat (*Rattus rattus*), House Mouse (*Mus musculus*), bat (unidentified species), giant galliwasp (*Celestus occiduus*), gecko (*Hemidactylus* sp.), frogs (*Hyla septentrionalis* and *Eleutherodactylus* sp.), katydids, cricket, mollusk (*Subulina octona*), and grass fragments. Lewis (1976) suggested that the galliwasp was more likely referable to the common *Celestus hewardii* rather than the presumably extinct *C. occiduus*. The Camberwell pellets contained a bone fragment, unidentified hair, cricket (*Urogryllus* sp.), flea, beetle elytra fragment, unidentified insect parts, grass and plant stem fragments, light brown feathers, fine grit, and a piece of string.

On 27 November 2005, I photographed an adult Jamaican Owl roosting in a broad-leafed tree partially shaded by a large talipot palm (*Corypha umbraculifera*) in Hope Botanical Gardens (18° 01.30' N, 76° 44.89' W; WGS-84). The owl remained stationary from 09:30 hr until 17:00 hr but

could not be located on subsequent days. I periodically searched the grounds near the roost area for prey remains over the next several months and finally discovered two pellets on 3 April 2006 under a talipot palm only 15 m from the November roost site.

I measured the external dimensions and dry mass of the pellets, dissected them, and identified prey remains through comparison with reference collections in the National Museum of Natural History. The size and shape of owl pellets vary among species but most are cylindrical when regurgitated (Andrews 1990). The Jamaican Owl pellets (~ 6.0 × 5.5 × 2.0 cm) were probably flattened by the impact with the ground below the roost. One pellet (Fig. 1A) contained a largely complete skeleton (minus the skull) of a Greater Antillean Grackle (*Quiscalus niger*) and three isolated rat bones (vertebra, ilium, and ulna) embedded in a loose matrix of black feather barbs and feather fragments (bone = 2.51 g; feather = 1.39 g; measured with digital scale). Skeletal elements of *Quiscalus niger* can be easily distinguished from those of the Jamaican Blackbird (*Agelaius niger*-

*rimus*), Shiny Cowbird (*Molothrus bonariensis*), and the introduced Eurasian Starling (*Sturnus vulgaris*), by their larger size. The humerus of the grackle also exhibits a deep tricipital fossa which is absent in the starling and Smooth-billed Ani (*Crotophaga ani*). The presence of the pygostyle, claws, phalanges, both carpometacarpi, and fragments of ribs, sternum and synsacrum in the pellet, suggests that the owl swallowed the entire body of the grackle after it was decapitated. Mean body masses of Greater Antillean Grackles in Jamaica range from 76 g (females) to 108 g (males; S. E. Koenig pers. comm.). This is the first conclusive evidence that the Jamaican Owl preys on passerine birds. The second pellet (Fig. 1B) contained the nearly complete skeleton, including skull and mandibles, of a juvenile Black Rat embedded in a compact mass of hair (bone = 2.84 g; hair = 3.55 g). The ulna (length = 21.73 mm) contained in pellet 1A was very similar in size to the lone ulna (length = 21.79 mm) present in pellet 1B. This suggests a single rat was represented in the two pellets.

In summary, regurgitated pellets and stomach contents indicate that the Jamaican Owl is a generalist predator of large invertebrates, frogs, lizards, introduced murid rodents, and passerine birds. These data also suggest that the owl may exert strong selection on nocturnal roost sites in passerine birds and lizards.

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