



ELADIO FERNANDEZ

Many West Indian birds not normally associated with predation on vertebrates will eat lizards when the opportunity for a high-energy meal presents itself. This Hispaniolan Trogon (*Priotelus roseigaster*) has captured a Hispaniolan Twig Anole (*Anolis singularis*).

# Avian Predators of West Indian Reptiles

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On continents, birds that regularly prey on vertebrates are usually raptors (birds of prey) that exploit abundant and prolific rodent populations. Although other mammals, birds, reptiles, amphibians, and even fish are taken, they rarely comprise the focus of a predator's attention, and are instead taken opportunistically or when seasonally abundant, such as during migration periods. On tropical islands, however, reptiles — especially lizards — often are the most abundant and visible vertebrates, and constitute the principal quarry of raptors and many other birds not usually associated with hunting vertebrates.

In our forthcoming compilation of data pertaining to the natural history of West Indian amphibians and reptiles, we cited 36 references that recorded avian predation on reptiles. These constitute 37 species of birds and 58 species of reptilian prey. In addition, many published accounts speak of avian predation affecting population sizes of lizards, especially on very small islands with minimal cover, or of birds taking anoles (*Anolis* spp.), for example, but without identifying the species of lizard. Others note that a number of large, insectivorous birds were observed eating anoles, but do not identify the predators. Those accounts

are not included in the totals above or in the accompanying table, which lists only records of known predators and prey. Particularly in light of the reality that recorded observations are mostly anecdotal (except for a few studies of raptor diets that are included), those listed must reflect but a small percentage of actual predation events. Nevertheless, the number of such records testifies eloquently to both the ability of predatory birds (obligate or facultative) to exploit an abundant and prolific resource and the ability of their prey to maintain population numbers in the face of substantial but obviously sustainable losses.

## Acknowledgments

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BRENDA S. AND R. DUNCAN KIRBY






American Kestrels (*Falco sparverius*) are small raptors that frequently take insects, especially when abundant and concentrated, as well as small vertebrates. They have been documented as predators of 12 different species of West Indian lizards (ten of them species of anoles). The Puerto Rican Kestrel illustrated on the inside front and back covers is eating a Puerto Rican Ameiva (*Ameiva exsul*). These birds are eating a Statia Bank Tree Anole (*Anolis bimaculatus*; left) and a Statia Bank Bush Anole (*A. schwartzii*; right).

**Table.** Avian predators on West Indian reptiles. Predators are listed alphabetically by scientific name in four categories: (1) Raptors (birds of prey that regularly or exclusively take vertebrate prey); (2) Seabirds (primarily marine birds that feed mostly on fish, but may opportunistically take terrestrial vertebrates); (3) Egrets and herons (wading birds that regularly take aquatic and terrestrial vertebrates); and (4) Birds not usually considered to be predators on vertebrates, although several species in this list are known to forage opportunistically for lizards and small snakes, and reptiles may constitute a major component of their diets.

**Avian Predator**

**Prey**

**Raptors**

<p>Red-tailed Hawk (<i>Buteo jamaicensis</i>)</p>  <p style="font-size: small; transform: rotate(-90deg); position: absolute; left: -40px; top: 50px;">DANIEL CARDIFF</p> <p>Red-tailed Hawks are large raptors capable of taking lizards as large as iguanas.</p>	<p>Lesser Antillean Iguana (<i>Iguana delicatissima</i>)                  Common Iguana (<i>Iguana iguana</i>)                  Puerto Rican Crested Anole (<i>Anolis cristatellus</i>)                  Puerto Rican Giant Anole (<i>Anolis cuvieri</i>)                  Puerto Rican Emerald Anole (<i>Anolis evermanni</i>)                  Yellow-chinned Anole (<i>Anolis gundlachi</i>)                  Puerto Rican Spotted Anole (<i>Anolis stratulus</i>)                  Puerto Rican Racer (<i>Alsophis portoricensis</i>)</p>
<p>Broad-winged Hawk (<i>Buteo platypterus</i>)</p>	<p>Lesser Antillean Iguana (<i>Iguana delicatissima</i>)                  Puerto Rican Giant Anole (<i>Anolis cuvieri</i>)                  Grenada Tree Anole (<i>Anolis richardii</i>)                  Leeward Groundsnake (<i>Liophis juliae</i>)</p>
<p>Ridgway's Hawk (<i>Buteo ridgwayi</i>)</p>	<p>Dominican Giant Anole (<i>Anolis baleatus</i>)                  Northern Green Anole (<i>Anolis chlorocyanus</i>)                  W-headed Racer (<i>Laltris dorsalis</i>)                  Hispaniolan Lesser Racer (<i>Antillophis parvifrons</i>)                  Sharp-nosed Treesnake (<i>Uromacer oxyrhynchus</i>)                  Hispaniolan Trope (<i>Tropidophis haitianus</i>)</p>
<p>American Kestrel (<i>Falco sparverius</i>)</p>  <p style="font-size: small; transform: rotate(-90deg); position: absolute; left: -40px; top: 50px;">LUIS O. NIEVES</p> <p>American Kestrel with a Crested Anole (<i>Anolis cristatellus</i>) on Puerto Rico.</p>	<p>Stout Iguana (<i>Cyclura pinguis</i>) juveniles                  Lesser Antillean Iguana (<i>Iguana delicatissima</i>) juveniles                  Common Iguana (<i>Iguana iguana</i>) juveniles                  Statia Bank Tree Anole (<i>Anolis bimaculatus</i>)                  Cuban Giant Anole (<i>Anolis equestris</i>)                  Anguilla Bank Tree Anole (<i>Anolis gingivinus</i>)                  Anguilla Bank Bush Anole (<i>Anolis pogus</i>)                  Cuban Green Anole (<i>Anolis porcatus</i>)                  Saba Anole (<i>Anolis sabanus</i>)                  Cuban Brown Anole (<i>Anolis sagrei</i>)                  Statia Bank Bush Anole (<i>Anolis schwartzi</i>)                  Les Saintes Anole (<i>Anolis terraelatae</i>)                  Cuban Ameiva (<i>Ameiva auberi</i>)                  Hispaniolan Giant Ameiva (<i>Ameiva chrysoleama</i>)                  Puerto Rican Giant Ameiva (<i>Ameiva exsul</i>)                  Dominica Ameiva (<i>Ameiva fuscata</i>)                  Anguilla Bank Ameiva (<i>Ameiva plei</i>)</p>
<p>Cuban Pygmy Owl (<i>Glaucidium siju vittatum</i>)</p>	<p>Cuban Ameiva (<i>Ameiva auberi</i>)</p>
<p>Puerto Rican Screech Owl (<i>Otus nudipes</i>)</p>	<p>Puerto Rican Gracile Boa (<i>Epicrates monensis</i>)</p>
<p>Osprey (<i>Pandion haliaetus</i>)</p>	<p>Central Bahamas Rock Iguana (<i>Cyclura rileyi</i>)</p>
<p>Barn Owl (<i>Tyto alba</i>)</p>  <p style="font-size: small; transform: rotate(-90deg); position: absolute; left: -40px; top: 50px;">GRABME PURDY</p> <p>Although primarily nocturnal, Barn Owls occasionally take diurnally active lizards.</p>	<p>Jamaican Giant Anole (<i>Anolis garmani</i>)                  Slender Cliff Anole (<i>Anolis lucius</i>)                  Haitian Giant Anole (<i>Anolis ricordi</i>)                  Jamaican Croaking Gecko (<i>Aristelliger praesignis</i>)                  Hispaniolan Giant Ameiva (<i>Ameiva chrysoleama</i>)</p>

**Seabirds**

<p>Magnificent Frigatebird (<i>Fregata magnificens</i>)</p>	<p>Anguilla Black Ameiva (<i>Ameiva corax</i>)</p>
<p>Laughing Gull (<i>Larus atricilla</i>)</p>	<p>Cuban Iguana (<i>Cyclura nubila</i>) eggs and hatchlings                  Anguilla Black Ameiva (<i>Ameiva corax</i>)</p>
<p>Royal Tern (<i>Sterna maxima</i>)</p>	<p>Cuban Iguana (<i>Cyclura nubila</i>) eggs and hatchlings</p>
<p>Brown Booby (<i>Sula leucogaster</i>)</p>	<p>Anguilla Black Ameiva (<i>Ameiva corax</i>)</p>

**Egrets and Herons**

<p>Cattle Egrets (<i>Bubulcus ibis</i>)</p>	<p>St. Croix Anole (<i>Anolis acutus</i>)                  Grenada Bush Anole (<i>Anolis aeneus</i>)                  Puerto Rican Eyespot Sphaero (<i>Sphaerodactylus macrolepis</i>)</p>
<p>Snowy Egret (<i>Egretta thula</i>)</p>	<p>Mona Blindsnake (<i>Typhlops monensis</i>)</p>
<p>Yellow-crowned Night Heron (<i>Nyctanassa violacea</i>)</p>	<p>Anguilla Bank Ameiva (<i>Ameiva plei</i>)                  Puerto Rican Gracile Boa (<i>Epicrates monensis</i>)                  American Crocodile (<i>Crocodylus acutus</i>) hatchlings</p>

**Birds not usually considered predators of vertebrates**

Puerto Rican Parrot ( <i>Amazona vittata</i> )	.....	Puerto Rican Giant Anole ( <i>Anolis cuvieri</i> )
West Indian Woodpecker ( <i>Centurus superciliosus</i> )	.....	Cayman Islands Sphaero ( <i>Sphaerodactylus argivus</i> )
Brown Trembler ( <i>Cinlocerthia ruficauda</i> )	.....	Dominica Anole ( <i>Anolis oculatus</i> )
Mangrove Cuckoo ( <i>Coccyzus minor</i> )	.....	Dominica Anole ( <i>Anolis oculatus</i> )
Bananaquit ( <i>Coereba flaveola</i> )	.....	Caymans Blue-fanned Anole ( <i>Anolis conspersus</i> )
Smooth-billed Ani ( <i>Crotophaga ani</i> )	.....	Caymans Blue-fanned Anole ( <i>Anolis conspersus</i> )
		Jamaican Giant Anole ( <i>Anolis garmani</i> )
		Les Saintes Anole ( <i>Anolis terraaltae</i> )
Cuban Blackbird ( <i>Dives atrovioletaceus</i> )	.....	Cuban Brown Anole ( <i>Anolis sagrei</i> )
Zapata Wren ( <i>Ferminia cerverei</i> )	.....	Cuban Brown Anole ( <i>Anolis sagrei</i> )
Domestic Chicken ( <i>Gallus gallus</i> )	.....	Smooth-scaled Worm Lizard ( <i>Gymnophthalmus underwoodi</i> )
		Southern Green Anole ( <i>Anolis coelestinus</i> )
		Hispaniolan Stout Anole ( <i>Anolis cybotes</i> )
		Jamaican Gray Anole ( <i>Anolis lineatopus</i> )
Pearly-eyed Thrasher ( <i>Margarops fuscatus</i> )	.....	Common House Gecko ( <i>Hemidactylus mabouia</i> )
		Statia Bank Tree Anole ( <i>Anolis bimaculatus</i> )
		Puerto Rican Giant Anole ( <i>Anolis cuvieri</i> )
		Puerto Rican Emerald Anole ( <i>Anolis evermanni</i> )
		Anguilla Bank Tree Anole ( <i>Anolis gingivivus</i> )
		Yellow-chinned Anole ( <i>Anolis gundlachi</i> )
		Dominica Anole ( <i>Anolis oculatus</i> )
		Anguilla Bank Bush Anole ( <i>Anolis pogus</i> )
		Saba Anole ( <i>Anolis sabanus</i> )
		Statia Bank Bush Anole ( <i>Anolis schwartzi</i> )
		Puerto Rican Spotted Anole ( <i>Anolis stratulus</i> )
		Anguilla Bank Ameiva ( <i>Ameiva plei</i> )
		Guadeloupe Anole ( <i>Anolis marmoratus</i> )
Guadeloupe Woodpecker ( <i>Melanerpes herminieri</i> )	.....	Caymans Blue-fanned Anole ( <i>Anolis conspersus</i> )
La Sagra's Flycatcher ( <i>Myiarchus sagrae</i> )	.....	Cuban Green Anole ( <i>Anolis porcatius</i> )
House Sparrow ( <i>Passer domesticus</i> )	.....	Neotropical Clawed Gecko ( <i>Gonatodes albogularis</i> )
		Hispaniolan Twig Anole ( <i>Anolis singularis</i> )
Hispaniolan Trogon ( <i>Priotelus roseigaster</i> )	.....	Grenada Bush Anole ( <i>Anolis aeneus</i> )
Carib Grackle ( <i>Quiscalus lugubris</i> )	.....	Cuban Iguana ( <i>Cyclura nubila</i> ) eggs and hatchlings
Greater Antillean Grackle ( <i>Quiscalus niger</i> )	.....	Caymans Blue-fanned Anole ( <i>Anolis conspersus</i> )
		Cuban Brown Anole ( <i>Anolis sagrei</i> )
		Puerto Rican Giant Anole ( <i>Anolis cuvieri</i> )
		Puerto Rican Emerald Anole ( <i>Anolis evermanni</i> )
		Yellow-chinned Anole ( <i>Anolis gundlachi</i> )
		Puerto Rican Spotted Anole ( <i>Anolis stratulus</i> )
		Cuban Giant Anole ( <i>Anolis equestris</i> )
		Cuban White-fanned Anole ( <i>Anolis homolechis</i> )
		Western Giant Anole ( <i>Anolis luteogularis</i> )
		Spotted Brown Trope ( <i>Tropidophis pardalis</i> )
		Jamaican Giant Anole ( <i>Anolis garmani</i> )
Jamaican Lizard Cuckoo ( <i>Saurothera vetula</i> )	.....	Cuban Giant Anole ( <i>Anolis equestris</i> )
Red-legged Thrush ( <i>Turdus plumbeus</i> )	.....	Caymans Blue-fanned Anole ( <i>Anolis conspersus</i> )
Loggerhead Kingbird ( <i>Tyrannus caudifasciatus</i> )	.....	Jamaican Giant Anole ( <i>Anolis garmani</i> )
		Dominica Anole ( <i>Anolis oculatus</i> )
Gray Kingbird ( <i>Tyrannus dominicensis</i> )	.....	



ROBERT POWELL

Pearly-eyed Thrashers are effective, albeit opportunistic predators of small vertebrates.



ROBERT POWELL

Cuckoos are opportunists, feeding on a variety of arthropods, some surprisingly small for such relatively large birds. They often concentrate on seasonally abundant prey, such as caterpillars, for which they frequently function as biological controls. On West Indian islands, however, many cuckoos selectively forage for small reptiles, especially anoles, and may run along the ground “chasing” lizards as well as picking them off arboreal perches. Although species such as this Yellow-billed Cuckoo (*Coccyzus americanus*) may occasionally take small reptiles, a focus on reptilian prey has led to many island forms with the common name of “Lizard Cuckoo.”