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Chapter 8

Birds of Lely Gebergte, Suriname

Brian J. O'Shea

INTRODUCTION

Birds are one of the best-known groups of organisms in tropical forest. Because the majority of species are diurnal, and because birds in general are quite conspicuous and easy to identify, they make ideal subjects for rapid biodiversity assessments. Birds are excellent indicators of environmental health in the tropics. Many species are persecuted directly for food or trade, and many more are sensitive to habitat alteration associated with anthropogenic activities. Through their roles as seed dispersers and predators, birds influence the distribution of food resources used by a tremendous variety of animals, and thus play an important role in maintaining ecosystem functions.

The Guayana Shield harbors just over 1000 species of birds (Hollowell and Reynolds 2005), most of which occur in the region's largely intact forests. Although a comprehensive checklist of the birds of Suriname does not exist at this time, approximately 650 species are known from the country (Haverschmidt and Mees 1994; O. Ottema pers. comm.). Roughly 500 species inhabit the forests of Suriname's interior. Because Suriname is quite small and its forest cover is mostly intact, the majority of these species are widespread within the country.

The interior of Suriname is sparsely populated. Most human settlements are situated along rivers; there are few roads, and access to large areas of the interior is limited. The country supports significant populations of bird species that are sensitive to human exploitation and anthropogenic habitat fragmentation. Parrots, guans and curassows, trumpeters, and large raptors are common in Suriname. The country represents a stronghold for these species, many of which have been displaced by large-scale human activities and direct persecution elsewhere.

Suriname contains few true highland areas, with only two mountains exceeding 1000 meters in elevation. The avifauna of plateaus in Suriname typically consists of widespread lowland species, with the addition of a small suite of species that are largely confined to inselbergs and plateaus in the country's interior. Because plateaus are well drained, bird species typical of seasonally inundated forests tend to be absent. Some elements of the Pantepui avifauna reach their eastern limit on the Tafelberg in central Suriname, but are not known to occur below 1000 meters.

The Lely Gebergte is an isolated plateau in east-central Suriname. There is a large airstrip at the summit of the plateau (elev. approx. 670 meters), and a clearing roughly 100 meters in diameter has been made to accommodate a radio tower near the airstrip, but the plateau is otherwise forested. There is no road access to Lely and no human settlements in the immediate vicinity, though local people access the mountain by way of the Tapanahony River.

METHODS

Mist nets were used to sample the avifauna of Lely Gebergte between 2 and 14 June 2003. Six 12-meter nets were opened at first light and closed in the late afternoon every day. Nets were placed in three habitats near the airstrip: 1) mossy "dwarf forest" with many bromeliads and

a canopy height of approximately 6 meters; 2) tall forest on flat to gently sloping terrain; and 3) scrub along the edge of the airstrip. Birds captured in the nets were collected or released. Specimens were preserved as study skins or skeletons. Tissue samples were obtained from all birds collected. Specimens are housed at the Nationale Collectie Zoolischë Suriname (NCZS) and the Louisiana State University Museum of Natural Science (LSUMZ); all tissues are housed in the Section of Genetic Resources at the LSUMZ.

Incidental observations of the avifauna were made in the course of checking mist nets and preparing specimens. The approximate number of individuals of each species heard or seen each day was recorded.

RESULTS

Appendix 9 lists all species observed at Lely and their relative abundances. 152 species were observed during the study period. 104 specimens representing 52 species were collected during approximately 700 net-hours of sampling; however, the overall capture rate was far higher because many birds were released from the nets. Capture rates were unusually high, due in part to the placement of nets in an area of fruiting melastomes (Melastomataceae) that attracted large numbers of birds. There were also many juvenile birds in the area – particularly manakins (Pipridae) and *Turdus albicollis* (White-necked Robin) – that contributed greatly to the total number of birds captured.

The avifauna of Lely seemed typical of well-drained forests elsewhere in Suriname. Interesting records include the first interior breeding record of *Tachybaptus dominicus* (Least Grebe) for the country and the first documented specimen for Suriname of *Geotrygon violacea* (Violaceous Quail-Dove; see O'Shea 2005). *Contopus albogularis* (White-throated Pewee) was observed regularly around the Lely airstrip. This species is patchily distributed from the Bakhuis Gebergte in western Suriname into French Guiana, and thus has one of the most restricted geographic ranges of any bird species in the Guiana Shield. *Phaethornis malaris* (Great-billed Hermit) was observed and collected at Lely. The range of this species in the Guianas is also quite restricted and seems to coincide closely with that of *C. albogularis*. Neither of these

species has been recorded from adjacent Guyana. Nine species of Guiana Shield endemics, or approximately one-third of those occurring in Suriname, were seen during the study period (Table 8.1).

The parrot fauna of Lely was diverse. At least nine species were observed on a daily basis, and two species of large macaws (*Ara* spp.) were common during the study period. The total lack of *Amazona* parrots, however, was perplexing. Parrots are known to make seasonal movements in response to changes in food availability, and it is possible that *Amazona* parrots were temporarily absent from the area. Surveying the area at a different time of the year would help to clarify whether the absence of these parrots was a temporary phenomenon, or the result of trapping or hunting pressure.

Trumpeters (Psophiidae) and curassows (Cracidae) are prized for food and are thus good indicators of hunting pressure in tropical forest. *Crax alector* (Black Curassow) and *Psophia crepitans* (Gray-winged Trumpeter) were seen regularly at Lely. Neither species was particularly shy, suggesting that hunting at Lely is limited.

Overall, the avifauna of Lely seemed to be minimally disturbed by human presence in the area, and contained many expected species of well-drained lowland forest in Suriname. Several species typical of higher elevations in Suriname were found at Lely as well. Due to the limited number of observers (one) and the small area covered, the number of species occurring on Lely is undoubtedly higher than this survey indicates.

DISCUSSION

The 14-day survey of Lely Gebergte found 152 species in a limited area around the airstrip. 54 species, or 36% of the total, were captured in approximately 700 net-hours of sampling effort using ground-level mist nets in three distinct habitats within the area. Of these species, only nine were recorded solely as mist-net captures. This emphasizes the importance of supplementing passive census techniques with active observation and tape documentation of a tropical forest avifauna. Because Lely is situated in a large region of unbroken forest, the mountain's avifauna certainly comprises at least 300 species.

The avifauna of Lely appears to be representative of the lowland forest that covers the surrounding region, with the addition of several species that are primarily confined to plateaus in the country's interior. These species include *Phaethornis malaris* (Great-billed Hermit), *Trogon collaris* (Collared Trogon), *Piculus rubiginosus* (Golden-olive Woodpecker), *Contopus albogularis* (White-throated Pewee), and *Lepidothrix serena* (White-fronted Manakin). Within Suriname, these species are also known to occur on the Brownsberg and at higher elevations in the Bakhuis Gebergte (BJO pers. obs.). The global range of *Contopus albogularis* is very small – the species is endemic to portions of Suriname and French Guiana. The other species are more widespread.

Table 8.1. Guayana Shield endemics observed on Lely Gebergte.

Scientific name	English name
<i>Pionopsitta caica</i>	Caica Parrot
<i>Selenidera culik</i>	Guianan Toucanet
<i>Pteroglossus viridis</i>	Green Aracari
<i>Myrmotherula gutturalis</i>	Brown-bellied Antwren
<i>Herpsilochmus stictocephalus</i>	Todd's Antwren
<i>Contopus albogularis</i>	White-throated Pewee
<i>Corapipo gutturalis</i>	White-throated Manakin
<i>Lepidothrix serena</i>	White-fronted Manakin
<i>Euphonia finschi</i>	Finsch's Euphonia

Cracids and parrots, two groups that are good indicators of human impact in tropical forest, are well represented at Lely. Curassows were seen regularly during the survey, suggesting that hunting activity is not especially high in the Lely area. With the mysterious exception of the genus *Amazona*, parrots were common in the vicinity of the Lely airstrip. Suriname supports a thriving trade in parrots, and substantial numbers are harvested annually from the country's interior. The proximity of human settlements and access corridors greatly influences trapping pressure on parrots in the Guianas (Hanks 2005). Lely is still quite remote and does not appear to be an important trapping area at this time, but a more focused assessment of the intensity of trapping pressure on parrots around Lely should be undertaken. From a global perspective, Lely is an important stronghold for parrots, curassows, and other species that are sensitive to human disturbance or that require large areas of intact forest for survival. While it does not represent an especially unique area in the Guianas from an ornithological standpoint, the remoteness and pristine condition of Lely relative to Brownsberg and Nassau argue for the expedient implementation of conservation measures. Foremost among these would be a restriction on the building of roads into the area. Road construction would precipitate an influx of hunters and trappers, as has already happened at the nearby Nassau Gebergte. Although the area is used by local people and some hunting undoubtedly occurs, the current level of hunting pressure at Lely seems light, especially in comparison to Nassau and the area surrounding the Brownsberg Nature Park.

The creation of permanent human settlements in the vicinity of Lely should also be discouraged. Settlements would increase hunting and trapping pressure on game birds, parrots, and other wildlife in the area, with deleterious secondary effects on the reproductive ecology of many plant species.

Overall, bird diversity at Lely seems high, and the plateau is a good candidate for protected status, particularly in light of current human pressures on Brownsberg and Nassau. Human activity does not seem to have substantially affected the avifauna of Lely up to the present time, and local people should be granted continued access to the area via the Tapanahony River. However, road construction and large-scale extractive activities should be avoided.

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Appendix 9

List of bird species observed on
Lely Mountain, 1-15 June 2003.

Brian O'Shea

Key to abundance codes:

A: abundant; more than 20 individuals/groups observed daily

C: common; 5-20 daily

F: fairly common; 1-4 daily

U: uncommon; average fewer than 1 per day, or same individuals seen repeatedly

Scientific name	English name	Abundance	Specimen collected
ORTALIS MOTMOT	Variable Chachalaca	F	
<i>Crax alector</i>	Black Curassow	F	
<i>Tachybaptus dominicus</i>	Least Grebe	U	
<i>Cathartes melambrotus</i>	Greater Yellow-headed Vulture	F	
<i>Coragyps atratus</i>	Black Vulture	U	
<i>Sarcoramphus papa</i>	King Vulture	U	
<i>Elanoides forficatus</i>	Swallow-tailed Kite	F	
<i>Ictinia plumbea</i>	Plumbeous Kite	F	
<i>Leucopternis melanops</i>	Black-faced Hawk	U	X
<i>Buteogallus urubitinga</i>	Great Black-Hawk	U	
<i>Spizastur melanoleucos</i>	Black-and-white Hawk-Eagle	U	
<i>Daptrius ater</i>	Black Caracara	U	
<i>Ibycter americanus</i>	Red-throated Caracara	F	
<i>Psophia crepitans</i>	Gray-winged Trumpeter	F	
<i>Aramides cajanea</i>	Gray-necked Wood-Rail	U	
<i>Patagioenas plumbea</i>	Plumbeous Pigeon	C	
<i>Leptotila rufaxilla</i>	Gray-fronted Dove	C	X
<i>Geotrygon violacea</i>	Violaceous Quail-Dove	U	X
<i>Geotrygon montana</i>	Ruddy Quail-Dove	C	X
<i>Ara macao</i>	Scarlet Macaw	C	
<i>Ara chloropterus</i>	Red-and-green Macaw	C	
<i>Aratinga leucophthalma</i>	White-eyed Parakeet	F	
<i>Pyrrhura picta</i>	Painted Parakeet	C	
<i>Brotogeris chrysoptera</i>	Golden-winged Parakeet	C	
<i>Touit batavica</i>	Lilac-tailed Parrotlet	F	
<i>Pionites melanocephalus</i>	Black-headed Parrot	F	
<i>Pionopsitta caica</i>	Caica Parrot	U	
<i>Pionus menstruus</i>	Blue-headed Parrot	C	

Scientific name	English name	Abundance	Specimen collected
<i>Pionus fuscus</i>	Dusky Parrot	F	
<i>Piaya melanogaster</i>	Black-bellied Cuckoo	F	
<i>Pulsatrix perspicillata</i>	Spectacled Owl	U	
<i>Glaucidium hardyi</i>	Amazonian Pygmy-Owl	U	
<i>Caprimulgus nigrescens</i>	Blackish Nightjar	C	X
<i>Chaetura spinicaudus</i>	Band-rumped Swift	C	
<i>Chaetura chapmani</i>	Chapman's Swift	F	
<i>Phaethornis ruber</i>	Reddish Hermit	F	
<i>Phaethornis bourcierii</i>	Straight-billed Hermit	F	X
<i>Phaethornis superciliosus</i>	Eastern Long-tailed Hermit	C	X
<i>Phaethornis malaris</i>	Great-billed Hermit	C	X
<i>Campylopterus largipennis</i>	Gray-breasted Sabrewing	F	X
<i>Thalurania furcata</i>	Fork-tailed Woodnymph	F	X
<i>Heliobryx auritus</i>	Black-eared Fairy	U	
<i>Trogon viridis</i>	White-tailed Trogon	C	
<i>Trogon collaris</i>	Collared Trogon	F	
<i>Trogon melanurus</i>	Black-tailed Trogon	F	
<i>Chloroceryle inda</i>	Green-and-rufous Kingfisher	U	X
<i>Galbula dea</i>	Paradise Jacamar	F	
<i>Malacoptila fusca</i>	White-chested Puffbird	U	X
<i>Monasa atra</i>	Black Nunbird	C	
<i>Capito niger</i>	Black-spotted Barbet	C	
<i>Ramphastos tucanus</i>	Red-billed Toucan	F	
<i>Ramphastos vitellinus</i>	Channel-billed Toucan	F	
<i>Selenidera culik</i>	Guianan Toucanet	F	
<i>Pteroglossus viridis</i>	Green Aracari	F	X
<i>Piculus rubiginosus</i>	Golden-olive Woodpecker	C	X
<i>Celeus undatus</i>	Waved Woodpecker	F	
<i>Celeus elegans</i>	Chestnut Woodpecker	U	
<i>Campephilus rubricollis</i>	Red-necked Woodpecker	F	
<i>Dendrocincla fuliginosa</i>	Plain-brown Woodcreeper	F	X
<i>Glyphorhynchus spirurus</i>	Wedge-billed Woodcreeper	C	X
<i>Xiphorhynchus pardalotus</i>	Chestnut-rumped Woodcreeper	F	
<i>Lepidocolaptes albolineatus</i>	Lineated Woodcreeper	U	
<i>Synallaxis rutilans</i>	Ruddy Spinetail	U	X
<i>Philydor erythrocerum</i>	Rufous-rumped Foliage-gleaner	F	
<i>Sclerurus rufifigularis</i>	Short-billed Leaf-tosser	U	X
<i>Xenops minutus</i>	Plain Xenops	F	X
<i>Cymbilaimus lineatus</i>	Fasciated Antshrike	U	
<i>Thamnophilus murinus</i>	Mouse-colored Antshrike	F	
<i>Thamnophilus punctatus</i>	Northern Slaty-Antshrike	C	X
<i>Thamnomanes ardesiacus</i>	Dusky-throated Antshrike	F	

Scientific name	English name	Abundance	Specimen collected
<i>Thamnomanes caesius</i>	Cinereous Antshrike	F	X
<i>Myrmotherula gutturalis</i>	Brown-bellied Antwren	F	
<i>Myrmotherula axillaris</i>	White-flanked Antwren	C	X
<i>Myrmotherula longipennis</i>	Long-winged Antwren	F	X
<i>Myrmotherula menetriesii</i>	Gray Antwren	F	X
<i>Herpsilochmus stictocephalus</i>	Todd's Antwren	F	
<i>Terenura spodioptila</i>	Ash-winged Antwren	U	
<i>Cercomacra cinerascens</i>	Gray Antbird	F	
<i>Myrmoborus leucophrys</i>	White-browed Antbird	F	X
<i>Hypocnemis cantator</i>	Warbling Antbird	C	X
<i>Percnostola rufifrons</i>	Black-headed Antbird	C	X
<i>Myrmeciza ferruginea</i>	Ferruginous-backed Antbird	U	
<i>Myrmeciza atrothorax</i>	Black-throated Antbird	U	X
<i>Hylophylax naevius</i>	Spot-backed Antbird	U	
<i>Hylophylax poecilinotus</i>	Scale-backed Antbird	F	X
<i>Myrmornis torquata</i>	Wing-banded Antbird	U	
<i>Grallaria varia</i>	Variegated Antpitta	U	
<i>Myrmothera campanisona</i>	Thrush-like Antpitta	F	
<i>Tyrannulus elatus</i>	Yellow-crowned Tyrannulet	C	X
<i>Myiopagis gaimardii</i>	Forest Elaenia	F	X
<i>Ornithion inermis</i>	White-lored Tyrannulet	F	
<i>Zimmerius gracilipes</i>	Slender-footed Tyrannulet	C	X
<i>Corythopis torquatus</i>	Ringed Antpipit	F	X
<i>Mionectes macconnelli</i>	McConnell's Flycatcher	F	X
<i>Leptopogon amaurocephalus</i>	Sepia-capped Flycatcher	U	
<i>Lophotriccus galeatus</i>	Helmeted Pygmy-Tyrant	C	X
<i>Tolmomyias assimilis</i>	Yellow-margined Flycatcher	U	
<i>Tolmomyias poliocephalus</i>	Gray-crowned Flycatcher	U	
<i>Platyrinchus saturatus</i>	Cinnamon-crested Spadebill	U	X
<i>Terenotriccus erythrurus</i>	Ruddy-tailed Flycatcher	F	X
<i>Contopus albogularis</i>	White-throated Pewee	F	
<i>Legatus leucophaeus</i>	Piratic Flycatcher	F	
<i>Myiozetetes cayanensis</i>	Rusty-margined Flycatcher	C	
<i>Conopias albobittatus</i>	White-ringed Flycatcher	F	
<i>Myiodynastes maculatus</i>	Streaked Flycatcher	F	
<i>Megarynchus pitangua</i>	Boat-billed Flycatcher	F	
<i>Empidonomus varius</i>	Variegated Flycatcher	F	
<i>Tyrannus melancholicus</i>	Tropical Kingbird	C	
<i>Attila spadiceus</i>	Bright-rumped Attila	F	X
<i>Schiffornis turdina</i>	Thrush-like Schiffornis	F	X
<i>Pachyramphus marginatus</i>	Black-capped Becard	U	

Scientific name	English name	Abundance	Specimen collected
<i>Pachyramphus minor</i>	Pink-throated Becard	U	
<i>Oxyruncus cristatus</i>	Sharpbill	U	
<i>Rupicola rupicola</i>	Guianan Cock-of-the-rock	U	
<i>Cotinga cayana</i>	Spangled Cotinga	F	
<i>Lipaugus vociferans</i>	Screaming Piha	C	
<i>Xipholena punicea</i>	Pompadour Cotinga	C	
<i>Perissocephalus tricolor</i>	Capuchinbird	U	
<i>Corapipo gutturalis</i>	White-throated Manakin	C	X
<i>Lepidothrix serena</i>	White-fronted Manakin	A	X
<i>Manacus manacus</i>	White-bearded Manakin	C	X
<i>Pipra pipra</i>	White-crowned Manakin	C	X
<i>Pipra erythrocephala</i>	Golden-headed Manakin	A	X
<i>Vireo olivaceus</i>	Red-eyed Vireo	F	
<i>Hylophilus muscicapinus</i>	Buff-cheeked Greenlet	U	
<i>Hylophilus ochraceiceps</i>	Tawny-crowned Greenlet	U	
<i>Progne chalybea</i>	Gray-breasted Martin	A	
<i>Cyphorhinus arada</i>	Musician Wren	U	
<i>Ramphocaenus melanurus</i>	Long-billed Gnatwren	U	
<i>Turdus albicollis</i>	White-throated Robin	A	X
<i>Coereba flaveola</i>	Bananaquit	F	
<i>Lamprospiza melanoleuca</i>	Red-billed Pied Tanager	C	
<i>Tachyphonus cristatus</i>	Flame-crested Tanager	F	
<i>Tachyphonus surinamus</i>	Fulvous-crested Tanager	C	X
<i>Tachyphonus phoeniceus</i>	Red-shouldered Tanager	F	X
<i>Tangara chilensis</i>	Paradise Tanager	C	
<i>Tangara punctata</i>	Spotted Tanager	C	X
<i>Tangara gyrola</i>	Bay-headed Tanager	C	X
<i>Tangara velia</i>	Opal-rumped Tanager	F	
<i>Dacnis lineata</i>	Black-faced Dacnis	F	
<i>Dacnis cayana</i>	Blue Dacnis	C	
<i>Cyanerpes caeruleus</i>	Purple Honeycreeper	C	
<i>Cyanerpes cyaneus</i>	Red-legged Honeycreeper	F	
<i>Chlorophanes spiza</i>	Green Honeycreeper	C	
<i>Sporophila lineola</i>	Lined Seedeater	F	X
<i>Arremon taciturnus</i>	Pectoral Sparrow	U	
<i>Saltator maximus</i>	Buff-throated Saltator	C	X
<i>Cyanocopsa cyanoides</i>	Blue-black Grosbeak	U	X
<i>Psarocolius viridis</i>	Green Oropendola	U	
<i>Euphonia finschi</i>	Finsch's Euphonia	U	
<i>Euphonia cyanocephala</i>	Golden-rumped Euphonia	U	
<i>Euphonia cayennensis</i>	Golden-sided Euphonia	F	