

BIRDING OUTBACK GUYANA

A Chronical of Ecotouring in the Savannas and Rainforests

by

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This diary along with photographs can also be viewed at
http://homepage.mac.com/Donald_Green/Guyana/

The Rewa River

PREFACE

This journal started as an occasional letter of my birding activities to my daughter, Jennifer Green, who shares my interests in birds and has now joined me on these trips. It is, of course, an aid to my mind, which is all too eager to discard memories. However, these memories are so pleasant that to lose any part of them would be a shame. It is also for my companions to whom I'll try to get copies. If there are unifying elements in this document it is the birds, the birding, and the wildlife. But the travel through rivers, forests and savanna and the ecology of the tropics was as exciting as the birds and I've tried to comment on those aspects that caught my attention.

This account is based on my trip notes, the log of birds seen and locations visited which were kept daily by the participants, slides I took, and the blizzard of photographs which Ilze Belodis took on the first trip and most kindly distributed to each of the participants, those taken by Steve Mirick and Roger Stanley on the second trip, another blizzard of photographs taken by Polly Rothstein and given to us all on the third and fourth trips and Jennifer's journals and records on the Rewa, Maparri and Kwitaro expeditions. Most importantly it has been redacted, many errors corrected, much memory recalled, and extensively improved by Davis Finch, who, after wading through several versions of this journal, continues to modestly refer to his efforts as "micro-corrections". Would, that when I was an editor, I had as careful and effective reviewers as Davis. Would that he had better writers than me! It is not in my nature to agree with even his every assertion. Consequently, I accept responsibility for all the residual errors.

In addition to my fellow participants, the birders and the fisherman who made these trips a delight, I wish to thank Davis Finch for inviting me; Tony Thorne of Wilderness Explorers and his able assistants Karen Weldren and Louis Singh for their assistance in Georgetown and in making travel arrangements elsewhere; Duane De Freitas, the captain of each of these the expeditions and our host at Dadanawa; his able lieutenants, Oscar Dookie, Ashley Holland, Pip Hiscock and Malcolm Miller. For their warm hospitality and friendship; Dianne McTurk our host at Karanambu; Shirley Humphrys at Mountain Point; Sandy and Duane DeFreitas at Dadanawa and Sandy at Kwatamang Landing, and Colin Edwards at Rockview. A special thanks to all who participated in making these travels a happy and birdacious adventure; our drivers, Cecil and Carl Fredericks; our guides on land and water, Duane, Kenneth, Tommy Kenyon, Percy, Michael Phang, Magnus and Placid Stevens, Silveirio and Richard Winter and our companions; Alwin, Andy, young Duane, Justin, Leland, Leroy, Paula, Nikki, Sammy and Stephen. Probably nothing made this trip more enjoyable than the kitchens at Karanambu, at Dadanawa, on the Kuyuwini, Kwitaro, Maparri and the Rewa Rivers. I am pleased to acknowledge the superb cuisine of marvelous Marjory at Dadanawa, Maparri, Kuyuwini and the Kwitaro, and the chef-ly skills of Dookie, Duane and Stephen who, on the Rewa, knew what to do with a fish.

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THE REWA RIVER

I first heard the Rewa River mentioned by Duane De Freitas and Davis Finch as we approached Manari and Lethem in April, 1997. To our southeast loomed the wall of the Kanuku Mountains. Beyond them in the great central bowl of the Southern Rupununi District was a very interesting river, the Rewa (Illiwa, on some maps), only accessible by boat. It was tempting new birding territory, offering prime fishing as well and clearly worth exploration. Before we left Guyana, the Rewa was much on our minds as a future destination. The Rewa River is a major tributary of the Essequibo River. Collecting water from the eastern slopes of the Kanuku Mountains via the Kwitaro River and from the south-central rainforests south to the Kuyuwini River watershed, the Rewa joins the Rupununi River near Rewa Village, 25 miles downstream from Annai. In contrast to the Rupununi, which is primarily a riparian corridor through extensive savanna, the Rewa is a typical amazonian "blackwater" river draining an area of more than 5000 square miles of untracked, uncut rainforest. As a consequence, the two differ distinctly in color, the Rupununi is tan, opaque with prairie silt, while the Rewa is clear composed of forest filtered water.

By September, 1997 our planning was sufficiently advanced that three of us had enlisted: Davis Finch, myself, and my oldest daughter, Jennifer. Subsequently, Steve Mirick, a very accomplished birder, signed on. On November 8th, Jennifer flew from San Jose to connect with the Guyana Airways Corporation (GAC) flight at JFK in New York. The next morning Steve and I left a chilly Portsmouth at 5:30 A.M. and met Davis on the C&J Trailways bus in Newburyport en route to Logan Airport in Boston. We were at JFK by 10:30 A.M. and when the GAC office opened up at noon we found Jennifer. The flight to Georgetown via Curacao was uneventful. We were met by our driver, Louis Singh (the world-class Scrabble player) and Karen Weldren, the Wilderness Explorers agent and, in Tony Thorne's absence, its acting manager. Check-in at the Pegasus was quicker than last time. The hotel's restaurant had suffered extensive fire damage since our last visit and the repair was the occasion for renovation of the pool area by the new management (Le Meridien).

GEORGETOWN lies on the south bank at the mouth of the Demerara River. Nowhere does it rise significantly above ocean or river. The view from the Pegasus Hotel is of flat land from the mudflats of the ocean to the land. Palm trees, large deciduous trees and lower buildings form a skyline over which the eight-story Pegasus, clearly the highest immediate structure, presides. Gray-breasted Martins circle the hotel. November 10, in the usual manner we were up at dawn's light and out to bird the hotel grounds and the sea wall. The ocean was quiet on my previous visit, as it was on this trip. There are always interesting birds in Georgetown including some we rarely see inland, and this morning such birds included, Whimbrels, Pearl Kites, Grey-lined Hawks, Snail Kites, and Plain-bellied and Glittering-throated Emeralds. Along the seawall we encountered the rarest "accidental." There we met Arthur "Art" Mudge an AID consultant working briefly in Guyana, a dedicated birdwatcher and an Audubon Society of New Hampshire member from Hanover. Davis and Steve knew Art by name and share many acquaintances but neither had met him before. We arranged supper plans at Cara Lodge forthwith.

THE BOTANICAL GARDEN was our main order of business after breakfast. We found the Botanical Garden much changed from our previous tour. A scheme has been floated to develop the Botanical garden into a series of six or seven friezes roughly portraying each of the major biotypes associated with environments of Guyana. The plan for this "Biodiversity Park" had succeeded to the extent of destroying a very large part of the park's natural habitat without any evidence of new environmental development. Indeed, the commission responsible for the proposal seemed to have vanished with the foliage. One evident advantage of the desecration was that the birds which remained had much reduced options for feeding and roosting and so were more apparent than before. The summer rainy season had been unusually dry, greatly lowering the water levels in the pools and lagoons thus providing extensive muddy edges. Here we found Pectoral, Solitary and Spotted Sandpipers, as well as Greater and Lesser Yellowlegs, Striated Heron, Limpkin, Pied Water-Tyrant and Black-crowned Night-Herons. The lagoons, thick with algae of a bright green color, were indistinguishable from home-made pea soup. They harbored spectacled caiman (Caiman crocodilus), turtles (sp.?), and Caribbean manatees. The spectacled caiman is yellow-green with dark edged scales and plates and is smaller than the black caiman. A Peregrine Falcon soared above the garden. My major objective here, shared with Davis, was to see the Blood-colored Woodpecker, a local specialty, which had eluded us on our prior visit to the garden in April. A calling male responded to tape and subsequently joined in a mobbing situation and so was seen by each of us at every angle. Lineated Woodpeckers were seen and heard, as was a White-bellied Piculet, several Yellow-chinned Spinetails (one within the 9 ft focusing range of my binoculars!) and both Barred and Black-crested Antshrikes. We had especially close looks at a pair of Southern Beardless-Tyrannulets feeding a juvenile in a tree over the path. Both the diminutive size and absence of rictal bristles (beardlessness) were apparent. A number of small flycatchers were present: Mouse-colored Tyrannulet, Yellow-bellied Elaenia, Spotted Tody-Flycatcher, Common Tody-Flycatcher and Yellow-breasted Flycatchers along with other species such as: Short-crested, Rusty-margined and Boat-billed Flycatchers, Great Kiskadee and Tropical Kingbird, a pair of Cinereous Becards and several Pale-breasted Thrushes. Tropical Mockingbird, Smooth-billed Ani, Yellow Oriole, several Shiny Cowbirds, and many Carib Grackles were noted. Gray-breasted Martin were abundant overhead and resting on trees and wires. Tanagers were represented by Blue-grey, Turquoise, Palm and Silver-beaked Tanagers and a male Violaceous Euphonia. A pair of Grayish Saltators, six Red-capped Cardinals, three male Variable Seedeaters and several Blue-black Grassquits were identified. Two northern migrants were present:

Yellow Warbler and Northern Waterthrush (heard), as well as the familiar ubiquitous resident House Wrens. Also heard was an Ashy-headed Greenlet. The Botanical Garden was especially good for parrots. Red-shouldered Macaw and Yellow-crowned Parrots were seen and Orange-winged Parrots were heard here. Most exciting was the discovery of a small group of **Green-rumped Parrotlets**. At five and a half inches, about the length of a warbler but much chunkier, these are among the smallest members of the parrot family in Guyana. I marvel at the extraordinary range of size in the Psittacidae from the 35" long Red- and-green Macaw to these miniature parrots.

Lunch at the Pegasus was a special order of sauteed fish provided with the assistance of a very cooperative waiter. It was a delicious meal which we all enjoyed. At this point I had no premonition that I would ever approach a limit to the amount of fresh fish that can be enjoyed in the human diet. I had yet to meet the Rewa River fishing contingent of our party. The roof of the Pegasus gave a spectacular panoramic view of the mouth of the Demerara River, the harbor and the Georgetown Bight. Hundreds of **Laughing Gulls** flew by. Far out in the shallows, a few dozen poles had been placed to hold fishing nets and on some of these were perched **Royal Terns**, while on another was a **Lesser Black-backed Gull**. This is the first of these gulls I have seen although I have chased them around New Hampshire, Massachusetts and Maine for the past three years. While even with Steve Mirick's Kowa scope I couldn't see critical fieldmarks such as yellow bill and legs, no other gull typically occurs on these shores with which a distant Lesser Black-backed can be confused. The afternoon was devoted to hunting the elusive Rufous Crab-Hawk along the seawall, lagoons, polders and drainage ditches toward Ogle Airport. That quest failed, but did turn up raptors such as Snail Kite, Roadside Hawk, Crested Caracara, Yellow-Headed Caracara and Great Black-Hawk. Two Southern Lapwings were observed in a field along the seawall and almost every field contained Cattle Egrets (our estimated total was 200). On the seaside mudflats we found Snowy Egrets (300+), both mature and immature Little Blue Herons, (40) and Tricolored Herons (60). Following the birdlisting ritual, most of us (Jennifer demurred in an attempt to pay off her sleep deficit and nurse the cold she was introducing to South America) joined Art Mudge at the Cara Lodge for supper and conversation. Karen Weldren met us briefly there and we met the manager, Gavin O'Brien, an old friend of Davis'.

KARANAMBU. We got up before dawn for the drive to Timehri and our flight by fully loaded twin-engine Otter to Karanambu. As always, Louis Singh was prompt, efficient and a great comfort in enduring the small trials of GAC travel and we left a significant amount of less treasured overweight with him when we departed. The flight left just after 6 A.M. and took 70 minutes to the GAC airstrip at Karanambu. There we were met by Dianne McTurk, Cecil, Kenneth and the Land Rover which transported us to the compound. As before, Fork-tailed Flycatchers and Grassland Sparrows were present along the road to the ranch, and at least one Savanna Hawk. At the ranch the usual flock of about forty resident Black Vultures were perching in nearby trees and several Turkey Vultures soared overhead. Stephen Raimondo, who had been Margie's right hand on the Kuyuwini trip, met us at Karanambu where he was assisting Dianne. Although he had been scheduled to start work at Don and Shirley Melville's store in Lethem in the coming week, it was instantly clear to me that Stephen was dying to go to the Rewa with us. Happily, Dianne insisted he go with our party "to care for Jennifer." This was a good thing too, since his exceptional skills as steward and quartermaster turned out to be essential and his gentle, pleasant helpfulness most welcome.

After the usual bountiful breakfast, amidst the hundred or so Red-capped Cardinals to which Dianne is also host, we were off to the "Forest Patch" for birding. Our previous visit to this locale in April was shortly after an exceptionally wet "dry" season. This visit followed an unusually dry season. Despite the difference of the seasons, the Forest Patch appeared much the same although the birdlife seemed less abundant than before. These unusual 1997 weather patterns are attributed by the press and some meteorologists to a profound "El Nino" associated with an extremely warm pool of Pacific equatorial water. The phenomenon is allegedly cyclical, but its underlying cause remains to be discovered (at least by me). The fact that each of the last three El Nino events has been longer and more severe than its predecessor suggests that they could reflect global warming.

A pair of Green-tailed Jacamars was called into the roadway for an intimate examination. In contrast, a clearly audible Spotted Puffbird resolutely refused to respond to its call. Buff-throated and Straight-billed Woodcreepers and a Pale-breasted Spinetail were seen and Crimson-crested Woodpecker were heard. At the woodland edges were Brown-crested Flycatcher, Gray Seedeaters, a small group of Bananaquits and Ruddy-breasted Seedeaters, including one very showy male. Brown-throated Parakeets, the typical savanna psittacid, and Swallow-wings were encountered. Swallow-wings are the absolute reagent indicator species for edge environment. They are common wherever high forest cover meets the open savanna or the broader river stretches. With the exception of Turquoise Tanager and Violaceous Euphonia, the tanagers here were those species seen in Georgetown although the call of Finsch's Euphonia was first heard here. The only Striped Cuckoo detected on the entire trip was calling here, as were Squirrel Cuckoos. As on the last visit, a Ferruginous Pygmy-Owl responded to a tape of birds mobbing a Ferruginous Pygmy-Owl. Remarkably, Jennifer and Steve were able to pick up this bird sitting high in a dense tangle of branches and Steve was able to put the scope on it, a really terrific job of spotting. Violaceous Trogon, Glittering-throated and Blue-tailed Emeralds were present in the Forest Patch and antbirds were represented by Black-crested and Barred Antshrikes as well as our first **Slaty Antshrike**, a pair and a juvenile. White-flanked and White-fringed Antwrens and Dusky, White-browed, Black-chinned and White-bellied Antbirds were seen and, in all cases heard as well, elsewhere at Karanambu. In the Forest Patch we also found a Slender-footed Tyrannulet near where we'd seen one in April and we heard a Yellow-crowned Tyrannulet for the first time. Curiously, it would not be until our last two days on the Rupununi that we finally saw this tiny bird. Helmeted Pygmy-Tyrant and Pale-eyed Pygmy-Tyrants called in the understory; the latter is not commonly

encountered outside of Karanambu. On both trips it was seen here, but on neither trip was it seen elsewhere. A Slate-headed Tody-Flycatcher, three Blue-backed Manakins and two White-tipped Doves filled out our list.

Back at the compound we were treated to a visit by Dianne's pet Giant River Otter, Peter. This gorgeous full-grown male is extremely friendly, at least when Dianne is about, and insists on being carried by her to the river for their afternoon swim. I took a photo which shows the trusting bond between them. The vibrissae and eyebrows of the otter are impressively stiff and strong and certainly serve dual sensory and protective roles during underwater exploration. This is the same individual photographed last April with the laundry detail. I have a wonderful portrait of Dianne and Peter who posed for an intimate embrace. After lunch a walk in the "Neopalma Woods" is de rigueur. This is a brushy area close behind the last houses to the left of the road toward the Forest Patch/GAC airstrip. The brush here grows thickly to a height of about 15-20 feet at the edge of the savanna. It is a location for a Karanambu specialty, the Pale-bellied Tyrant-Manakin (*Neopelma pallescens*). We cut a short tunnel through the brush and stood in a gallery among narrow-stemmed shrubs. After several tries, Davis was successful in luring this fast-moving bird into view. Tape-luring has its good and bad sides. An accurate identification can be made since in all probability, the bird is responding to the call of its species. However, such a bird is "wired", aggressively searching for a newcomer, whether a rival, companion or mate. Actively searching for the intruder, it does not stay in one place for long and is not easy to see. In contrast, quietly stalking birds that are engaged in other activities offers better and more leisurely views. The silent stalk is both more difficult and less effective since fewer than half the species present in an area can typically be detected. Tropical Gnatcatcher also responded to mobbing sounds in the area.

In the neighborhood of the ranch buildings we observed Crested Oropendola, Campo and Yellow Orioles. Walks on the river trail and the Karanambu runway produced my first really good view of **Capped Heron** and we also found Pale-vented Pigeons, Brown-chested Martins, two **Giant Cowbirds** and Green Kingfisher. At dusk a few flying Least Nighthawks appeared. Along the river at the Karanambu Landing we heard a loud crashing in the brush and in short order a **Red-rumped Agouti** emerged in plain view onto an open bank. Under the rocky ledges to the left of the Landing, at least a dozen **Long-nosed Bats** roosted. Dianne's usual gracious Karanambu hospitality was enjoyed at dinner.

Wednesday, November 12. All too soon it was up, a sip of coffee, and out to the runway for dawn birding. This is the time for Caprimulgidae. Lesser Nighthawks were seen and Band-tailed Nighthawk were heard but our very best views were of feeding Pauraque and White-tailed Nightjars. These had different feeding styles: Pauraques sit in the open on the ground, looking (and perhaps, listening) for passing insect prey, and fly straight up to capture it; whereas, the White-tailed Nightjar hawks for insects, slowly flying low over open ground much like a Harrier or Short-eared Owl, settling down for a while and then repeating the exercise. As dawn approached, we heard a Collared Forest-Falcon, a species I have yet to see, Little Chachalacas and, around the ranch buildings, a Double-striped Thick-Knee. Pale-vented Pigeon, Eared Dove and Common Ground-Doves were seen and a Ruddy Pigeon was heard. Red-bellied Macaws, Brown-throated Parakeets and pairs of Yellow-crowned Parrots dispersed from roosts. In the brushy grassland between the airstrip and the river forest we saw a White-tailed Goldenthrout, a Glittering-throated Emerald and a Lesser Seed-Finch and heard a Laughing Falcon. Davis called in three Plain-crested Elaenias, a species characteristic of Curatella grassland and edge areas composed of grass and chest-high shrubs interspersed with thickets of small trees and vines. Botanically, this transition area is a more complex area than the typical savanna brushland. In the riparian forest canopy several Cayenne Jays hopped about. A familiar Barn Swallow flew by.

TO ANNAI A pleasant breakfast was followed by our departure for Annai in Dianne's Land Rover packed to the gills with luggage, tire and seven occupants, we four plus Dianne, Stephen and Cecil. The road to Annai passes east of the GAC airstrip along the side of semi-permanent sloughs. At the first slough was a bonanza! Two dark wading birds with legs placed well forward were probing the marshy grasses, the **Sharp-tailed Ibis** which I had missed at Towa Towan in April. Here we saw the first of many Cocoi Herons, twenty Great Egrets, thirty Snowy Egrets, four Little Blue Herons, thirty Wood Storks, six Wattled Jacanas and a Jabiru. Also present were Vermilion Flycatchers, Red-breasted Blackbirds, White-headed Marsh-Tyrants, the only American Kestrel seen on this trip, two Ospreys and a White-tailed Hawk. Along the road we flushed Eared and Common Ground-Dove and later near Annai, we taped a Plain-breasted Ground-Dove into view.

The ride to Annai was, to say the least, brutal. For much of the way the road follows the northern edge of the river plain just above the maximum flood level skirting the edges of hills. While generally pot-holed and rutted, it offers no challenge to a Land Rover. However, because this particular vehicle lacked canopy supports it was impossible to ride standing. On such a road at the speeds favored by Cecil each jar was transmitted with the utmost directness to the seated passengers. Moreover, even when Cecil approached a pothole he couldn't slow down since, like all of the Land Rover's I've ridden on the savanna, it had no brakes! We all agreed that this trip was the low point of the expedition. We did list six Lesser Yellow-headed Vultures on the trip. Doubtless their anticipation was a reflection of our discomfort.

At Annai the road skirts around the eminence on which Annai Village stands but we detoured to the village nevertheless to receive any messages from Duane's company. There being none, we continued toward the airstrip and Rock View. Rock View Eco-Tourism Resort is a pleasant two-story mortared lodge surrounded by a number of very well-appointed brick-walled cabins. Considering its location Rock View is really quite elegant. The host Colin Edwards was no stranger to me since I had heard him on the radio frequently both this trip and last. There are "computer junkies" and, in the outback, "radio

junkies" and Colin sits firmly with the latter. As before, this trip was organized and competently led by Duane DeFreitas the manager of Dadanawa Ranch. The fishing party that Duane had invited to go with us was international in character. Mike Wilson, Duane's brother-in law from Barbados was, perhaps, the most dedicated (fanatic) fisherman of the lot. In addition there were Mike Lee (Venezuela and Toronto) and his son, Troi Lee-Lawford (London), a computer enthusiast (is prodigy or geek appropriate?), and Roger Stanley (Toronto) with whom Mike Lee works. Mike Lee describes himself as a computer systems theoretician, not a hardware or software technician but someone who figures out how to get the hard and soft stuff to do what he wants it to do. Roger is a high-flying businessman who's cleaning up in Toronto and clearly was having the time of his life in Guyana. Ashley Holland, who works for Dianne at Karanambu, played a dual role as fisherman and river-guide. Ashley, whom we first met in April, is quiet, shy, competent and very much at home in the rivers. Introductions were over cold beer at the Rock View pub. As always there was the standard amount of going back and forth, finding this or that and trading this for that. Finally we drove to Kwatamang Landing (N 3° 55.057' W 59° 06.029') to meet the supporting staff. Chief among these was Oscar Dookie ("Dookie") an all-around right-hand at Dadanawa whom I had not met the last trip. Tommy Kenyon, a skilled woodsman and sometime bridgebuilder, was the birder's guide throughout. Tommy has a farm in the Kusad Mountains to the southwest of Dadanawa and has traveled and lived in Canada. Leland, inexplicably called "Crotchman", and Alwin were general hands who filled out the list of our company. On hand to see us off was an old friend, Carl Fredericks, our driver, guide and companion on the Kuyuwini trip. At Kwatamang Landing the flotilla consisted of three river boats (20-footers, flat-bottomed, square-sterned and sharp-bowed), a 15-ft Mirrocraft, and an inflatable. These were powered by three outboards (two reliable, one variable) and the plan was for two motorized boats each to tow another, while the third carried the birders and, theoretically, traveled unimpeded.

ON THE RUPUNUNI. We were hardly at the Kwatamang Landing before we saw our first new bird, a **Large-billed Tern**, a first for me. In the trees at Kwatamang we also found a Hooded Tanager. Early in the scorching hot afternoon we snacked and then launched down-stream on the Rupununi. The river at this season is *cafe au lait*, about 200 ft wide, and running about 3-4 mph. As it turned out, one of the outboards had a defect that caused it to cut out after a few miles of running. It could be started again after some time, but on the Rupununi it was unreliable, so on several stretches of the run we towed the Mirrocraft. There's something about the Rupununi, Dookie's motor doesn't like! The typical river birds are: Green Ibises, Anhingas, Cocoli, Capped and Striated Herons, Jabiru, Osprey, Bat Falcons, Southern and Pied Lapwings, Spotted Sandpipers, Green, Ringed and Amazon Kingfishers, White-banded and Southern Rough-winged Swallows and Red-capped Cardinals. Near Annai the river is broad, shallow and braided by large sandbars which required considerable maneuvering and infrequent wading. The relatively low gently sloping banks are lined with riparian forest interrupted by open savanna or by entering watercourses. Our objective on this afternoon was to camp about eight miles down the river. On the way we passed a small stream coming in from the right. On its bar fed a Solitary Sandpiper and a mystery sandpiper. Could it be a Baird's which would be a new species for the Guyana list or something else? A close approach did not answer the question until it flushed and proved to be a **White-rumped Sandpiper**. Over the river we counted twenty **Short-tailed Swifts** and a single Fork-tailed Palm-Swift. A Black-throated Mango, the first of three, captured insects in flight over the river and a Black-eared Fairy was also identified. Among the new birds added were Cream-colored and Lineated Woodpeckers, in addition to Striped Woodcreeper and Pale-breasted Spinetail. A singing Cocoa Thrush was one of only two heard on the trip of this unseen species.

The Rupununi River is home to Black Caiman (*Melanosuchus niger*) and in the course of our run to the first camp we encountered several very large individuals. One, which was hauled out on a sand-bar, I estimated to be more than fourteen feet long. This individual was resting broad-side to us and only its head and body was visible, the tail, equal in length to the body, being curved behind it. As it turned to enter the water its immensity became apparent. This crocodylian has been reported to reach a length of 19 feet. Regardless of size they do not permit a close approach. There are many anecdotes in the older amazonian literature (for instance; both T. Roosevelt and H.W. Bates) of unwary humans being attacked and even killed by this largest of the caiman. Black Caiman are a dark gray color with four or five eight-inch wide vertical black bands extending down their flanks. In most of its range the Black Caiman is now in danger of extirpation as a consequence of its preference for easily accessible water such as large rivers or oxbows, because it defers procreation until it reaches the extraordinary length of 12 feet, and because its leather is prized. The fishing party did manage to capture a twelve-inch hatchling now in Duane's reptile park. Certainly, the Rupununi and Rewa Rivers constitute an important refugia for this endangered species.

CAMP # 1 was at N 3° 52.610' W 58° 59.874' on a shelf fifteen feet high on the left bank of the river. While the crew cleared places for hammocks and started supper, we birders with Duane and Mike Wilson as guides drifted down-stream a mile or less seeing Pauriques, a Short-tailed Nighthawk and Lesser Nighthawks, and hearing a Gray Potoo. Otherwise, it was a quiet, lazy, evening drift. In contrast, the return required considerably more effort since darkness made detection of sandbars and obstructions difficult. We were aground as much as afloat. Travel at the end of the dry season during falling river levels raised the possibility that we might conclude the trip with muscle power in place of motors. Considering Dookie's motor this was a real probability. This was one of only two nights during which we failed to sit together for the birdlist.

I must have assimilated some of the art of hammocking on my last trip for I slept well. Up at 5:30 a.m. on November 13, we commenced birding in a high, liana-draped forest immediately behind the campsite with Tommy Kenyon as our guide. The shore here is composed of dunes covered by large trees interspersed with lower shrubby depressions and wet swamps closer

to the river. We glimpsed a trogon, either Violaceous or White-tailed, our first Forest Elaenia and a Red-eyed Vireo. A number of the antbirds seen elsewhere on the trip were present here including, Black-crested Antshrike, Streaked and White-flanked Antwrens, Black-chinned Antbird and an audible White-browed Antbird. By 7:30 A.M. we were back at the campsite for breakfast. In the nearby trees were several interesting bird species: a **Black-poll Warbler** (fresh from Aziscoos?) actively fed in the same tree as did a more elusive Yellow-breasted Flycatcher. Over the river the Black-throated Mango displayed repeatedly and in the woods we found a male **White-chinned Sapphire**. We launched at 8:30 A.M. with the plan of stopping for lunch in the vicinity of Bat Creek (about 18 miles from Annai) and then continuing on to the Rewa River where we anticipated camping. The Rupununi here meanders through flat savanna, with steep, tree-lined banks on the eroding side of the river and shallower, sloping, jungle-grown banks on the depositing side of the river. Our course was usually close along the steep banks on the "working" side of the river. The first avian surprise of the trip was the discovery of abundant **Drab Water-Tyrants**. This bird is known to Guyana but its ecological niche is sufficiently specialized that Davis had not encountered it in his previous visits to Guyana. These small, active, accurately named, gray-brown flycatchers stay close to the 20-30 foot cliff-like clay banks of the river and seem to favor those banks overhung with root mats. Their wheezy, drawn-in call was first detected by Davis the day before and became familiar to us all by the end of this day when we'd seen and heard twenty-one. Most were paired and usually both members of the pair would escort the boat for 100-150 yards along one bank (I presume to the end of their territory). In doing so they would fly a few feet above the water three or four boat-lengths ahead of the boat, perch on a low branch often over the water and repeat their escort when the boat approached. At the end of their territories, they would abandon us by flying up toward the overhang and perching. Only once did I spot an individual on the shallow side of the river. In addition to the river avifauna already seen on the trip we saw the following new species: Rufescent Tiger-Heron, King Vultures, Black Caracara, **Sunbittern**, **Yellow-billed Tern**, Plumbeous Pigeon, Orange-winged and Red-Fan Parrots, Squirrel Cuckoo and Band-rumped Swifts. Two aracari were glimpsed, either Green or Black-necked. The high banks and large tree trunks overhanging the river were the roosting spots for groups of small, very dark bats, usually a dozen or so per roost. We regularly flushed them when the boat came too close to a trunk or passed under it.

We stopped for lunch close to Bat Creek near a large inlet on the left bank and, while two boats fished, we birded in the forest. The terrain at this site was similar to that of the morning site although the forest was more open. There was very little bird activity at this hour. Davis played a mobbing tape which brought in the usual cast of characters and one unexpected one, a nondescript robin-sized gray bird which flew in to sit quietly on a close branch. It was my first sighting of a **Screaming Piha** although I had heard its piercing unmistakable call many times before and looked for it in vain. Its call is considered by Haverschmidt and Mees to be the "most characteristic sound of the forest." The truly remarkable aspect of this sighting was that Steve Mirick saw the Screaming Piha before ever having heard its call! At this place we also heard and summoned in by tape a male **White-winged Becard**.

Our trip down the river was marked by Black Caiman as large as those we'd seen yesterday. They were especially common at the deep pools where the river makes right angle turns. Amerindian fisherman or their dugout canoes also occurred at these spots suggesting that fish were the common attraction. Several turtles were spotted but none close enough to make an identification, and at least one giant otter was seen. On the occasional mid-river sandbars sat Southern and Pied Lapwings and Black Skimmers and almost certainly some of the latter two species were nesting judging from their crouched posture and refusal to abandon their position as we passed. Five Black Caracaras were counted. Generally, the birders' boat led the flotilla although we paused from time to time to check on the progress of the others. Our last of these stops was at a dried streambed a few miles upstream of Rewa Village. Here we had very good views of a number of antwrens and antbirds although nothing new apart from our first **Pale-tipped Tyrannulets** which we saw well.

ON THE REWA. CAMP # 2. (N. 3° 52.146' W 58° 46.406') Our travel speed was good and around 3:30 p.m. we approached Rewa Village which sits 40-50 feet high on the right bank of the Rupununi just upstream from the mouth of the Rewa. Navigation here is slowed by a series of rocky fingers that extend from the right bank into the river. This rock seems to be a uniform uncompressed lava, ash or sediment pocked with frequent cavities and forms the foundation on which Rewa Village rests. In our haste to reach a suitable campsite, we don't stop but passed the village with a few salutes to the several dozen people gathered there. The Rewa River is instantly gorgeous. The water is seemingly cooler and, as advertised, obviously clearer than the Rupununi. The forest begins to take on great height and an unbroken aspect distinct from the savanna riparian corridor. Traveling southward we navigated a small rocky bar a half mile up the Rewa and continued another mile and at 4:50 P.M. set up a camp on the steep bank on the left side of the river. Tommy attacked the underbrush with his cutlass and we threw his cuttings over the bank. In an extremely short time hammocks were hung, Dookie, Stephen, Crotchman and Duane had a kitchen operating, fish were frying on the griddle, libations were poured and I was already hooked on bummed cigarettes. The speed with which this crew arranged a campsite that met our every need was incredible and made our every stop an anticipated treat. I think that both Jennifer and Steve as well as Roger and Troi were impressed; the others, Davis, Mike Wilson and Mike Lee were blasé having been through this drill before. With night quickly upon us we did not bird, but our fishermen began hauling in a variety of fish. During evenings on the Rewa we occasionally heard an explosive, extremely loud, splash. This is one of the methods that black caiman employ to fish. I'm told that the caiman lies still in the shallows and when a foraging fish nudges its side it whips its tail around while turning its head to catch the fish in its open jaws. Touching the side of the small caiman elicited the reflex.

Long before distinguishable dawn light on November 14, the roars of Red Howler Monkeys echoed first from one quarter, then another. Each troupe would chorus for several minutes or so until a descending series of barks from the alpha male silenced them. Then another group would take up the refrain. This went on until it seemed that we were surrounded on all sides by monkey hordes. During the trip we also heard Black Spider Monkeys and on three occasions saw and heard Squirrel Monkeys in trees along the river. Birding started at 5:00 A.M. and continued until 8:00 A.M. in the woods behind the campsite seeing Reddish and Long-tailed Hermits and **Black Nunbirds**. A Yellow-throated Woodpecker was called in and a Yellow-tufted Woodpecker was heard. A **Gray Antbird** and a pair of **Warbling Antbirds** were seen. As we walked along we found a pair of **Wing-banded Antbirds** rummaging among shrub roots. These small, short-tailed, "rail-like" antbirds make themselves known by their active tossing of leaves as they forage nearly buried in the duff. Antshrikes found today were: Saturnine and Cinereous Antshrikes and a second record for Guyana of the Spot-winged Antshrike which we had been the first to see on the Kuyuwini River in April. A female **Pompadour Cotinga** was a novel addition to our birdlist at this camp, as was a **Yellow-crowned Elaenia** called into a thicket overhanging a swampy pool. A distant Channel-billed Toucan was spotted flying across the river and two Green Aracaris were seen perched in a high tree across the river.

Today's run up the river against the current was more leisurely and more interesting. The river had its share of high banks and, here too, the Drab Water-Tyrant was an invariable constant. As we passed close to a steep bank where several trees had fallen into the river, three young giant otters and at least two adults darted out of one log jam and into another with much chattering. Steve took a splendid picture of the young. They were part of a large family, composed of the parent and at least three other adult "aunties." Several of the adults took to the water, protesting to lure us away, first close, then up the side of the shore and onto the bank. The young skittered back and forth into cover and out but went still when joined by an adult under a pile of logs on the bank. Various counts placed the family at eight or nine. All this we watched from a mere boat-length.

Where tributaries entered there were often significant sand dunes. The high dunes at one of these points showed tracks of large turtles that had come ashore to nest and the tracks and drying racks of visiting fishermen. At the cross-over points where the river changes directions, wide, shallow, sandy flats presented navigational challenges while giving splendid views of the larger fish, among them were stingrays resting on sand in the smooth clear water. The largest of them may have been 18 inches across. Often it was not until the shadow of the boat passed over the ray that it raced off with considerable commotion. These rays have a strong spine near the tip of their tails and when stepped on will whip the tail toward the offending leg. While the ray is not poisonous, the wound is reported to be very painful and has a high probability of becoming infected. When pulling the boat over shallows going upstream, Tommy and Duane splashed water ahead of themselves to alert and scare off the rays. Other big fish seen in the shallows or in pools at their edges were lukunani, a cichlid known to fisherman as "peacock bass", and arawana. Occasionally, small fish, frightened, became airborne, one such left over our boat at face level. At the end of one day a five-inch flatfish was found to have flipped itself into one of the boats.

Birds newly seen on this passage up river were: **Gray-rumped Swifts**, two Greater Yellow-headed Vultures, Golden-winged and **Painted Parakeets**, a pair of **Red and green Macaws** and a small band of Red-throated Caracaras. Two pairs of **Crimson-crested Woodpeckers**, heard often before, were finally seen and a Lineated Woodcreeper was heard. The most common raptor along the river was the Bat Falcon. Many were paired. At one stop Davis recorded a particularly vocal falcon which was nearly drowned out by the enthusiastic jubilation of those fishing in the lagging boats. Next most common were Great Black-Hawks and **Roadside Hawks**. All of these raptors are edge specialists. The Bat Falcon specializes in chasing down bats, a task which may be easier in the open vistas of the riverbed than over the forest. Both Collared Forest Falcon and Laughing Falcon were heard but not seen. Ospreys, winter visitors from North America (all of which had left New England by mid-October) are commonly seen, often carrying fish, along the river.

Along a wide stretch of the river we spotted five Muscovy Ducks in a small lagoon on the shoreward side of a large sandbar. Duane motored over to the far shore, while Tommy, thinking of fresh meat, hefted the single-shot 12-bore shotgun and waded up to his armpits across the river. By staying below the sandbar, he remained out of sight of the birds until he was opposite where he had last seen them. However, wary and with good ears, they had moved away from that point so that when he arose to shoot, he flushed them at maximum range. They flew off, unscathed, to the relief of the more dedicated birders. As a sometime ducker, I was impressed with Tommy's stalk. The wild Muscovy is a goose-sized, deep-black duck with striking white wing coverts. As a domestic fowl it occurs in many plumage variations. It is a tropical american native whose name immortalizes a significant location error made by Linnaeus, who ascribed it, of course, to Moscow.

Butterflies in clouds fly along the river and alight on the emerging mud flats and sandy shores to feed on the salts of heron splats. Two similar types are usually present together; both have wing shapes like the common cabbage butterfly, but are nearly twice the size. The commoner one is bright yellow, the less common is lime-green. It is hard to ignore these colorful, numerous insects. Henry Walter Bates, probably one of the most skilled entomologists of his day to visit the Amazon, concluded that congregations of similarly colored "*Callidryas*" butterflies were composed exclusively of males. He also reports that at Ega he noticed eighty species of butterflies belonging to twenty-two different genera congregated at the water's edge and that "with very few exceptions, all the individuals of these various species...were of the male sex." Are the males seeking "salts" or other some component of bird scat of particular need for male butterflies? He comments that the females occur singly at the

forest borders where they lay their eggs on low-growing mimosas. Another insect oddity seen at the water's edge was a brilliantly stenciled day-flying moth (*Urania fulgens*). This is a striking creature, the body and wings jet black and with four or five narrow phosphorescent light-green stripes across the wings and along the fat moth body. Its beauty alone makes this a standout among insects, but its behavior and distribution is equally interesting. Although we only saw single specimens, it is reported to undertake extensive daytime migrations during which thousands may be seen flying along watercourses. Its distribution is in the new world tropics and in Madagascar and reflects the distribution of lianas and trees of the family *Omphalea* on which the larvae of this moth feeds exclusively. Interestingly, *Urania's* migrations have been proposed to be due to the avoidance of plant toxins developed by *Omphalea* as a consequence of *Urania* larvae feeding on the plants. It would be interesting to learn if 1) this is true and 2) if a tree has to be actively fed on to make the decision to produce toxin, or 3) whether a pheromone signal from a caterpillar-infested tree is sufficient to elicit toxin, as has been suggested for oak infestation by gypsy moth larvae. On a steep river bank near a butterfly-bejewelled sandbar, we lunched briefly and trekked a few yards into the brush to find a pair of diminutive **Ruddy-tailed Flycatchers** victualing in the top of a modest-sized palm.

CAMP #3 (N 3° 45.389' W. 58° 42.942') was among large buttressed trees on a shelf on the left bank of the river. Following a 7 hours run up the Rewa, a distance of perhaps twenty-five miles, we arrived at about 4:00 P.M. One of the boats skippered by Ashley and carrying fishermen had lagged considerably to fish and was nowhere in sight. After clearing the campsite we explored upriver for another mile. Beyond a rocky bar that spanned the river was a very attractive right-hand bend in the river with a quarter-mile long sandbar on the left. Clearly, this would be a most satisfactory fourth campsite. We drifted and paddled back counting bats and nightbirds and listening to night sounds. Eventually, the lagging boat showed up and the camp settled down. In the evening we heard a **Hardy's** aka **Amazonian Pygmy-Owl** across the river and managed to lure it into the woods near us. Although we did not see it, its call and response to the tape made a definite identification. Davis also identified a calling Tawny-bellied Screech Owl.

November 15 from 4:30 A.M. to 12:30 P.M. was spent working the woods behind camp three. This was an interesting walk among huge trees on the high bank and descending through varzea and lower trees to the edge of a swampy area. At dawn we heard a Variegated Tinamou, the only one recorded during this trip. We saw or heard eight different parrots, although only **Dusky Parrots** were new on this foray. A Fork-tailed Woodnymph was the only new hummer spotted. A Golden-collared Woodpecker and a pair of Red-necked Woodpeckers were seen as were our first Striped and Chestnut-rumped Woodcreepers. In a thicket one of the three species of large red-eyed antshrikes, a male Fasciated Antshrike was seen. Diving deep into a low gallery we followed a foraging party of antbirds, eventually intercepting it. This was a very productive and responsive group which contained Saturnine Antshrike, Cinereous Antshrike, Amazonian Antshrike, Mouse-colored Antshrike, in addition to White-flanked and Grey Antwrens and Black-chinned Antbirds. Among other birds seen were Wing-barred Piprites and **Double-banded Pygmy-Tyrant**. We first heard the Yellow-margined Flycatcher at this site and, although it was heard for the next four days, it was never spotted. The White-crowned Manakin was similarly heard in this area but eluded us through the trip. I was finally privileged to spot a cooperative **Pectoral Sparrow**, long overdue after my many attempts to view it at the Parabara Forest.

CAMP # 4 (N 3° 44.021' W 58° 43.320) In the early afternoon, we relocated to the fourth campsite, lunched and swam. This is a lovely, open campsite. The river is cool and refreshing when the sun is at its zenith and the broad beach, although scorching hot, is an interesting place to walk. Facing the river from the campsite the main current of the river flows from left to right into a large pool. Along the edge of this pool a strong eddy countercurrent flows upstream past our kitchen/sunning area. Fish are plentiful, as are caiman. It is a splendid spot from which to watch early morning parrot flights. The river is broader and slower upstream and at the top of the sandbar above the campsite many trees are lodged in midstream making it necessary for boaters to pick a careful course for a few hundred feet. This afternoon was the only time on this trip that rain threatened and a very brief shower mostly by-passed us. Our hammocks were hung from trees on a shelf of high ground above the beach. In anticipation of rain, a tarpaulin had been arranged so the hammocks were rapidly put under cover when it did rain. We birded from 3:15 to 5:00 P.M.. In the late afternoon we observed a party of four or five **Blue-throated Piping-Guan** in the trees behind the beach. After the standard amenities and a supper of fresh fish, tasso (dried jerked beef) rehydrated, rice and hot sauce, birdlisting and bed beckoned. At night a Hardy's Pygmy-Owl and a Spectacled Owl called.

We bathed cautiously at the edge of the pool in front of the camp. I don't recall anyone striking off across the pool for a real swim, but a limited dip and just sitting in the current was very refreshing. Certainly there was the ever present possibility of an assault by caiman or piranha. Piranha have a mixed reputation when it comes to attacking large animals. They are to be feared under some situations: their dentition is the equal of the Atlantic Bluefish and they can mount a ferocious feeding frenzy. Hans-Ulrich Bernard suggests that during the low water of the dry season, piranha that are cramped in limited space with reduced food resources are more prone to attacking atypical prey than during high water conditions. Fragments of food from the kitchen attracted a surprising quantity of fish of several varieties, including piranha, in among our feet. During the first evening at this camp, a little (4 foot) caiman came close inshore to investigate us, but subsequently they kept to the other side of the river. Are other aquatic animals a threat? Teddy Roosevelt relates that the piraiba, a large catfish in the Amazon watershed is feared because of its attacks on humans. The piraiba is reported to grow up to nine feet long. This is the country of the anaconda which we did not see.

Sunday, November 16. This morning we birded from 4:00 A.M. until 10:00 A.M. Proceeding along a trail that Tommy had begun yesterday afternoon, we worked inland toward the higher forest. The riverbank, including that on which we are camped, would be low islands or even flooded during the wet season. Surrounding these islands are the streams, channels, ponds, and lagoons that comprise the varzea proper. For the first few days we birded in this now-dry varzea gradually extending the trail until it climbed a hill that was probably never flooded and which had a distinctly different botanical character. Our hammocks were in an open gallery forest with low underbrush. On the inland side, a fringe of jungle separated the camp from a woodland composed of much higher trees buttressed with immense flanges. These are uniformly called "mora" trees by the natives. One type is, according to Bates, called *Mora excelsa*. But in this environment many of the largest species representing a variety of genera share this buttressed trait. Even with strong binoculars it is difficult for me to examine the leaves of these 100-120 ft giants and probably futile since convergent evolution has tended in many species toward a "standard" water-shedding leaf shape; a smooth-surfaced, medium-sized, lance-shaped leaf with drip tips.

Dawn birds heard were a Tawny-bellied Screech Owl and an Undulated Tinamou. Two raptors were also heard respectively in and over the forest, Lined Forest Falcon and Ornate Hawk-Eagle. **Mealy Parrots** were seen. One of the first species Davis called in was a pair of beautiful Rose-breasted Chats in tall vine tangles close by our bivouac area. Also seen was a splendid male Blue Dacnis and three Blue-gray Tanagers. Yellow-rumped Caciques, eight in all, were also seen this day. A Long-billed Starthroat and Black-banded and **Barred Woodcreepers** were found. Another of the red-eyed antshrikes, the Great Antshrike (both sexes) were seen well. A Rufous-bellied Antwren and a pair of **Ferruginous-backed Antbirds** were listed. Four Purple-throated Fruitcrows, two Capuchinbirds and a **Cinereous Mourner** were added to the list. Here we had the second Guyanan record of the **Rusty-breasted Nunlet**, the first being on the last trip to the Kuyuwini River. Two Thrush-like Antpittas and a Bright-rumped Attila were heard, but no others were heard or seen on this trip. For birding in thick or high forest, Davis's educated and accurate ear is an essential tool that I clearly lack. His familiarity with, and continued alertness to, the sounds around us coupled with his virtuosity with his tapes often produced birds that none of us even guessed were around.

We worked our way under a low gallery toward a dense, vine-faced thicket as Davis searched for a bird he'd heard here the day before. Here he discovered a family group of three **Euler's Flycatchers**. This bird shares the trait that marks a typical Empidonax, "specific characters so subtle that there is often more variation within a species than there is between any two species in the genus" (Kaufman). It looks like a typical Empidonax and was placed in that genus for almost one hundred years although now shares its own genus, Lathrotriccus, with the Gray-breasted Flycatcher and possibly one other. It is of special interest because this is the first record for Guyana, none exists from French Guiana, and only two have been recorded from Suriname in the past 74 years (Haverschmidt and Mees). None has been known to breed east of Venezuela in the coastal countries. The likelihood that we saw a family group implies they must be breeding in the Rewa Valley.

Later in the day we birded in the woods from 11:15 A.M. to 3:30 P.M. and on the beach from 4:00 P.M. to 5:15 P.M. At the bivouac Duane had a crew, consisting of Crotchman, Alwin and Tommy, setting up the frame for a shelter. Tommy saw a Blue-throated Piping-Guan in a tree overhead. Out came the 12-gauge and down came the guan to fill the pot for a later meal. The fishing party had left on Sunday morning for Fish Pond fifteen miles up the river taking a significant portion of our rum supply and at this stage any portion was significant!. After our usual high tea celebrated with rum and followed by supper, we broke out Jennifer's treasure, a bottle of 12 year-old single malt scotch. Good whiskey a long way from home develops an incredibly high vapor pressure. It evaporated nearly instantly. Thanks, Jennifer. Next time bring two !!

Monday, November 17. This morning, while Steve, Jennifer and I breakfasted, a pair of Scarlet Macaws flew down the river. Brilliantly lit by the bright, rising sun, they were a simply stunning sight. Yesterday Duane and Dookie had explored an upriver streambed and were impressed with tracks and general terrain. We agreed birding there might be a good idea so they ran the boat a mile more or less up the river to this narrow dry streambed which entered on the right-hand side. On the way a juvenile Rufescent Tiger-Heron was seen briefly and a Sunbittern was observed for many minutes in the open stalking insects on a sandbar. In a shoreside thicket along the sandbar a **Lemon-chested Greenlet** was heard and called in to be observed. In the wet season the stream flows out of a pond deep in the rain forest. In the dry season it gave us a highway into the midst of towering, massive trees on level, rather open ground. Almost at once we heard a new species of raptor, a **Lined Forest-Falcon**, which responded to tape by flying in and perching in view. A Barred Forest Falcon also called. Farther along the trail we heard another White-crowned Manakin which again was obdurately indifferent to tape. We found a White-tailed Trogon, several woodpeckers, two **Plain-brown Woodcreepers**, two Wedge-billed Woodcreepers and four species of woodcreeper that we had seen earlier: Chestnut-rumped, Striped, Straight-billed and Buff-throated. Climbing out of the streambed, which was about 12 feet lower than the forest floor, we oriented on a foraging brigade of antbirds and ovenbirds. The flock contained several species new to this trip among them: Olive-backed Foliage-gleaners, **Brown-bellied Antwrens** and **Long-winged Antwrens**. This was a productive area with more than 17 other species of antbirds! Davis identified the calls of a Short-tailed Pygmy-Tyrant and a Thrush-like Schiffornis and, as well, found a **Rufous-capped Antthrush**. Also new here was another vireo, the **Tawny-crowned Greenlet**.

The high point for me of this walk was certainly our stumbling on a family of **Yellow-billed Jacamars**. The birds responded to tape and gave close, clear views for several minutes. Judging from their behavior, they were a parent and

probably two young since one bird carried food to one of the others and two seemed to take cues from, and follow, the other bird. The Yellow-billed Jacamar is an exceptionally colorful and handsome representative of a rather gaudy genus. The jacamar tendency to remain still for long periods at fairly low heights while scanning their surroundings for large flying insects allows their beauty to be fully appreciated. The illustrations in books of this jacamar do not begin to capture its color. After a guessing game about which direction to go to find the streambed - I was turned about! - Tommy unerringly led us to it. At 12:25 P.M. we rendezvoused with the boat and headed back for camp. In the afternoon, Jennifer, Steve and Davis walked the trail behind the camp from 2:15 P.M. to 5:15 P.M. among the birds they saw was a Royal Flycatcher. I had been somewhat "peelly-wally" since the third camp and in a short time decided to drop out and rest. A walk along the beach revealed a fifteen-inch diameter, circular water-filled excavation surrounded by a raised wall of sand just at the water's edge. Floating in this protective harbor was a large cluster of frog eggs. In this manner the Gladiator (or Bombardier) Frog (*Hyla boans*) assures its tadpoles will not be consumed by fish before they can swim. The temperature of the sand everywhere but near the water's edge is so incredibly hot during the day that predation from the land is unlikely. I'm told that after the eggs develop to the tadpole stage the frog returns at night to break down the wall, dig a canal to the river and, thus, release them. There are risks in this sort of parental care. A fast drop in water level may cook the eggs or leave them high and dry, or a sudden flood may wash them into the river. Nevertheless, these risks are offset by the added protection that development to the swimming stage offers to the frog embryo before its exposure to the world of predators.

Near dusk the fishing party returned loaded with lukunani and piranha, a few arawana, some tweezer-jawed swordfish, a few spectacular saber-toothed baiara, tigerfish (a black-striped type of catfish), and a very dark mottled-brown 15-inch catfish. Alwin quickly cleaned them, salted the split fish and hung them on the drying racks. The party had arrived at Fish Pond on Sunday afternoon to find it virtually dry. They slept on a sandbar in the open sharing it with large caimans to whom "Roger-Roger" talked in his sleep all night. Perhaps this is like the protection from nightly raccoon raids that playing a radio in the garden affords. In any case, they survived. In the morning they started back. Several miles above our camp at a pool by a rocky rapids the party began seriously fishing. The fishing was fast and furious and the rods were passed around among the five fishermen so that everyone caught fish. As delicious as the fish were, I found there is indeed a limit to how many successive meals of fish I can truly enjoy. Davis, on the other hand, never tired of the menu.

We often encountered reptiles along the river. In addition to black caiman these included quite large lizards, called "salipenta" (a term said to describe the larger *Tupinambis* sp. lizards, but which seemed to be generally applied to all but the smaller lizards) and iquanas (*Iguana iguana*) which, surprised sunning on the bank, scrambled up the banks or dropped into the water. On this trip no serpents were seen. Sunning turtles, while the most regularly encountered reptiles, were rarely seen well because they dove into the water in advance of our approach. However, during the fishing expedition Ashley surprised a turtle in shallow water, managed to race it down and brought it back to camp for us to see before releasing it. This turtle had a high-domed shell about 14 inches long, and weighed possibly 6+ lbs. When released it scurried quickly toward the river and plowed through the shallows creating a strong wake. Duane would have liked it for his zoo but turtles are under assault in the South Rupununi and any adult that can escape to breed again constitutes a treasure. One of the turtles we failed to see was the giant arran turtle (*Podocnemis expansa*). On the return trip we briefly came ashore and Duane spotted a matamata (*Chelys fimbriata*) swimming under the boat. With great alacrity he leaped in and caught it. The matamata is an extraordinary example of camouflage, not simply in its red-brown color, but in form as well. The head is flattened to an edge in front, the eyes are tiny and obscure just below the front outer edges of the head and various knobs, fringes and projections (the fimbriation of its Latin name) give it the character of a decaying tree branch or root. The nose is at the tip of a narrow tube so that no part of the head is exposed to breathe. Beneath the mouth are a row of four projections that presumably serve to lure small fish. The heavy central scutes on the carapace each rise to a peak and the scutes around the circumference of the shell each end in a point. The overall impression is that of a fragment of rock resting on a branch. This individual had a partially amputated hind foot having successfully escaped an encounter with some predator.

This evening we had a hearty supper of scads of fish and a delicious taste of piping hot Piping- Guan complementing our rice and farine. The last squirreled-away bottle of rum was produced and instantly consumed. Speculation and theory of just how to have a new supply air-lifted to us was rife. The situation even made it into our radio transmissions so that all Guyana, and most of northern South America, was alerted to our embarrassing situation. Amidst loud recriminations about how the hell did Duane expect a mere nine bottles of rum to last a party of fifteen for nine days (hey mon, it ain't loaves and fishes!), we retired to do the birdlist. In the evening, a Spectacled Owl and a Hardy's Pygmy-Owl were heard again.

Tuesday, November 18. This morning, Davis arose early to record bird sounds and we joined him on the forest trail that Tommy Kenyon had been extending almost daily. Three walks were made today from 5:30 A.M. to 9 A.M., from 10 A.M. to 2 P. M., and from 3:45 P.M. to 5:00 P.M. In the dawn chorus a Spectacled Owl was heard. Accompanied by Roger Stanley, we moved quickly to extend the head of the trail into new territory. Two Euler's Flycatchers were in the thicket where we'd first found them. Farther on we encountered a pair of **Musician Wrens** foraging around stumps in a thicket. Davis called them in and one circled us occasionally singing its symphonic and flute-like notes (enigmatically characterized by Haverschmidt and Mees as "a bad omen for hunters") while magically staying out of sight in open forest floor. Eventually, its movements became so predictable that we all saw it well. A short distance away we encountered a male and a probable female **Dot-winged Antwren** among a group of fast-moving foragers. This is one of only a few Guyanan records of this antwren. The only Ash-winged

Antwren detected on this trip was heard here and our first Golden-spangled Piculets and a Long-tailed Hermit were spotted. A pair of Black-capped Becards were also recorded. Tommy pushed the trail up a hill that rose to *terre firma* considerably above the varzea. At one point, perhaps forty feet above the ground, we watched a pair of Golden-winged Parakeets excavating a hole in a large tertiary attached to a large mora. On this relatively steep hillside the forest was denser and more lush than that of the earlier part of the trail and quite humid and hot. Here and there the occasional rubber tree had been chevroned to collect the latex, balata. Unique roles still persist for natural rubber; no substitute has ever been found for its use as the inner windings of golf balls, and for specialized tires such as aircraft tires. Now the working of the rubber into figurines is a folk art among many Guyanan artisans. **Flame-crested**, Guira and **White-shouldered Tanagers** were seen for the first time, and we saw and taped our first seen Grayish Mourner and a **Black-tailed Trogon**. A Gray-fronted Dove was heard cooing. While we had several audibles on the trip, we had no visibles. While we were concentrating on tanagers, Tommy had cleared a path toward the summit of the hill and was out of sight 200 feet ahead when he spotted a **Spix's Guan** in a tree. He proceeded to "collect" the guan, informing us of his action by the shot and the corpse which we duly photographed. More fowl for the pot. About lunch time we scraped together a meal through the foresight of Tommy who had brought a bag of a really delicious local trailmix containing cashew nuts, farine and raw sugar all finely ground together, and Roger who had thought to bring a bag of roasted, sugared cashews and some very tasty and refreshing candied ginger.

We turned around and retraced our steps toward camp. High among the buttressed trees near camp a foraging flock of birds were spotted among them we finally saw two species that we had heard for several of the last few days, **Spot-tailed** and **Todd's Antwrens**. Jennifer chanced on a "salipenter" off the trail in these open woods. This fifteen-inch lizard was evenly gray-brown almost exactly the color of a liana stem. It had frozen, limbs spread, in prone position, on the forest floor looking for all the world exactly like a piece of branch. Its commitment to this position was such that it could be tilted almost to the point it would tip over without altering its stance. Its survival was entrusted to one of the basic tactics of biology and administration; when threatened, do absolutely nothing.

Lunch, following the usual practice, was on the beach preceded by a swim. Insects are only a slight problem but at high noon a typical, black musca-like fly is plentiful enough to verge on being a pest. Tommy and Dookie swat and grab them with quick hand motions and drop them on the ground. A much larger insect, a solitary ground hornet, darts in among our feet to pick them up and carry them off one at a time and, shortly, all the corpses are gone. These ground hornets nest in tunnels on a knoll on the beach. Hundreds fly actively for a few hours when the sun is at its zenith. Bates describes a hornet-like wasp *Monedula signata* engaged in a similar activity in the upper Amazon. A softball-sized marabunta nest covered with the small black wasps was hung in a thin copse on the summit of this knoll. Neither the ground wasp nor the marabunta caused us any problems on this trip. At this season in this location there were no mosquitoes, simply none at all. I have yet to meet the kaboura, a Simuliidae cousin of the northern blackfly with which it shares an equally intimidating reputation. During one walk on Tommy's trail as we climbed out of the varzea I found that a medium-sized tick was attaching itself to the skin web between my right thumb and index finger. That none of us had been parasitized before was probably because ticks do not survive the flooding of the varzea where we had done most of our birding and because the use of Permanone on our socks, shirts and pants protected us from those that did find us. I had not used DEET at all on this trip. At 3:45 P.M., Davis led another trip down the trail. I renege since it was too close to sundown and there are few things I like less than stumbling around in the dark. I stayed on the beach and saw the usual evening flight of six or eight **Giant Cowbirds** and a Red and green Macaw that had been calling in the high trees across the river pool. Steve also saw a **Lesser Swallow-tailed Swift** over the beach. In the evening Gray-winged Trumpeter called.

RETURNING TO ANNAI. Wednesday, November 19. Today we plan to depart. This was our last chance to bird in this marvelous woods and we could only bird from dawn until about 8:00 A.M. Our walk was quickly out to the end of the forest trail. Here we saw a Caica Parrot and, on the hillside above the varzea, we heard a male **Black-throated Trogon** which, in responding to its own voice, overshot us on several passes, but finally alighted for a good mutual view. We had now certainly reached a state of diminished returns in respect to new species at this site. Thus, while we saw many other birds, none was new. Nevertheless, our first Cinnamon Attila and Tiny Tyrant-Manakin were each heard here.

We breakfasted (yes, the tasty Spix's Guan was on the menu) then we made a swift run down the Rewa River overtaking an amerindian family poling a dugout and scow. The amerindian method of poling a dugout down the river is curious: the pole is planted on the bottom, pushed off, pulled out and rotated 180°, so that on the next set the other end is planted on the bottom. Seems to work for them but I suspect the technique would be rather uncomfortable in the icy waters of New Hampshire. They were transporting two halves of an arapaima. Not the largest, for 1000 pound fish have been caught, but this fish is so large that the fileted, salted and partially dried meat occupied most of the room in both the dugout and the scow. Duane stopped to purchase half of the arapaima filets which even partially dried still weighed 55 lbs. Everyone seem pleased with the purchase which cost Duane about \$5000.00 GD (ca. \$36.00 US). The huge, and now rare, arapaima is a delicacy that is the prized item in the Guyanan specialty, dried fish and bakes. Transported back to Dadanawa this would be a welcome addition to the ranch larder. The amerindians use both fishing lines and bow and arrow to capture fish. A typical river scene is an indian standing on a rock or a dugout kanou with a half-drawn six-foot long bow fitted with a fifty-inch long arrow. The arrow is a work of art made from a long, light cane and is fletched with two 4 inch segments of Curassow primary feathers selected from opposing wings to insure proper rotation. The attachment of fletch and point is careful, beautiful symmetrical threadwork which is strengthened by

a dark resin or glue. The fishing arrowheads are made of eighth-inch steel rod with two barbs at right angles: one an inch from the point, the other two inches from the point. It is an altogether lethal arrangement. Another type of arrow differs only in its point which is made of a light wood, lance-shaped, and six-inches in length. This is used for large terrestrial or arboreal game (tapir, sloth, monkey, agouti). The outfit is completed by a bow made of a single piece of dense bi-colored wood about 3/4 inch at its middle and tapered to about 3/8 inch at the tips. The concave (heart wood) side of the bow is dark, the convex (sap wood) side is light. The bow string is of symmetrically twisted plant fiber so perfectly even in form that one has to inspect it closely to believe the twine is not machine-made. There are other bows of shorter and lighter construction with correspondingly more delicate arrows which are used for hunting small birds, lizards and mammals. The thought, the artistry, the beauty, the technology inherent in the construction of these tools astounds me. As a sometime fly-tier, I can only admire the elegance of the feather and thread-work. The mastery of this living artist sings to me in much the same way as does that of the 12,000 year-old maker of the Clovis stone spear point I once found at Aziscoos.

Lunch was on a sandy bank next to a tributary in the vicinity of the large sandbars frequented by turtle egg collectors. Here, Steve joined the fishermen in hauling in lukunani and swordfish. In the shallows I found a fresh-water crab, in form like a typical grapsoid, brown and about three times the size of a fiddler crab. That this would be hundreds of miles from salt water surprises me. The only crab-like decapods I had encountered living their lives in fresh water were crayfish. The equatorial freshwater fauna is bewildering. Rays, crabs, flatfish, dolphins are all saltwater creatures that have adapted to it. Some of these are descendants of salt-water species that were trapped in a huge Amazonian Sea formed when the Andes rose and cut off all west-drainage of the continent during the mid-Cretaceous Period. Great time in a relatively unvarying climate and the filling of this sea with sediment and salt-diluting water favored selection for the critical water-salt balance adaptation. A colleague at the University of Sarajevo once pointed out to me an interesting parallel to this phenomenon among fish found in rivers of the Croatian coast. Some of these fresh-water fish are salt-water descendants of Mediterranean fish that took refuge in streams when the Meditterrean Sea was cut off from the ocean, dried and became too salty for even ocean fish to survive in.

Novel bird species first seen along the trip included Blue Ground-Dove and White-collared Swifts. High in a tree-top along the river a Black-tailed Tityra, which I didn't see well, was identified by several familiar with the bird. Considering the distance to go, we hurried down the river and by 3:00 p.m. made Rewa Village where we went ashore and met some of the villagers. This is a clean, small village with well-built permanent brick-walled, thatched houses bordered by a grove of large mango trees. The people were friendly, curious to know what we were doing, and informative about their village. Everywhere we go, Duane knows people, or knows people who know him, for instance, the amerindian family from whom he bought the fish had relatives that worked for Duane at one time or another. The Deputy Captain, Rudolf Edward, asked me to send a report of our trip. Since birding the area was our objective, I will send him our Rewa River bird list with a letter outlining our journey.

CAMP #5 (N 3° 52.357', W 58° 49.963') We continued up the Rupununi to our fifth campsite on a very large sandbar a mile or so above the Rewa River. This site was memorable for the planetary display that evening. On the equator, Mercury rises to its greatest height, maybe 18°, and there it shone brilliantly in the west, a treat to this northern city-dweller who had seen it only a few times before and always just dimly above the setting or rising sun. In a band across the sky followed red Mars, bright Venus, Jupiter whose four large moons were clear in Steve's Kowa telescope, ringed Saturn and, at our feet, the real glory of the heavens, Earth. The astronomical event of having all the major planets in sight at the same time is not common and even as astute an astronomer as Davis had not anticipated it. As it turns out, Uranus also was faintly visible had we but known where to look. One thing led to another and soon we were viewing galaxies, such as M31 the Great Andromeda Spiral Galaxy, with the telescope. Altogether it was an event enjoyed by all on a beautiful, warm, clear night as only the tropics can offer. In the dusk a dozen Band-tailed Nighthawks hawked above the river while bats swooped and dived from fifty feet to the water surface. Bats are ubiquitous in the forests and over the rivers. It is estimated that the order Chiroptera constitutes the greatest vertebrate mass in the Amazonas. Waking at dawn to see bats flitting over our hammocks was a frequent event. Our hammocks were set up on a rise above the shore where a dry streambed entered the river. The streambed was pocked with tapir, peccary and jaguar tracks and twice during the night large animals moved along it since, because of the cliff-like riverbank on that side of the river, it furnished the only access to the water for several miles. The first was a lone animal, the second was a small group that seemed to be walking among our hammocks. They were, hopefully, tapirs, not pumas or jaguars.

Thursday, November 20. Early last evening a Tawny-bellied Screech-Owl had been heard and just before dawn Davis lured the bird to the trees above our hammocks so we could all see it well. A call, that of either a Mottled or Black-banded Owl, was heard. This morning we walked up the dry creekbed where we found Finsch's Euphonia. Inland above the bank a thin forest of trees with heights around 15-20 ft extended over a relatively flat once-drowned area. In this inauspicious place, Davis conjured up one of the biggest surprise of the entire trip, a Saffron-crested Tyrant-Manakin. While this was not a new Guyanan record, Davis explained that it represents a significant extension of the range in this country of this species which had previously been known from "white sand highbush savanna in central and northern Guyana". While we breakfasted on the sandbar we were treated to a fly-by of at least 160 Scaled Pigeons. A Black-throated Mango and a White-necked Jacobin worked the trees along the river. A Yellow-crowned Tyrannulet, heard often before, was seen at last. About 9:30 A.M. we started up the river again. The weather was much warmer and traveling against the current was slow, and slowed further by Dookie's cantankerous outboard. On the river all the usual birds were seen and counted. To relieve monotony, I kept a close bird log and launched forth several tunes rattling about my head, most notably "Won't you be my Melon, Charley Baby?" It was a hot

day! We stopped after two hours and lunched from 11:30 A.M. until 1:00 P.M. Stephen and Ashley joined us for a brief foray into the woods behind the bank on which we lunched. At the base of a tree a ten-inch lizard worried a huge katydid for more than five minutes, alternatively bashing it against a trunk and chewing it until fleeing from us with the insect still unswallowed in its mouth. Only a few familiar birds including Roadside Hawk, Black-crested Antshrike, Black-chinned Antbird, Forest Elaenia, Striped Woodcreeper and a Helmeted Pygmy-Tyrant turned up. We continued up the river until about 3:30 P.M. and camped again on the left side of the river. It is a fact that without exception our camps were on the prevailing Guyanan "rules of the road" side of the river. The only stops we made in exception to this rule were two emergency stops when Dookie's motor failed. Most proper! This site was approximately a mile and a half shy of our first campsite on the river.

CAMP #6. (N 3° 51.643 W. 58° 56.169) The day had been hot and as I grabbed Steve Mirick's arm to help him ashore it was clear he was running a fever. When measured, it turned out to be close to 103° F. He was feeling unquestionably "peelily-wally". Opinion was mixed as to whether this was, as I thought, a result of a gastrointestinal infection complicated by incipient heatstroke or, as others cynically suggested, withdrawal symptoms. In any event the treatment was the same and rest, fluids, cool compresses, tylenol, a general antibiotic (floxin) and a night's sleep restored him to a similitude of normality. Jennifer had brought a number of enameled pins by Spear as gifts for the support staff. She proceeded to make her awards to the delight of the assembly. Soon all the worthies were appropriately pinned. Our indefatigables, Davis and Jennifer, walked in the woods, but I idled on the sandy bank smoking cigarettes under a large spreading tree, watched huge caiman in the pool, listened to the squirrel monkeys cracking nuts in trees on the far shore and speculated with Mike Lee on the barely imaginable world of today's biochemistry and biotechnology. As usual the fishing crew did their stuff. Both Mikes landed lukunani from the bank. After we had settled in, Duane took a boat-load on a fishing expedition into a small inlet just below the camp. He jumped and shot a Muscovy Duck. With Steve "hors de combat", Davis, Jennifer and I did the bird-list and turned in early disturbed hardly at all by the excitement of a chase by the staff and fishing crew after a boat which, poorly secured, had floated off down the river. As the my fishing buddy, Joe Uttaro, would have put it, "Poco chimo, poco marinari" (Little rope, little fisherman!).

Friday, November 21. The dawn chorus included Undulated Tinamou, Rufescent Tiger-Heron, Spectacled Owl and Tawny-bellied Screech-Owl. A tour of the open varzea behind the campsite and toward the small inlet produced good looks at three Cream-colored Woodpeckers, our second Saffron-crested Tyrant-Manakin, a Yellow-headed Caracara, and Brown-throated Parakeets. Southern Beardless Tyrannulet, Straight-billed Woodcreeper and Cinnamon Attila called, but were not seen. This was the last day on the river and we departed camp at 8:00 A.M. for Annai. We had a fair stretch to go against the current. We were now running through the formidable heat of the open savanna. I found myself wetting my hat every half-hour and singing monotonously. Davis asked me (and then answered) what had Melon Charley said to his daughter when she announced she was going to run off and get married? "You cantaloupe!" So our brains went. The heat was sufficient to diminish or call into question our birding judgement to the point that the ever-present Bat Falcon began to assume the form of the Orange-breasted Falcon. We had such a perfect view of the bird in question perched thirty feet above our heads and subsequently flying (a locomotion encouraged by the shot charge that Tommy put into the base of the branch on which it perched), that nothing short of collecting it (we declined Tommy's offer) could finalize a diagnosis. The result of this transmogrification is that I now despair of ever recognizing an Orange-breasted Falcon, even if one falls out of the sky into my lap. We stopped briefly at a landing across the river from an indian farm to lunch on a splendid repast, curry of Muscovy Duck. The sand was blisteringly hot so even those who were nearly always barefoot raced to the cool woods. A swim in the water was a welcome relief. Dookie entertained the party by climbing trees to collect orchids in search of a suitable homecoming gift for his bride, Tammy.

AT ROCKVIEW. In short order we were off again and arrived at Kwatamang Landing at 3:15 p.m. to be met there by Sandy, Carl, even the long absent Pip, fresh back from the Queen's bar (who said he studied for the bar and how much does that take?) and assorted other children, friends and relatives. Instantly, the long drought was ended by Sandy who, responding to her husband's lack of detail, had the foresight to bring with her a sufficiency of rum and a couple of coolers of Polar beer. The party went on for an hour and probably all night with much talk and hilarity. Happily, the threatened ox-cart ride was withdrawn and Carl chauffeured us by Land Rover to Rock View where a long-dreamed of shower, partial shave and brief collapse were enjoyed. Colin Edwards hosted his traditional relaxing pre-dinner social hour with many of the guests at the lodge. Among them were two attractive young women: Susan Alsop, the Assistant Manager at the Cara Lodge, and Vivian, a physician and jogger. Also present was Neil Pryor, an executive with the Guyanan Telephone Co., another jogger. After supper we had an early turn-in. I'd asked Sandy to bring me an amerindian bow and fishing arrows and Carl gave me this nearly six foot long package which ultimately was shepherded to Portsmouth.

Saturday, November 21. We walked around Rock View from 5:30 A.M. to 6:30 A.M.. The aforementioned joggers, the world's full of them, flashed by as we found our first Double-striped Thick-knees. Both Crested and Yellow-headed Caracara were seen. Columbidae were Common Ground-Doves, Eared Doves and Pale-vented Pigeons, the Psittacidae were Brown-throated Parakeets, Yellow-crowned Parrots and Red-shouldered Macaws. Since we had all but exhausted the possibilities of the savanna avifauna by this time, we saw nothing else that we had not seen before. Yesterday's birdlist was done this morning. Following a delicious breakfast which included, but was not limited to, porridge, eggs, fruit, rolls, toast with mango jam, tapioca pudding, and coffee (Good Show, Colin!) we retired to the courtyard to join Duane, Sandy, Dookie and Tammy, Carl, Ashley, Pip, the Mike's, the Steve's, Roger and Troi for photos and a farewell champagne toast, then on to the

pub for the airline weigh-in. On schedule at 8:12 A.M., the GAC Twin Otter set down at the Annai Strip, heartfelt farewells were made, which included Dookie being capped with Steve's NH Audubon cap, and we were off at 8:23 A.M..

GEORGETOWN. Sixty-eight minutes later we landed at Cheddi Jagan Airport. We were required to pass customs. Because of their potential for drug traffic even domestic flights nearing the Brazilian border are treated as if from Brazil. The process was lubricated with Louis's efficient help and we were then driven to the Wilderness Explorers Office in Georgetown spotting on the way one new species, a Zone-tailed Hawk. In Georgetown we drove by Stabroek Market to the House Proud gift shop where I was able to buy a very enlightening book, "Amerindian Testimonies", a compilation by Amerindians of their life and experiences, and an attractive wooden bowl carved out of the beautifully colored native wood called purpleheart. In telescope view from the Pegasus Hotel rooftop were about thirty Scarlet Ibis on the far shore of the Demarara River. A hot afternoon was spent at the National Zoo where we met most of the fishing party. Our attempt to increase the size of our table at the very well-booked Cara Lodge to include the fishing party unfortunately came to nought so we dined without them. This zoo has a small but attractive collection. It was made even more so by the enthusiasm and friendliness of the zoo attendants. The larger birds were especially well represented. Among the raptors were all the commoner hawks including several specimens of the truly immense Harpy Eagle. Parrots seem to take captivity well. Almost all the species we worked so hard to see in the wild could be seen at close quarters. Hybrids of large macaws (Red and green x Blue and yellow) whose colors could not to be seen anywhere else were striking as were the handsome Red-Fan Parrots seen at arms length. In the lagoon are large, very tame manatees, expecting to be fed. They approach anyone who stands on the shore and wait patiently see what is thrown or handed to them. This part of the Botanical Garden is a site where Gray Kingbirds occur commonly and we saw three today.

The beach in front of the seawall is composed of eroded mounds of mud deposited by the river interspersed with sandy sections and tide pools. Herons worked these mud bars searching for small crabs and we observed the Tri-colored Herons stalking technique in detail. In a slow-motion process, not unlike the Sunbittern's tactic, the heron slowly and deliberately approaches the crab while steadily moving its head in a back and forth manner. By the time the heron is within range the crab has accommodated to its presence and movements and ignores it. The heron simply plucks it up on the next forward movement of its head. While on the seawall we witnessed an unusual inter-species event. A Ringed Kingfisher, not a common sight on the beachfront, flew out over the mudflats and was immediately harassed by a pair of Bat Falcons that had been perched on top of a large tree. The attack drove the kingfisher down onto the beach. The attack was continued when it tried to take-off. Eventually, the excited Bat Falcons broke off the attack and returned to the tree allowing the thoroughly harassed kingfisher to fly inland toward one of the nearby canals.

RETURN TO NEW HAMPSHIRE. Sunday, November 22. One bright spot in the evening was the news that our flight out of Georgetown would not be at the usual time, requiring as it does a 1:00 A.M. departure from the hotel. An 11:00 A.M. departure allowed us to bird for a few hours prior to riding out to Timehri. The dawn patrol along the seawall produced one new trip record, a Yellow-crowned Night-Heron and, of course, most of the typical shore-side birds. The remainder of the trip out to Cheddi Jagan Airport and back to JFK was a carbon copy of the last trip except for the more civilized departure time from the Pegasus, 7:15 A.M. for an 11:00 A.M. flight. Arrival in JFK and clearing customs was normal. Jennifer whose connections were destroyed by our delayed departure, did have to scramble to find a new way to the West Coast. Nevertheless, even she managed to get there by late evening and home by the next morning. The November weather was typical, i.e., marginal, but our delayed shuttle flight to Boston still met the penultimate C&J bus to Portsmouth. The shock of arriving in 20°F Portsmouth from 90°F Georgetown never fails to amaze.