Panama Birds & Mammals | Trip Report February 9 – 17, 2019 | Written by Robert Gallardo



With Guide Robert Gallardo, and participants Mike, Cindy, Sandy, Pat, Lanny, Sue, Lois, and Andy.









The Isthmus of Panama owes much of its extensive biodiversity to its proximity to South America, having been formed nearly three million years ago, through volcanic activity and erosion. This land bridge literally "opened the door" for a large array of organisms to begin to migrate northward from the continent to the south. Due to prevailing trends in land use practices caused by man, some species continue to slowly expand their ranges northward from Colombia. The country's current protected areas system, along with watershed protection during the occupation era, has afforded it an ample quantity of forest cover to harbor its diverse flora and fauna.

Drawing off of the diverse array of bird and mammal species, nearly 1,000 and 255 respectively, Naturalist Journeys continues to offer a tour that highlights two of the three eco-lodges run by the Canopy Family. The Canopy Tower itself is located within Soberania N.P. literally just a stone's throw away from the Canal, while the Canopy Lodge is located at a cool highland site, west of Panama City. This years' tour included nine clients, many being retired biologists, and Robert Gallardo was brought down from Honduras as a host guide. It would end up being a very memorable trip with some incredible highlights and discoveries that would include nearly 270 species of birds and 19 mammals.

Sunday, February 9

Part of the group had arrived a day early in Panama, and by the first morning Mike, Cindy, Sandy, Pat, Lanny, Sue, and I were ready to get going. We did a tad bit of bird watching at the hotel as we waited for the driver and found Orange-chinned Parakeet, Yellow-bellied Elaenia and Tropical Kingbird.

Our driver showed up and we departed for the historic part of Panama City where there were some tidal flats. The tide was low and many of the birds were a ways off, but we got to see a variety through the scope. There were White Ibis, Whimbrel, yellowlegs and a fair number of the elegant Southern Lapwing. On the grassy lawn was a pair of the handsome Saffron Finch. After a short visit to an artisan center,









we headed out toward the nearby foothills to our first destination: The Canopy Tower.

Upon arrival we were met by the staff and assigned our rooms. While getting a tour of the facility we noticed that someone was stringing out a "treat" for some local visitors. A small troop of Geoffroy's Tamarins knew that a couple of ripe bananas were on their way and we got close looks at this cute mammal.

After lunch, we took a short stroll down the paved road. The bird activity was slow at first, so we focused some attention on learning some plant families and some butterfly hostplant ecology, as a female Julia Longwing laid eggs on a passionvine. A bit down the road, however, some activity was spotted at eye level inside the forest. A fruiting melastome tree was attracting some Red-capped Manakins and Fulvous-vented Euphonias. A male Dusky Antbird also made a brief appearance nearby. On our way back up the hill, the same melastome was attracting some new visitors. A Shining Honeycreeper and Green Honeycreeper came in, as well as several Golden-hooded and Plain-colored Tanager. It was a great way to start the trip.

By the time we returned to the Tower Betsy, Lois and Andy had showed up and our group was now complete. We spent the remainder of the day atop the Tower with its birds-eye view. We all got acquainted and saw a few other birds, such as Short-tailed Swift, Short-tailed Hawk, Red-lored Parrot and Tropical Gnatcatcher. Before dinner, we met with Alexis, who would be our staff guide for all our outings while at the Tower. We had a delicious meal and called it a day.

Monday, February 10

By 6:30 a.m., we were all atop the tower having coffee and starting to look for wildlife. Mantled Howler monkeys were already roaring nearby and we saw them through the scope. The choir of bird song started to fill the air, and soon we saw Keel-billed Toucan, the otherwise secretive Green Shrike-Vireo, Scaled Pigeon, and Tropical Gnatcatcher. Many other species were just heard only, but we would catch up to some of them later on.

After breakfast, Alexis and Igua, a staff guide in training, took us down the entrance road for what would turn out to be an excellent morning. Bird activity picked up and we found a perched White-vented Plumeleteer, and soon a pair of the Black-crowned Antshrike. A few "flashier" species included a male Slaty-tailed Trogon, as well as Broad-billed and Rufous Motmots. A flowering tree had attracted a Blue Dacnis as well as Green and Shining Honeycreepers. A bird that called from deep within the forest caught Alexis' attention and eventually came into view. It was the sharp-looking Cinnamon Woodpecker and we got scope views of it. Earlier from the tower we heard some sweet whistled phrases that filled the air that belonged to the Slate-colored Grosbeak. We caught up to one that landed right in front of us. We also took notice of something green that was flitting around and eventually alighted on a nearby leaf. It was a Northern Green Longwing butterfly, which typically inhabits the rainforest canopy.

Although we saw a lot of nice birds, the mammals also made a great showing. A couple of Central American Agoutis were seen as well as a Brown-throated Three-toed Sloth that was high in the subcanopy. Alexis and Igua knew where to find a more secretive mammal. Inside a tree hollow tucked behind some palms was a Western Night Monkey; a typically secretive nocturnal mammal that has its northern range limit in Panama. It heard us and poked its head out to investigate. We got to see it in the scope through windows in the foliage, and from a vantage point inside the forest, Robert was able to get a couple good shots. We also learned that another nocturnal denizen was sharing the same hollow; a giant Rufous Tree Rat. It would mark an end to a wonderful morning.





At the bottom of the hill we were picked up at the Tower's BirdMobile and returned for a delicious lunch. Right before the afternoon outing, Robert spotted a flash outside the dining room window on the third floor. It turned out to be a freshly hatched Mexican Arcas hairstreak. Betsy, Cindy and Sandy were there to enjoy it.

At 3:30 p.m., we hit the road for an afternoon of wildlife viewing at a different destination. At the bottom of the hill, we discovered that a large tree had fallen across the road. Some quick machete work and we were on our way again. We reached the Ammo Dump Ponds and didn't have to go far at all to see a kaleidoscope of birds. Some of the highlights included clear views of Blue Dacnis, Crimsonbacked Tanagers, Yellow-headed Caracara, Scrub Greenlet, Black-striped Sparrow, Yellow-rumped Cacique, Yellow-



tailed Oriole, Red-legged Honeycreeper, and Greater Ani. There were also Green Iguana and a Spectacled Caiman sitting amidst the thick grass. The list of species was mind boggling. We departed this site and headed back to the Tower. Part way up the hill, Robert spotted something high up in a bare tree. We stopped and it ended up being another Three-toed Sloth, but we got much better views than the first one. What a great way to end the day's activities.

That evening as we were finishing our checklist, we all heard a 'thud' and suddenly saw Mike on the floor. Alexis was helping him up. He had not fallen on accident, but had a little bat in his hands. What happened? He saw something on the floor and caught it. So, our bat expert helped confirm that the bats that come into the dining room each evening were, in fact, Little Mastiff Bats. Our excitement for the day was now complete.

Tuesday, February 11

We had a very early breakfast and headed straight to this morning's destination; the world-famous Pipeline Road. En route, we spotted an interesting bird in the marsh at the Ammo Dump Ponds. It was an adult Rufescent Tiger-Heron. Toward the back side of the marsh, Betsy spotted a large heron with a black crown; it was the giant Cocoi Heron. Good spotting!

We reached Pipeline Road and started walking in. Right at the entrance gate was a concentration of mammals. The giant fig tree was full of Howler and White-faced Capuchin monkeys, so we enjoyed them for a while. Then a big group of White-nosed Coatis came sauntering by, which stopped to feed on the fallen figs that were dislodged by the monkeys. Then Alexis spotted a small bird high up in the subcanopy. It was a Pied Puffbird and we got scope views of it. Also in the same set of trees was another inconspicuous, yet large bird; a Great Potoo on a day roost. Indeed, it was an excellent start to the morning.

Two other groups of bird watchers were just ahead of us, but that didn't deter us from finding some great birds that were not detected by their guides. A couple Gartered Trogons made a showing, then suddenly a large bird flushed up from the ground on our left just inside the forest. At first, we thought it was a tinamou, but we were wrong. It was a Slaty-backed Forest-Falcon that was apparently hunting. It flew a short distance so we got to see it again. We were incredibly lucky to have seen this otherwise secretive bird that often inhabits the canopy. Another Three-toed Sloth was also spotted nearby; this one clutching a young. A King Vulture was also seen as it soared high above. Alexis heard and found yet another great bird that was tucked high and away; a Blackbreasted Puffbird. A gorgeous Black-striped Woodcreeper was also seen, as well as two adult Bright-rumped Attilas feeding two young. What a great line-up of birds, but we weren't finished yet. Toward the end of the walk, we heard the distinctive call of the Streak-chested Antpitta. Eventually it came in and then flew across the road. It slowly hopped parallel to us, and we all got scope (and camera screen) views of this plump, little forest denizen. On our way back to the gate, a male Blue-crowned Manakin appeared as well as a perched Double—toothed Kite, low on a Cecropia tree. We loaded up the BirdMobile and found a few Crimson-crested Woodpeckers just as we were leaving. It was an end to an incredible morning.

We had lunch at the Tower and took a well-deserved siesta. At 3:30 p.m., we dropped down the hill to the Summit Gardens area for some afternoon wildlife viewing. However, that wouldn't last too long. Just as the bird watching was starting to pick up, Alexis received a phone call. A couple of the lodge staff who were doing some roadwork said they were looking at a Harpy Eagle.











'Yeah right,' some of us may have thought, but it was worth investigating. We loaded up the truck and headed back to the lodge at full speed. We got about half-way up the

hill, and there, atop a huge leafless tree, was the mighty Harpy Eagle in all its splendor. For many, the sighting of the world's most powerful bird of prey is the "dream bird." It often symbolizes an ecosystem with large tracts of intact forest and an ample supply of sloths, monkeys and other pretty items. We soon realized it had a blue leg band and a small transmitter protruding from its back. We would later find out that it was a 12-year old female, that had been shot and rescued in the Darien region, then rehabilitated, and later released back into the wild. Alexis said it showed up a couple of years ago so it's not just every day that one will appear. We all soaked in the moment until she decided to fly away. It was already getting too late to return to Summit Garden, so we went back to the lodge. A couple bends from where we were was the Harpy, this time perched lower in a balsa tree, and we got even better views. As we approached the gate, someone spotted a Nine-banded Armadillo probing in the leaf litter. What an incredible morning and afternoon we had, but still had a bit more to come before finalizing the day.

We did our checklist and had dinner, then headed down the road in the BirdMobile. We wanted to see if we could find some nocturnal creatures. Close to the lodge gate was a Great Tinamou, perched in plain sight. A bit further, we spotted a Night Monkey and it turned out to be the same individual we saw on its day roost; that being evident from the botfly on its upper breast. The sightings slowed down from there until we had a Hoffman's Two-toed Sloth, also in plain sight. Near there was a flowering balsa tree which is known to attract mammals. Sure enough, there were two Kinkajous present with one affording us a great view. On the return drive we had one more Kinkajou and a sleeping Two-toed Sloth. And to top off this truly spectacular day was an adorable Central American Woolly Opossum, low on a palm. For many of us this would be a day long remembered.







Wednesday, February 12

Today we had a pre-dawn breakfast, then headed toward the humid Caribbean side of the country. We reached the Gatun Locks on the Canal and were able to cross over without having to wait for the passing of large cargo ships. We eventually reached some nice rainforest, and did some roadside bird watching. The trees were filled with Yellow-throated Toucans and Mealy Parrots. There were also Spot-crowned Barbets and the handsome Purple-throated Fruitcrows, plus a perched Rufous-breasted Hermit. A Gray-headed Tanager also appeared and perched in the open right in front of us. More capuchin monkeys were also seen nearby. At the end of the walk, we got a brief view of the lovely Bay Wren, whose lovely repertoire of songs and other sounds echoed from within the forest. We back tracked a bit and had a mid-morning snack. A gorgeous Golden-collared Manakin was nearby and we got scope views of it. Further down the highway, we walked down a secluded dirt road. A Blackbreasted Puffbird made a nice showing, as well as the rare Jazzy Leafwing butterfly. We then made our way to the Fort Sherman area where we had a nice picnic lunch. A curious coati came in to sample some pieces of fruit that we had discarded.

At the end of the road, we pulled into an area to see an old Spanish fort that once stood as a sentinel over the mouth of the Chagres River. This was a key area where the Spanish once moved large quantities of gold that was being pilfered in the New World. As the day drew to an end, we decided to walk a side road through a beautiful forest. It was hauntingly quiet, so we continued on and made one last stop for the day at a black mangrove forest. Robert spotted an American Pygmy Kingfisher deep inside the mangroves, and just as a scope was getting

set up, a male appeared not ten feet in front of us. To top off the day, a pair of the sleek Mangrove Cuckoo were spotted. We loaded up the van and made the drive back to the lodge to end another great day.

Thursday, February 13

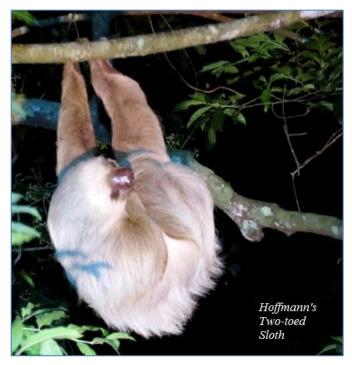
After yesterday's long day, we were ready for an easier day. After breakfast, we headed down the hill and didn't get far before running into a Great Tinamou that slid away into the dark forest interior. Down on the main road, Robert spotted a White-necked Puffbird on an exposed branch. No sooner than we got going, we spotted an adult Gray-headed Kite, perched low right next to the road. We all got great photos of this otherwise shy bird. Within a minute or so Sandy spotted a perched Black Hawk-Eagle and it took off when it saw us slowing down. It was an excellent start for today's outing.

We reached the boat dock and boarded a covered boat. During the first part of our boat ride, we saw a variety of birds including moorhen, herons, swallows, anhinga, and jacanas. In a backwater area, a baby crocodile sunned itself on a piece of floating bamboo. Nearby was a young caiman sunning on a



muddy shoreline. Giant Green Iguanas were seemingly everywhere. We eventually entered the main canal which was the shipping channel. Huge cargo ships of all sorts came and went. We made our way to some quiet backwaters and began to see Snail Kites which were seemingly everywhere. More howlers and capuchins were seen at various spots along our route. Some capuchins that were feeding on coral tree nectar had orangish faces covered with pollen. At a quieter part of the marsh we found a female Ring-necked Duck and right behind it was







a strange, little dark object amidst some floating vegetation. It was a female Masked Duck of all things and we were quite fortunate to have found this timid, stiff-tailed duck.

We made our way back to the dock, then to the lodge in time for lunch, and an end to a wonderful morning. In the afternoon, we loaded up the BirdMobile and went to the nearby Rainforest Discovery Center. Upon arrival, we found a flowering balsa tree that had attracted a group of lovely Yellow-tailed Oriole, Masked Tityras, and some Black-cheeked Woodpeckers. A bit down the trail was a patch of lekking Long-billed Hermits, and we got scope views of them. We reached the tower and made our way to the top for a breathtaking view over the canopy. Another flowering balsa in the distance attracted an array of tanagers, orioles, honeycreepers, dacnis, hummingbirds and parakeets. A Gray-headed Kite came into view and perched for awhile. Numerous Scaled Pigeons came and went, and a mixed flock of White-shouldered Tanagers, Lesser Greenlet and Tropical Gnatcatchers hung around. A female and immature male Blue Cotinga also appeared, but never a full-on blue adult. Different parrots also came by, including the adorable Brown-hooded.

It was getting late, so we descended the tower and had dinner that was brought in from the lodge. It was then time to continue looking for more nocturnal mammals. At the gate on the same flowering balsa tree, there were two Allen's Olingos. It was a great start. A bit further were two Kinkajous, and in a field was a Jungle Rabbit. Down by the railroad tracks we found a canid hunting in the grass. At first, we thought it was a stray dog, then maybe some strange color form of a Gray Fox. Robert had recalled that there was something else in the region. In a newer edition of F. Reid's mammals' book, is a Crab-eating Fox which has been spreading its range northward, following deforestation trends. The last confirmed sighting was about fifty miles to the east of where we were. The illustration and photos from internet, matched perfectly with what we saw that night. It would end up being the rarest mammal we would see during the entire trip. Andy was able to acquire a small series of excellent photographs. As we continued, we came across a tree full of sleeping Red-lored Parrots, who suddenly lifted off into the darkness. We then came across a Common Pauraque in a grassy clearing, and a lone Lesser Capybara in a muddy hollow. As we were approaching the lodge, we found yet another Two-toed Sloth and Three-toed Sloth. Right next to one of the sloths was a Rothschild's Porcupine, and it scurried away quickly before anyone could get a photo. All in all, it was another excellent day filled with birds and mammals.

Friday, February 14

We had an early breakfast this morning, then headed out to the Metropolitan Park for more wildlife viewing.

There were more White-tipped Doves, White-shouldered Tanagers, and a lone Plain Xenops. Nearby was a roosting Common Potoo, right above the trail, and we got scope views. Another White-necked Puffbird was spotted, as well as a pair of Dusky-capped Flycatchers. We also saw our first Whooping Motmot; formerly called the Blue-crowned. In the ravine below, there were numerous Lance-tailed Manakins that were calling, and a young male made its way up to the road. And after numerous days of just hearing the Cocoa Woodcreeper, we finally got to see one.

We then continued on to Punta Culebra where Smithsonian has a little reserve and nature center. There were many sloths on the grounds itself, and we also found Mangrove (Yellow) Warbler, and a Northern Scrub Flycatcher. There was also a nice frog exhibit, with interpretive material and living specimens. We returned to the lodge for lunch, and in the afternoon went to the Canal museum located at the Miraflores Locks. We watched as huge ships came and went through the locks. For its time, it was an incredible engineering feat. We also watched a movie of a stylized version about the history of the canal. The interpretive exhibits, however, showed a much more realistic rendition of the canal-making era. It was a nice way to end another day.

Saturday, February 15

Our final morning in the canal area was spent at the Summit Gardens area; the place we visited the other day before getting "rerouted" to see the Harpy Eagle. The site was literally hopping with birds such as orioles, woodpeckers, tityras, flycatchers, and tanagers. Some notable species included Black-throated Mango, Whooping Motmot, Black-tailed Trogon, and Pale-eyed Pygmy-Tyrant. We inspected some small lagoons at the end of the road, and had some good sightings there as well, including three species of kingfishers: Ringed, Green, and American Pygmy. A couple of Boat-billed Herons were spotted on a day roost, and a Great Black Hawk made a brief appearance. A Gray-cowled Wood-Rail was also seen skulking along the far side of one lagoon. It was a great way to end our visit in the Canopy Tower area.

We returned to the lodge, packed up, and said our farewell 'good-byes' to Alexis and other staff. We then made our way westward along the Pacific coast, and headed inland to Valle, where the Canopy Lodge was located.

Upon arriving we were met by Elias; one of their staff guides who were to take us around for the next day and a half. After lunch and getting our rooms we began our brief, but rewarding experience to this lovely part of Panama. Their feeding station was busy with a plethora of birds including Gray-headed Chachalaca, the striking





Flame-rumped Tanager, Thick-billed Euphonia, and a Gray-cowled Wood-Rail that would collect fallen scraps. A

couple of the spectacular Golden-hooded Tanagers appeared to be making a nest in a nearby bromeliad. A nearby flowering bush attracted the Snowy-bellied Hummingbird, and just below the flowers, a pair of the Common Tody-Flycatcher were beginning to make their hanging nest.

We walked along a nearby trail that followed the river and came across a small flock of Dusky-faced Tanagers and a very cooperative Buff-rumped Warbler. The highlight at that spot, however, was the sighting of the lovely Sunbittern at the waters' edge. This unique Neotropical bird is always a joy to see. We continued our foray walking up the road, and came across a Bay-headed Tanager that was feeding low on ripened wild figs. That is one spectacular bird! No sooner than we finished seeing the tanager, a Purple-crowned Fairy appeared as it fed on some bluish trumpet vines.



We reached the site where the Lodge ran a canopy zipline operation, but they also had a side trail for bird watching. Elias said he had a spot for some roosting Mottled Owls. Since we had gone "owlless" the entire trip, everyone was ready to see one. A bit further down the trail and there they were; two of them tucked away in a dark spot. We soon came across some army ants and the handsome Rufous Motmot was poised nicely for photos. Also present was a Barred Forest-Falcon which is typically a shy denizen of the forest subcanopy. Like many other bird species, it was hunting the arthropods that try to escape the ants. Elias told us that the ants were there yesterday as well and that there was not just one, but two Rufous-vented Ground-Cuckoos. This is one of the "Holy Grail" bird species in the Neotropics and is usually much more difficult to find than a Harpy Eagle. We searched for it a bit, but to no avail. We did, however, make sure to let the zipline staff know that if they saw it the following day to be sure to let us know.

We returned to the Lodge and had dinner, but our day wasn't over yet. We took a short night walk into the gardens. An olingo was quickly spotted high in a tree and it soon fled at lightning speed. Coming from a pond and outflow, came a variety of frog calls, and was well worth investigating. The loudest call came from the giant Smoky Jungle Frog, which if handled, exudes a milky substance. It took awhile to locate it from its hidden spot. Much more subtle cricket-like and 'chirping' sounds drew our attention to another spot. We found a small assortment of glass frogs and tree frogs. It was a great way to add a little more variety to the things we have seen. We wandered up the road a bit and found a Common Potoo perched atop a large snag then called it a night.

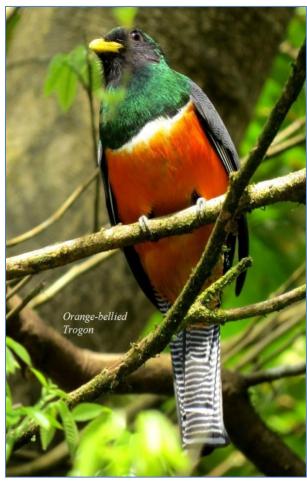
Sunday, February 16

We had an early breakfast and headed off for what would be a spectacular and memorable day. We drove up the mountain to a plateau area and stopped at different spots. A large patch of flowering trees attracted a few hummingbirds, including a Bronze-tailed Plumeleteer and Crowned Woodnymph. Elias spotted two Barred Hawks flying high up and a Plumbeous Kite made a brief appearance. We also ran into a large flock of birds that contained many of the handsome Tawny-crested Tanagers; the males of which are adorned with a golden Mohawk. Then Elias spotted a specialty; a Brown-billed Scythebill, and we got prolonged views of it. The tiniest member of the woodcreeper family, the Wedge-billed, also made a brief appearance. Across the road a female Spot-crowned Woodcreeper was spotted as well as a handsome Orange-bellied Trogon.

At another spot, we came across the handsome Silver-throated Tanager, Olive-striped Flycatcher, and the tiny Mistletoe Tyrannulet. Numerous times throughout the morning and afternoon, we observed the boldly patterned Black-chested Jay; the only jay species of the entire trip. And to add to the list of owls was a roosting pair of Tropical Screech-Owl right alongside the road.

The top of the mountain was packed with birds and our morning was about to end with a bang. We headed downhill back toward the lodge and stopped to inspect a blooming balsa tree. With a bit of patience, the bird we wanted to see appeared. It was the diminutive Rufous-crested Coquette and it had perched high above the road. Nonetheless, everyone got scope views of this ornately adorned bird. Another showy bird then appeared: the blue-throated form of the Northern Emerald Toucanet.

Continuing down the hill we bumped into a couple guys on a motorcycle. They had just left the zipline area with good news: the ants were active and the two ground-cuckoos were there. Most of us opted to delay our lunch a bit in order to get a chance to see this near-mythical bird. No sooner than we reached the first part of the trail did we see the signs of ants: jays, motmots and woodcreepers that were flying to and from. We paused and waited patiently, and if by some twist of fate there it was. Through the viney tangle, we were able to get scope views of this prized bird. One must realize that to see both the Harpy Eagle and the Rufous-vented Ground-Cuckoo in a weeks' time is quite the accomplishment.







Mostly everyone returned to the Lodge except Cindy, Betsy and me. The two cuckoos had run across the trail and scurried up the hillside, but we wanted to wait for them to return to the ants. We waited patiently and soon Cindy spotted one just uphill from where we were standing. We were able to snap off a few shots before it disappeared into the forest. Elias had come back so we returned to the Lodge with him.

We had some down time and in the late afternoon went out for our last excursion. We drove down the highway a bit to another canyon to look for another cool bird; the tiniest of the motmots: the Tody. We heard several pair, but most were elusive and stayed well hidden in the thick undergrowth. We were able to locate one through a small window and got quick scope views. We also found a Golden-collared Manakin, and a lone White-thighed Swallow. The soft, melodious chattering of a Yellow-backed Oriole was a nice way to end the outing.

We returned to the Lodge and wrapped up our trip list. We recorded nearly 270 bird species and 19 mammals. Favorite birds of the trip included: Rufous-crested Coquette (Sue, Pat), Rufous-vented Ground-Cuckoo (Betsy, Robert), Whooping Motmot (Betsy), Sunbittern (Sandy, Andy), Masked Duck (Sandy), Rufous Motmot (Lanny), Harpy Eagle (Lois, Mike, Robert). Favorite mammals of the trip included: Western Night Monkey (Cindy), Geoffroy's Tamarin (Andy), sloths (Lois, Mike, Betsy), White-faced Capuchin with pollen-covered face (Lanny), Mantled Howler (Sue), Central American Woolly Opossum (Pat), Crab-eating Fox (Sandy, Robert).

At dinner time, the owner of the three lodges had showed up and met the group. Raul Arias de Para was a visionary in his time when he began to establish Panama's finest eco-lodges. After dinner Robert gave a presentation on Neotropical Butterfly Diversity and Ecology to wrap up the night and an unforgettable trip.

Photo Credits: A special thank you to Robert Gallardo for providing the photos for the report.