

New Columnists for Watchbird Journal

by Dale Thompson, Editor-in-chief

The staff of the Watchbird is happy to introduce three new columnists and their respective columns in this edition of the Journal. They will be writing from their experiences and expertise in their own special fields of aviculture.

Glenn Mitchell will be writing on "Canaries" for both the beginner and the experienced aviculturist. He has been raising Canaries for many years and provides some practical information on breeding Canaries—from history, caging, diet and management.

Through his columns on "Indoor Aviary Design and Management," **Steve Hartman**, from Ohio, will be giving a real boost to aviculturists who, for many reasons, are using indoor aviaries. Cold weather and other indoor aviculturists stand to gain so much knowledge from this column. Hartman was a well received speaker at the 1996 AFA convention.

Fred and Lyrae Perry, long known for their *Psittacula* expertise, will be writing on all aspects of this very popular genus of birds. They will deal with the genetics and mutations of the Indian Ring-necked Parakeet and all the other species of *Psittacula*. They will cover identification, feeding, housing, breeding and other aspects of the aviculture of this very popular group of birds.

Many thanks to these experienced aviculturists for sharing their wisdom with our readers. Several additional writers are preparing material for upcoming series of columns that will appear in the next few issues of Watchbird. ➔

Manu National Park (Birds and Other Creatures)

by Rae V. Anderson
Sierra Madre, CA

Manu National Park (a few years back also declared a National Biosphere Reserve) is truly a world treasure. It is located less than 100 miles north of the extremely interesting city of Cuzco, the capitol of the ancient Inca empire.

The lowland area along the eastern edge of the Andes is the most biologically diverse that our planet contains. Two and one half acres of ground there may well contain over 200 species of trees alone.

Four Million Acres One Thousand Species of Birds

Manu National Park comprises approximately 4,000,000 acres. This makes it a little bit larger than the state of Connecticut. It is the only park in the world which contains more than 1,000 species of birds, 1,200 species of butterflies and 200 species of mammals.

It must be kept in mind that the cloud forest and lowland rain forest, unlike the Africa savannas where from a Range Rover you can observe huge herds of herbivorous mammals and big cats and other carnivores, the majority of rain forest birds prefer the high canopy 100 to 150 feet above the forest floor and the mammals and other bird species must be viewed at close range through dense and dark vegetation. On average only about 5% of the sun's light reaches the forest floor.

This obviously requires some spe-

cial thought as to how best to see the most. One successful technique in the lowland forest is to simply stand or sit still and quiet near a game trail and view the forest residents as they approach you. A better way is to find a high point from which you can overlook the surrounding forest canopy. Ideally, there will be one or more blooming or fruiting trees visible in the near vicinity. Such a site is tremendously rewarding particularly during the first two hours after dawn and the last two hours before dusk. Manu National Park has numerous such vantage points though not really convenient to the lodge. Mirador 1 and Mirador 2, as well as a small wooden observation platform at the top of a cliff about a mile from the Manu Lodge, are good spots. During the wet season the viewing platform at the Moriche palm grove is a good place to watch the Red-bellied and Blue and Gold Macaws feeding on the ripe palm fruits. This latter area is a swamp during the rainy season but that is when the palms are fruiting and the birds congregate.

Also well worth while are excursions on the oxbow lakes. The canoes, being quite silent and capable of slow movement, allow easy and clear view of the many Hoatzins, Red-capped Cardinals, various herons, egrets, spoonbills, jacanas, ducks and hummingbirds, as well as toucans, aracaries

and macaws as they fly over. From the canoes you may also see the highly endangered giant river otters, 70 pounds and six feet long, and if you are lucky a jaguar, tapir or giant anteater on a sand bar. The only mammals that appear in large groups are the Squirrel, Capuchin, Spider and Howler Monkeys. The other monkey species, Dusky Titi, Saddleback Tamarin, Emperor and Pigmy Marmosets are solitary or travel in small family groups.

The park has three distinct zones, each a unique ecosystem unto itself. The Puna Grassland extends from the snow line in the Andes down to 11,500 feet. The most unique and obvious bird in this zone is the huge and spectacular Andean Condor. There are also Mountain Caracaras and several species of hummingbirds. In all three zones the numerous hummingbirds proved very difficult and in most cases impossible for me to identify due to adverse lighting and in the cases of most females, their similar colors.

The mid-zone of the park is the Cloud forest. It's elevation extends from 11,500 to 4,000 feet. This is where the beautiful Crested and Golden-headed Quetzals and the Andean (Scarlet) Cock-of-the-rock are seen. In addition, I saw the Blue-crowned Trogon at 5,600 feet elevation, as well as flowerpiercers, hummingbirds and many, many beautiful tanagers including the Orange-eared.

The lowland forest (Rain forest) extends from 4,000 feet to the lowest elevations of the park, approximately 1,000 feet. Many accessible and popular locations in this zone have bird lists approaching 500 species. However, if you spent an entire season of concerted birding I think you would be lucky to record half that number.

In the cloud forest, and lowland rain forest in particular, what looks quite uniform to most of us is in fact a great variety of microhabitats. Each species of tree and patch of plants, heliconia grove, bamboo thicket, etc., hosts its own specific group of birds.

Manu National Park protects 11% of all bird species on our planet! This is 200 species more than occurs in all of the United States and Canada combined.

The average human population in

Manu including the two Machiguenga villages and the few scattered families of Machiguenga Indians together with the very few and reclusive Mashco-Piro and Yaminahua Indians (who try to avoid contact with anyone from the outside and are very rarely seen) is about 500. The Indian population is about 400 of that total.

For human use purposes, the park is divided into three different areas or zones. A narrow strip of land along the Alto Madre De Dios river is referred to as the Cultural Zone. This allows the few families who were living there before the establishment of the park to continue there. However no new or additional development is permitted.

The next is the Reserved Zone. Tourists are permitted in the Cultural and Reserved Zones. A maximum of 500 visitors per year are currently permitted in the Reserved Zone. The remaining 80% of the park is restricted to the few indigenous people and a very limited number of properly accredited scientists who are actively participating in legitimate research. There are two biological research stations in this zone, Cocha Cashu station and Machiguenga Ccollpa station.

The Easy Way

There are two ways to get into Manu. The easy way and the hard way. The easy way is a 45 minute flight from Cuzco to the Boca Manu airstrip. This is a dirt strip cleared of forest adjacent to the Madre De Dios river at its junction with the Manu river. Then by motorized canoe for the four to six hour trip up the Manu river to the Manu lodge.

The canoes, being quite silent and capable of slow movement, allow easy and clear view of the many Hoatzins, Red-capped Cardinals, herons, egrets, spoonbills, jacanas, ducks and hummingbirds as well as toucans, aracaris and macaws as they flew over.

The Hard Way

The hard way (but far more scenic and interesting) is two days by land vehicle from Cuzco over the two easternmost ridges of the Andes over 14,000 plus foot passes on the unpaved one-way road. Here 18,000 to 20,000 foot glaciated peaks about 12° from the equator are visible. This takes you past the Chulpas (pre Inca above ground burial structures), through occasional Inca villages, over the high Andean puna grassland and continuing down into the high elevation scrub

...we reached the cloud-forest home of the spectacular Andean Cock-of-the-rock.

cloud forest. Then continuing down as the height of the cloud forest canopy increases and the canyon walls become ever more vertical.

After a full bone jarring day of travel through coca fields and bamboo thickets we reach the cloud forest home of the spectacular Andean (Scarlet) Cock-of-the-rock. This is Peru's national bird.

This night's cloud forest camp at 5,600 feet consists of a covered platform with two-person mountaineering tents equipped with sleeping pads, set side by side. A few years ago Boris Gomez, the owner/operator, had begun construction of a more permanent type facility here but the Sandero Luminoso (Shining Path) guerrilla movement resulted in a near total cessation of tourism in Peru. As a result, construction ceased.

Now that the terrorist movement is no longer a great threat and tourism is rebounding, Mr. Gomez may again start to improve the camp. It is, however, very functional in its present form and is quite fun. The camp is located beside a fast moving mountain river in which I saw the attractive Torrent Ducks. The males with their black striped white heads and the females with underparts totally red. It is very fascinating to watch these birds, with what appears to be so little effort, very rapidly swim against the strongest and fastest currents from one rock to another.

Cock-of-the-rock Lek

A 15 minute walk down the road from the camp is a Cock-of-the-rock breeding lek. I could not understand what the Cock-of-the-rock males saw that made the lek different from the immediately adjacent forest area. I could not see more perching sites of the types the birds were using or significant difference in its degree of openness. Perhaps it is related to the available food sources? The males appear to exert so much energy in their displaying that the lek must be close to adequate food sources? Or perhaps the acoustics of this site are more favorable to the females in the area being made aware?

The differences are very subtle but quite important what ever they may be. It looks like there should be ample Cock-of-the-rock nesting sites on these steep canyon walls. The nest sites are on near vertical areas with rock overhangs that offer protection from the rain.

Males congregate at the lek for only about the first 1 1/2 to 2 hours after dawn and for about the same period before dusk. During these times there is calling between the males with some bowing and wing spreading. This, however, immediately changes to a frantic, raucous display the instant one of the somberly colored females enters the lek. In the birds which I observed the females appeared to watch the action for a few minutes and then simply fly away. This gave the impression of possibly simple curiosity on the part of the female or that she didn't think the males were trying hard enough.

The blind (hide) at this site is a small, about 8 X 8 ft. platform hanging on the very steep side of the heavily forested canyon wall. The thatch cover is about four feet above the platform. This requires that to observe and photograph the birds one must be sitting or kneeling. My old knees and back complained vigorously but I forced the issue in order to observe this wonderful display and hopefully get some decent photographs. The photography was, unfortunately, not very successful.

The problem of trying to hand hold a 400 mm lens while in an awkward and uncomfortable position in very low light resulted in all these photos being fuzzy. I did use one roll of ISO

800 film shot at 3200 in order to obtain faster shutter speeds. This might have worked but for the processing lab failing to follow my very explicit instructions that the processing for that roll be "pushed" +2. That failure resulted in woefully under exposed frames that could only be trashed (along with six additional rolls of film all incorrectly processed). A great disappointment! Just one of several.

During the first evening in the blind between seven and 10 males were in the lek. The next morning there were between 25 and 30 with one female. It is difficult if not impossible to get an exact count due to the foliage, because you can never see all of the actors at any one time.

Earlier in the afternoon and later in the morning, individuals were seen in the trees some distance from the lek.

The second long day was another bone-jarrer down to the end of the road arriving at the eight-family village of Atalaya on the Alto Madre De Dios river at late afternoon. We then crossed the 200 yard wide river by motorized canoe and were carried by ancient Land Rover to the beautiful Amazonia Lodge. This had in former times been a tea plantation but being at too low an elevation the experiment was a dismal failure. The current owners now maintain it as a tourist lodge which is needed for the overland trip to Manu. The rest of the plantation has now reverted to second growth forest.

It was at this location which I saw the first Hoatzins of the trip. There is a marshy area very close to the lodge and two pairs of Hoatzins were nesting there. Oropendolas, various tanagers, etc., were in view at any time I chose to look for them. (The noise of the oropendolas make their presence apparent even when you don't look.)

During the first evening in the blind, between seven and 10 males were in the lek. The next morning there were between 25 and 30 with one female.

Amazonia Lodge is a good place to see Military Macaws flying over. They prefer the slightly higher elevation.

Best Birding Location in the World

Amazonia Lodge is a good place to see Military Macaws flying over. They prefer the slightly higher elevation of the transitional zone between the Andean foothills and the Manu lowlands. Some people consider this zone (between 1,500 and 3,000 feet in Manu National Park) to be the single best birding location in the world. The next morning we are back at the river at dawn for the 12 hour (possibly less during the wet season) motorized canoe trip down the Alto Madre De Dios to its junction with the Manu River. It is interesting to note that this location is about 100 miles in a direct line from the Pacific Ocean to the west and this river system runs some 2,800 miles to the Atlantic. The elevation here is about 1,300 - 1,400 feet above sea level. This means that on average the river only drops about six inches per mile from here to the Atlantic.

Then it's up the Manu to the Manu lodge. On the way a brief stop is required at the Park guard station. Here there is a small but interesting exhibit about the park. All persons entering or leaving the park are required to register and record their passport number. Your Yellow Fever immunization may also be checked here before you are permitted to proceed.

Fireflies Glowing

It is dark before we arrive at the river access to the lodge. The lodge is about 1/4 mile from the river. This was an interesting 15 or 20 minute hike through the forest amid all the night chorus and the myriad of fireflies, particularly because some of the firefly species (the click beetles) glow continuously and all very brightly (mostly bright light green but an occasional orange).

Boris Gomez, the ecologist owner/operator, built the lodge completely of mahogany and Spanish cedar cut from trees that were downed

and beached (driftwood) on the Manu river by its annual floods thus avoiding the necessity of cutting living trees. The lodge is located on the bank of Cocha Juarez, an oxbow lake about 1.2 miles long and 600 feet wide.

At Manu lodge the wake up call each morning occurs about 15 minutes after dawn by the Red Howler Monkeys in the trees outside.

There is no swimming permitted in the cochas (lakes) because of the 15 foot Black Caimans (which I saw) and to the lesser risk of piraña. Both of these creatures inhabit the lakes and the rivers. I am told there are even larger caiman in the cochas than those that I observed.

Macaws and Toucans

Mirador 1 and Mirador 2 are small ridges about 300 feet above the surrounding lowlands. These provide a nice view over the forest canopy. They are, however, far enough from the lodge that in order to be there at the optimum birding time (first thing in the

morning and last thing in the afternoon) when the birds are most active, it necessitates an hour or so traveling through the forest in the dark (not a great idea without an experienced guide). From here I viewed Scarlet, Green-winged, Blue and gold, Red-bellied and Chestnut-fronted Macaws and various toucans flying by. I was told there are also Blue-headed macaws there but I did not see any of them. I also saw Piping and Spix's Guans and a spectacular adult Spangled Cotinga. On the trails I saw Razor-billed Curassows, Variegated and Little Tinamous (I think). The tinamous are very difficult for me to identify when I see them running through the vegetation on the dark forest floor. I did find light blue porcelain-like egg shell fragments that appeared to be remains of a recently hatched nest.

A large flock of parrotlets flies into a nearby tree. With my 8 power binoculars I am not able to locate even one of the birds, they are that well camouflaged.

Macaw Nesting Sites

A short distance from the lodge is a huge hardwood tree which I believe to be a *Leptocarpa* about 130 to 150 feet tall. About 75 to 100 feet up, just at the point of emergence of the big main branches is a Green-winged Macaw nest. Two adult birds were looking out of the opening at me. By the time I went back to get my camera and returned to the tree the birds were no longer visible. This was not nesting season for the Green-wings. They nest during the wet season when the largest numbers of trees are blooming and fruiting.

The dry season here is April through October. The wet season is November through March. In the dry season it usually rains a little bit during some part of most afternoons and usually lightly to torrentially for some portion of the night. During the wet season it rains all the time.

Satisfactory nest sites in the rain forest are at a premium and the Green-wings vigorously defend their chosen

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sites. It is believed that on average there may only be one to two satisfactory macaw nest sites per square mile of forest. The criteria seem to be: is it high enough, big enough, deep enough, clean enough and sufficiently sheltered from the rain. Because of this researchers have installed many artificial nests for the large macaws.

These man made nests are eight foot sections of 14 inch diameter PVC pipe. The pipe is first scorched and brushed which gives the exterior the appearance of natural tree trunk. There is an opening at the top for the birds and an access door at the bottom of each nest for purposes of inspection and monitoring. Since usually only one of the two chicks survives to fledge, the researchers generally remove the weakest chick for hand rearing. They have found that the hand raised chicks can be quite successfully reintroduced into the wild after weaning and that they successfully interact with the wild flocks. The Green-winged Macaws prefer nesting sites high in big hardwood trees.

The preferred nesting sites of the Blue and Gold Macaws are trunks of the *Iriartea ventricosa*, *I. deltoidea*, and *Mauritea flexuosa* Palms. These are tall, clean trunked palms which "belly-out" for about 10 or 15 feet at a point above the vertical center of the trees. These palms have extremely hard outer bark and tend to stand for several years after the tree is dead and even after the crown has been broken off. The birds chew an entrance hole (possibly after being started by a woodpecker) at the upper portion of the enlarged belly section and nest inside. If the crown has been broken from the tree they simply use the open top as their entrance.

Scarlet Macaws are more versatile and use both kinds of sites.

The artificial nests are being successfully used by both the Green-winged and Scarlets.

In Manu National Park there are six species of macaws and a total of 28 psittacine species. There are also 10 species of Ramphastids (family of toucans). In the Cloud forest and transitional zone of the park there is the Military Macaw plus six other psittacine species.

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Over 50 Species of Birds Observed

I did not see much wildlife of interest on the Alto Madre De Diós river probably due to the scattered habitation in the Cultural zone. The Manu and Madre De Diós rivers were, however, another story entirely. The most common birds on these latter two rivers were: Large-billed and Yellow-billed Terns, Black Skimmers, various gulls, grebes, cormorants, various herons (including Tiger Herons) and egrets, occasional Roseate Spoonbills, Horned Screemers and Jabiru Storks, singles and pairs of Orinocco Geese (these birds seem to be very territorial and I never saw more than a single or a pair on any half mile section of the river), Ringed, Rufus and Green, and Amazon Pigmy Kingfishers, several kite and caracara species, many flocks (20 to 50 birds) of nighthawks day roosting on the sand bars and driftwood on the bars.

I saw one adult King Vulture together with several Black Vultures feeding on a peccary carcass at the rivers edge. Of particular beauty were the frequent sightings of pairs of Scarlet Macaws in blooming *Erythrina* (Coral) trees by the river banks. Flame birds in flame trees!

At the edge of the cochas (lakes) and in the forest I saw, amongst others, Sunbitterns, chachalacas, trumpeters, Wattled Jacanas, wild Muscovy Ducks, various doves and pigeons, Blue-crowned Motmots, Swallow-winged Puffbirds, Spangled Cotinga, Vermilion Flycatchers, various swifts and swallows, toucans, toucanets and aracarís, many species of tanagers and mannikins, many flycatcher species, Red-capped Cardinals, many species of hummingbirds, etc. The list goes on and on.

On the way to the macaw clay lick my Machiguenga boatman, with

unaided eyes, spotted a Giant Anteater on a sand bar island at least a mile away—much before I could make out what it was with my 8X binoculars. Eyes like those of a hawk.

Clay Licks

The macaw clay licks are of particular interest. There are 18 known major licks in southeastern Peru and the native people in the area claim to know of about 15 additional. Such licks are known to occur along the lowland forest rivers from Ecuador to Bolivia.

I have not to date been able to find anything published which compares the mineral contents of the lick sites to each other or to the clay immediately adjacent to but outside the licks. Visually, it all looks like the same orange clay.

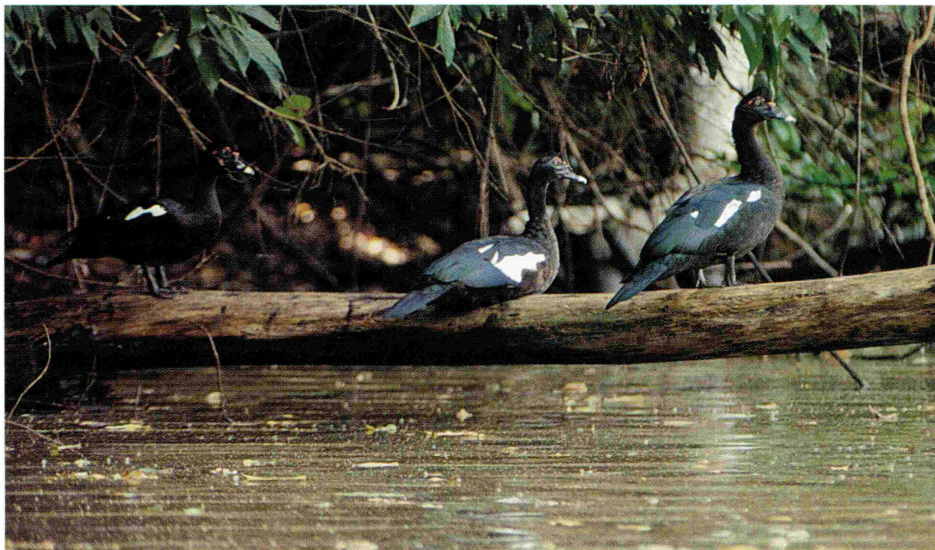
There is another lick further up the Manu river near the Machiguenga Ccollpa research station and a couple of them further south in the Rio Tambopata Reserve.

The lick which I visited is on the

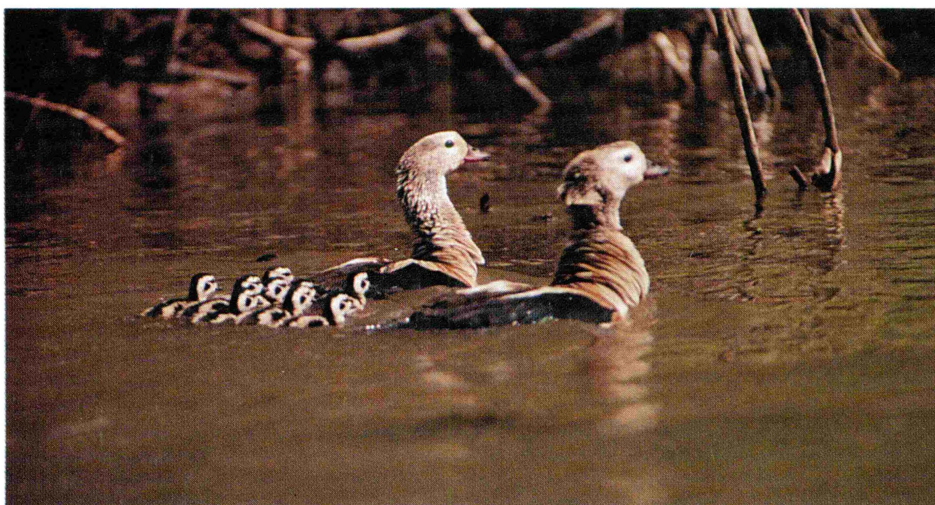
Shortly after dawn the first small parrots began to arrive

Madre De Diós river at Tambo Blanquillo. The lick proper is roughly 300 or so feet long and the bank is probably 25 feet high. The blind is a wooden platform constructed across two large canoes with a palm thatch shelter enclosing a wooden bench below a 12 inch slit in the thatch on the side facing the lick. It is anchored by a long line (on a reel) to a large downed (driftwood) tree in the river about 100 feet or more from the lick bank. The operator of the blind can, with the line and reel, slowly maneuver the blind to the most optimal location for viewing. We periodically watch a large caiman glide past the blind.

Shortly after dawn the first small parrots begin to arrive at the lick. They are predominantly Blue-headed Pionus (*Pionus menstruus*), a few Orange-cheeked or Barraband's (*Pionopsitta barrabandi*) and a few



Wild Muscovy Ducks on one of the cochas (oxbow lakes), Manu.



Orinoco Goose (*Neochen jubatus*) family with nine goslings on the Manu River.

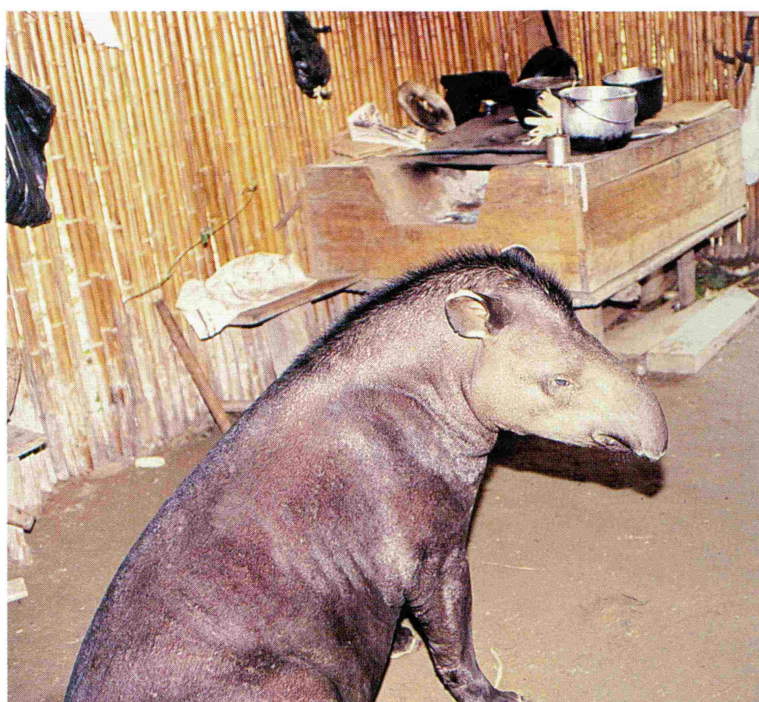
Mealy Amazon (*Amazona farinosa*). The Orange-cheeked or Barraband's are readily distinguishable by their black heads and the intense red "flash" which shows every time they open their wings.

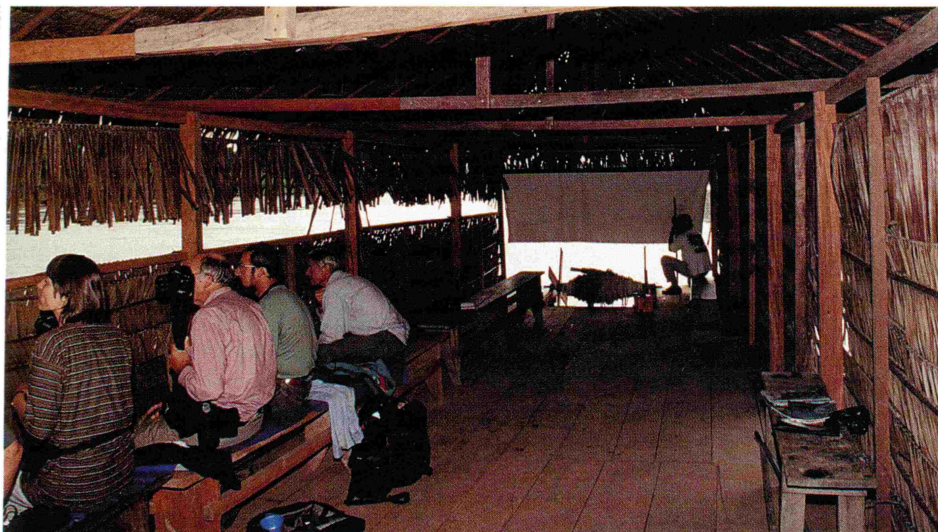
Periodically a hawk or eagle will fly over (or some other cause) startling the birds which erupt in chattering flight. After circling a few times they quickly return to the lick. The Green-winged Macaws follow into the high trees, squawking, preening and performing their acrobatics. They take their time. After an hour or so they very slowly work their way down and begin displacing the smaller parrots on the lick. It appears that not all of them can fit on the lick at the same time (there are definitely preferred spots) so they seem to rotate more or less in "shifts." As with the smaller parrots, an eagle flies over or something else startles them and they all erupt in a kaleidoscopic pyrotechnic-like display. They then return to the trees and again slowly work their way down to the clay bank. To be able to observe this very extraordinary event is certainly a lifetime memorable experience. By 9:30 - 10:00 A.M. the show is all over and the lick is vacant until the next morning.

There are at least three theories as to why these birds eat the clay (but why just this clay?).



Above. Cuy (guinea pigs) are a traditional Inca dish. They are raised on the kitchen floor - a standard practice. Right. A South American Tapir, hand raised but forest free in the kitchen of a Manu River family home. The guinea pigs ran under the stove when the tapir came in the kitchen.





The blind (hide) on the Madre De Diós River at the macaw clay lick.



Hoatzin



Green-winged Macaws (Ara chloroptera) displacing the smaller parrots on the clay lick.

First: It is known that the clay is high in salts and minerals and possibly the birds simply need these.

Second: The clay may simply act as an antacid and relieve or prevent indigestion.

Third and most popular and probable: It is known that many of the fruits and seeds, at the stage they are eaten by these birds, are toxic. They contain alkaloids, tannins, etc.. It is suspected that the clay may absorb (or adsorb) the toxins (act as a detoxicant). It has been established that the clay binds to the toxins and helps them pass through the bird's (and human's) body rather than being absorbed by the body tissues.

The lick activity appears to peak in August and September which is probably the driest part of the year. At this time the food choices are at their annual minimum. The birds may therefore be forced to eat less desirable and possibly more toxic items.

The return to Cuzco requires a boat ride of several hours to Boca Manu just below the junction of the Manu, Alto Madre De Diós and Madre De Diós rivers. The airstrip's boarding lounge is a raised wooden platform with a palm thatch roof and open on all sides. There are several long dry cane stalks with leaves in the rafters for the purpose of dissuading bats from using it as a roost. The edges of the dry cane leaves are saw toothed and the bats do not like their wings to be touched by them

The Boca Manu airstrip has a refuse pit (garbage, etc.) surrounded by a small fence. I was told that the day before I arrived there a Jaguar had gotten into the pit and was unable to get out. They had to remove a section of the fence and lower one end of a log into it so the cat could escape. I certainly would have loved to have been able to see and photograph that! As usual I am either a day late or a dollar short.

Manu is not an easily reachable destination nor is it for the luxury minded. It is, however, certainly a once in a lifetime experience.

Reference

Munn, C. A., 1994, WINGED RAINBOWS—MACAWS, National Geographic, Vol. 185, No. 1 (January) pp. 118 - 140. 

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