











Borneo's Rare Mammals

Destinations: Deramakot FR, Kinabatangan River, Tabin WS: Sabah, Borneo

Duration: 15 Days **Dates:** 8th September – 22nd September 2019

-  Having a great view of Otter Civet (the best Mike Gordon had ever had!)
-  Fantastic views of North Borneo Gibbons at eye level in Tabin around the cabins
-  Amazing Flat-headed Cat walking / hunting along the shore just inside the forest
-  Seeing 3 enormous Crocodiles, two of which must have been around 5m in length
-  Seeing 129 species of birds including a Blue-headed pitta & Argus pheasant
-  Enjoying the amazing expertise of Mike in Deramakot and his great spotlighting skills
-  A total of 79 species of mammals including the rare Otter Civet & Flat-headed Cat
-  Seeing a range of reptiles with the highlight a wonderful Bornean Keeled Pit-viper
-  Having an amazing sighting of an Otter Civet alongside the road and crossing
-  Having some brilliant close North Borneo Gibbon sightings around Tabin Lodge

Tour Leader / Guides

Martin Royle (Royle Safaris Tour Leader)
Mike Gordon (Deramakot & Tawau Guide)
Dankut (Deramakot Driver)
Rossman & Harwah (Kinabatangan River Guide)
Mawee (Tabin Guide)
Shavez (Tawau Guide)
Marud, Charles & Afii (Drivers)

Participants

Ms. Jill Clark Mr. Jim Nelson
Mr. Chris Daniels Mr. Monty Ross
Ms. Rebecca Henshall Mr. Oleg Rozkho
Mr. Colin Hovey

Photo Credit – Flat-headed cat by Chris Daniels

Overview

Day 1:	Sandakan / Deramakot Forest Reserve
Days 2-8:	Deramakot Forest Reserve
Day 9:	Deramakot Forest Reserve / Kinabatangan River
Day 10:	Kinabatangan River
Day 11:	Kinabatangan River / Tabin Ws
Day 12-14:	Tabin WS
Day 15:	Home





Day by Day Breakdown

Overview

Borneo is without a question one of the most biodiverse and wildlife rich locations in the world. From enigmatic orangutans to pygmy elephants and from huge salt-water crocodiles to well-endowed hornbills the tropical island has some of the world's best known species. However it is also home to animals that most people have never heard of, from the very elusive Borneo ground cuckoo to the curious looking proboscis monkey and from the secretive sun bear to the misleading flying lemur; Borneo has many species which are just down right strange.

This trip will focus on a small number of probably the most elusive, endearing and incredible mammals here. Often share and nocturnal there is a wealth of life to be found after dark in the forests of Borneo. From the top predator on the forest the Sunda clouded leopard and its smaller cousins, Sunda Leopard Cat, Flat-headed Cat, Marbled Cat and the near mythical Bay Cat to the more commonly seen civet species, colugos and slow loris; this trip will aim to showcase the best of Borneo's mammals by both day and night.

There is a good probability we will not see all of our targets, that is the nature of things when looking for the rarest and most elusive. But it is very hard to spend considerable time in the forests of Borneo and not see an impressive number of species (mammals, birds, reptiles and amphibians). To help us in our quest for the rarest species we have the expert help from local spotters, incredibly experienced guides and even advice and information from the leading biologists in Borneo. All of this, some specialist equipment and a huge amount of luck would be needed in order to be successful. But if you do not try you will never be successful.

So we set off with three different destinations in mind, firstly the wonderful and now famous sustainably logged reserve (low-impact logging) of Deramakot, which would produce Sunda leopard cat and hopefully either or both Sunda clouded leopard and marbled cat. We then would have a couple of nights looking for the semi aquatic flat-headed cat along the shores of the Kinabatangan River, before finishing in the wonderful Tabin Wildlife Sanctuary; which has a very nice lodge and also a pretty good track record for malayan sun bears. But its proximity to a palm oil plantation means that there is a good amount of rodents around and this brings in civets and leopard cats and we hoped for good sightings of these, even if the sun bears remained hard to see. Tabin is also the location of the last Sumatran rhino in Malaysia. One old individual is kept in a pen inside the forest, a sad reminder of how fragile the forests here are.

All of these forests have one thing in common. They may not be around (or their inhabitants as numerous) in the near future. These forests are some of the most under threat in the world, increasing human population, coupled with poaching and illegal logging are culminating in the forests and the animals they harbour becoming increasingly rare and endangered. But the single biggest threat here is the ceaseless conversion of forest to monotonous palm oil plantations. By driving around a good part of Sabah (one of the more wildlife and conservation focused parts of South East Asia) we will see first-hand the difference between pristine forest and monoculture plantations. We aim to showcase the wildlife and forests of Sabah as well as increasing awareness of the problems it is facing.

We will also have the guidance of passionate local guides and there are some fantastic conservation groups working tirelessly to increase sustainable ecotourism here and save as many acres and species as possible.

As many of our targeted species are nocturnal we will be spending a large proportion of our time in the dark, searching the forests and river banks with a spotlight; looking for the tell-tale eye shine of an animals eyes reflecting back the light from your torch. It is always very hard to predict what animals you may see when you embark on a safari, but one thing we know for sure with this trip to Sabah, Borneo: that is that we will see plenty and what we do see will either be endemic, endangered or elusive.

Before this main section of the trip started we had 3 clients (Jill, Colin and Chris) explore the Tawau Hills National Park with the expert guidance of our guide Shavez. This was a week-long trip to this remote and seldom visited park and it was very successful. It can be hard to see wildlife here, the main trails are all on foot and it requires great luck and patience to stake out likely areas for wildlife to come to you. But a quick summary of some of the species seen include: Borneo colugo, collared mongoose, reticulated python, Bulwer's pheasant, Borneo pygmy elephant, helmeted hornbill, a full sightings log is below; not a bad start to the trip and after the hide hiking to get to and from the accommodation deep in eth forest and on the top of a hill, the jeep safaris in Deramakot would be a welcome relief.





Day 1 Sandakan / Deramakot FR *Arrival, Travelling & Wildlife Watching*

This morning Oleg, Jim and Monty all arrived into Sandakan and met up with Martin and Becky in Sepilok before beginning the drive to Telupid. The drive was around 2 hours and once we arrived at Telupid, we stopped for lunch and met our guide for Deramakot (Mike Gordon) and had lunch. It was here that the rest of the group (who had had a success pre-tour extension to Tawau) met us after their long drive this morning. So once Colin, Jill and Chris were all here and the group was all together we headed off road and continued through the palm oil plantations until we arrived at forest.

It was another couple of hours before we arrived and settled into the guest houses here. We then had dinner and headed out at around 8pm. For the next week or so we would do our best to turn ourselves nocturnal in our quest for the wonderful nocturnal wildlife of this stunning forest.

Our first sighting came pretty quickly and was one of the 5 species of cat known from Borneo, by far the most common and easily seen; the Sunda leopard cat. We watched this one walking along the side of the road before it disappeared into the vegetation and out of sight. We then found our first Borneo colugo of the night, it was a grey morph and clinging to the side of the tree and moving up rather quickly and ungainly for an animal designed principally for gliding long distances between trees. A little further along we got a puncture and whilst this was being fixed we had a short walk along the road, this gave us the chance to see some animals that are often missed when driving, such as a rough guardian frog (of which the males carry the eggs and tadpoles around on their back for protection), a red crab in the bushes, an assassin bug and two mating stick insects as well as a roosting yellow-bellied prinia. Whilst on foot we also spotted a Philippine slow loris feeding, hanging upside down and nimbly collecting food from the vegetation around him, before moving off and into thicker foliage. Nearby the slow loris a huge swallowtail moth was feeding on nectar and on the other side of the road we had a Sunda short-nosed fruit bat feeding on a fruits, coming in and landing for a brief moment and then taking off, circling, landing and repeating.

Back in the vehicle we found a northern boobok (or hawk-owl) perched on an exposed branch and giving us fantastic views, before we found the first flying squirrel of the trip. A Thomas's flying squirrel, this first one was in a nice tree on an expose horizontal branch and so we could get some nice pictures of it grooming, albeit a little distant.

Further on we found a pair of giant red flying squirrels in the same tree and also a Thomas's flying squirrel in the same tree. We watched as the Thomas's stayed away from the two larger giant red flying squirrels as they chased each other around the trees, until one of them climbed to the top and launched itself off and right over us, amazing views of it gliding overhead.

Next we found a pair of Borneo colugos, a grey and red morph in the same tree and offering good views. Then on the road ahead of us was a group of elephants, 8 of them at least 2 adult females and the youngsters of various ages. They were moving away from us ahead of us and then entered the forest after a few hundred meters, giving us a trumpet as they departed and we drove passed them. Some large flying foxes flew overhead before we turned around and started to head back, coming across the elephants again. This time we stopped and waited as two adults came out and fed on the side of the road for a while.

We then found a foraging Philippine slow loris high in the trees whilst a lot of bats (recorded and identified in the species list) flew around us. This was followed by a black flying squirrel in dense foliage feeding and then flying away from us and a wonderful Malay civet on the road ahead of us and walking along the edge of the road for a minute or so. That was the last sighting before we returned to the accommodation, Chris went for a walk on the ecology trail and saw a female great argus pheasant roosting.

Day 2 Deramakot FR *Wildlife Watching*

Today the day time was free for the day and we met up after dinner for another nocturnal drive. Very early in the drive we found a giant red flying squirrel and there was a mousedeer in the thermal (but we couldn't get views on it in the thick vegetation) before we had a great encounter with a female Island palm civet and 4 of her young pups. They were just on the side of the road and sniffing and milling around together before entering the grass and disappearing back into the forest. We then had a brief Sunda leopard cat in the same place as one of the ones we spotted last night.

Our next sighting was a Philippine slow loris moving quickly up a vertical branch and into dense foliage. We then had our first Thomas's flying squirrel of the night (not the last) before encountering the elephants for the first time tonight also. This was a better sighting that last night, they were all on the road and then went off when we approached. So we stopped and waited with the lights off, only the thermal telling us where they were, then one of the adults came out and was followed by 6 of the 8 in the group. We followed them a while and got some nice views. But once the other 2 wanted to join, we left, we had split the group and didn't want to be in the middle of the, so left them in peace and carried on down the road.

We then had an excellent slow loris very close to the road and posing for us in an exposed branch. Just staring back at us for several minutes. What a great sighting of the only venomous primate in the world, they have a gland on their elbow that secretes an oily substance which is poisonous to most animals. When threatened they lick the substance and then bite, envenomating the predator.



There were many Island palm civets around tonight, having not seen any yesterday it was interesting to see so many foraging along the road. Just passed one island palm civet we came to a brown wood owl in a tree, it had just caught an unidentified rodent and swallowed it quickly.

In a tree we found a Borneo striped palm civet moving quickly around looking for fruits and flowers to feed on and then nearby another island palm civet we had a great view of a Malay civet, it came out of the verge right next to our vehicle and walked along the road and across. Brilliant views and very close.

There were a couple more elephants just off the road as we drove along, this was a male and a female, perhaps in the act of mating. They were shy and so we didn't hang around them and continued onwards.

We had further giant red flying squirrels, Thomas's flying squirrels, striped palm civets climbing in trees, Malay civet on the road, Philippine slow loris high up in dense trees as well as a nice grey morph colugo in the typical 'v' shaped hanging position and then a very young yellow-throated marten coming out of its den in a dense tangle of vines and bromeliads and climbing quickly to the other side of the tree and away from us.

We reached km 27 and then had a coffee break around 11pm, on our way back we had more of the same species and the elephants again, trumpeting as we drove passed as well as an amazing Sunda leopard cat on the side of the road, sat crouched and looking at us, no more than 2m away, but a torch fell off a seat and made such a racket that the poor cat was spooked and slunk off into the vegetation.

Our next sighting of note was a pair of courting Malay porcupines, the male was chasing the female in tight circles, probably looking to the least painful way to mount the back of a porcupine. I don't not envy the intimate relations that porcupines go through to reproduce. But then the highlight of the night and the trip so far, an amazing otter civet close to us 4m away in front of the jeep on the side of the road foraging for frogs in a small roadside puddle. The civet then crossed the road right in front of us, Mike said it was the best otter civet sighting he had ever had and it was incredible. It had been the night of civets for sure.

Then before we made it back to the accommodation we had sightings of a dark-eared tree frog on a grass stem close to the road, more island palm civets on the road, another brief Sunda leopard cat, a buffy fish owl perched nicely for pictures and many large flying foxes flying against the half moon and clear sky and then a very far away Philippine slow loris.



Day 3 Deramakot FR

Wildlife Watching

During the day the group split, some went out for walks and saw species as diverse as red-bearded bee-eaters and bronzed drongos to the endemic Borneo yellow muntjac, whilst some just rested and chilled out. Chris and Oleg also had some great encounters with Bornean Muller's gibbon, very close and curious gibbon coming to have a look at them as well as a solitary maroon langur.

Then we went out again after dinner on the quest for the top predator in Borneo; we got a very early and distant yellow-throated marten high up in a densely foliated tree and then we had the usual collection of Thomas's flying squirrels (many all through the night), striped palm civets climbing high among the trees foraging and feeding on berries and flowers and a couple of Philippine slow loris (but all more distant sighting to what we had had in the previous nights). We did have a very nice sighting of a very close and obliging buffy-fish owl before the first of many Sunda leopard cats tonight. This one offered us great views as it walked alongside the edge of the road and then crossed over in front of us. There was a very brief view of a female sambar deer heading off the road and down the side of a slope and into the forest.

Next we found a colugo (grey morph) hanging upside down in a tree before it climbed onto the trunk and very quickly and skilfully climbed high and out of sight. Mike then spotted a trefoil roundleaf bat hanging on a branch just off the road, its ears and nose twitching quickly as it echolocated looking for food.

We had more Sunda leopard cats on the sides of the roads and one walking down a logging track and then a striped palm civet jumping acrobatically from one tree to another before a very brief Malay civet and another colugo.

We then stopped for a very close and photogenic Thomas's flying squirrel before we came across the group of elephants again. They were more nervous of us today and quickly went off the road and were going through their repertoire of calls, cerebral rumbles, trumpets and even a roar were heard as they walked off into the forest. Maybe the male we had seen yesterday had joined the group for mating opportunities and his presence had put the rest of the group on edge a little? Because they were definitely behaving a little stranger than usual.

More leopard cats followed, including one we waited for as it went a little way into the vegetation, Martin kept track of it with the thermal and when it came back out we got great views.



There was a pair of striped palm civets feeding in the same tree and then a very unusual sighting, it was an Island palm civet just into the forest (around 10m in) and it was feeding on something, then when it picked it up and dragged it away it looked very much like another island palm civet. Whether it was cannibalising it or it just looked the same as an island palm civet we will never know, but it was too large for it to be a pup and it had the same colouration and markings as an island palm civet.

During our coffee break Mike found a ranee mouse and then shortly after we had a large Sunda tree mouse cross the road. The way back was quieter with more leopard cats and a couple of nice greater mousedeer (one giving us great views right next to us on the side of the road) being the only sightings of note.

Day 4 **Deramakot FR**

Wildlife Watching

Today some elephants had arrived around the accommodation complex, we could smell them and see their dung and another group saw them at around km 3. So there were no walks into the forest during the downtime, however walks around the roads were productive for Oleg, who had views of a female bearded pig and her little of piglets crossing the road, a rhinoceros hornbill flying overhead and a small troop of northern pig-tailed macaques high in the trees.

We once again went out after dinner and hoped for some more luck, maybe swapping some of our Sunda leopard cats for one of their larger cousins. The intermediate bent-winged bats were flying around the lights at the restaurant, catching insects as we left. We quickly found a greater mousedeer on the road, we would actually encounter this same mousedeer in the same place three times tonight and it was also seen by Oleg on his walk this morning in the same place again. We also had poor views of a Philippine slow loris and many large flying foxes overhead before nice views of a striped palm civet grooming in the crook of a tree.

There were a few more striped palm civets tonight and many Thomas's flying squirrels and occasional Philippine slow loris and Borneo colugo again.

We found a couple of fruiting trees where the large flying foxes were hanging upside down and feeding, which was an interesting sighting. There was also a good view of a slow loris along an exposed branch, moving slowly along and then stopping to look at us and then quickly moving along and up onto another branch and away from view.

A good sighting of a different greater mousedeer followed, it was walking along the road ahead of us and crossed a couple of times and nearby Mike had a fleeting glimpse of a Sunda leopard cat. It was a bright night (nearly full moon) and some of the leopard cats were a little more skittish tonight. We passed the elephants which were just off the road and then had a sounder of bearded pigs foraging noisily in the forest just off the road, we struggled to find them and then one darted across the road and away.

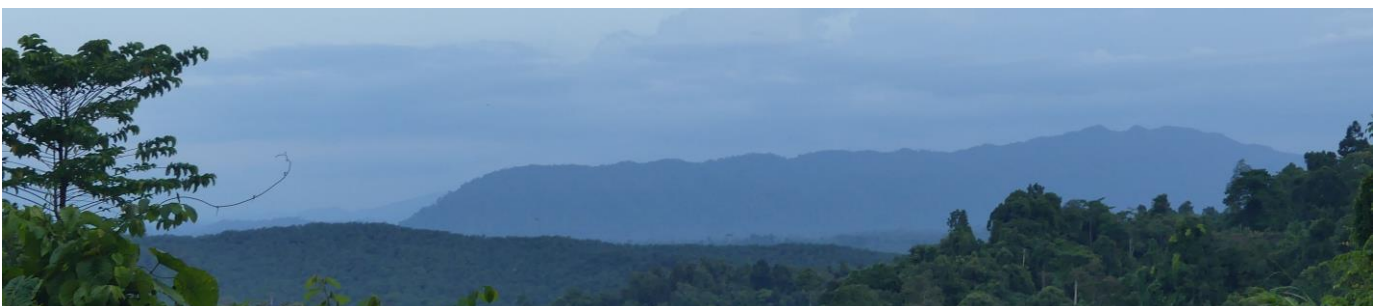
In general it was much quieter tonight than the last two nights and large periods passed without anything or the occasional flying squirrel sighting. We did have a very good view of a Borneo wood owl just over the road before a red morph colugo, followed by a brief brown morph colugo.

After our coffee break we headed back and had a couple of skittish Malay civets, a sleeping crested-serpent eagle and an island palm civet on the road. Then a youngish bearded pig ran across the road, jumping into the grass on the opposite side.

Ahead of us there were 3 elephants on the road, 2 adults and a young one (around 2-3 years old) in the middle of them, we followed and ahead of these was the whole group. They didn't stay on the road for very long and entered the forest, for a group of large animals they disappear so quickly and silently into the forest when they want to.

We then had a close harlequin flying frog next to the road and then a couple of very nice Sunda leopard cat sightings, including one which was walking just ahead of us and then came to another leopard cat sat on the road. They went passed each other without much interaction, but it was interesting to see the first cat walk past and arch its back very high and walk stiff legged passed the other one, the second cat sniffed and then crossed the road and they both entered opposite sides of the forest. Certainly no territorial displays or conflict here.

As we entered the accommodation complex we found a fruiting tree with around 20 large flying foxes whirling around, it was nice as the moon was making a great backdrop for some large bat silhouetted against the moon photography. But then the highlight of the night, in a nearby tree, another fruiting fig tree was a wonderful binturong. It climbed down the main trunk and then lay on an exposed branch and allowed us to have a great look at it. The final hour was very quiet, just the same greater mousedeer and a striped palm civet, before we called it a night at around 02:20am.





Day 5 **Deramakot FR**

Wildlife Watching

Today we mixed up the routine a little, we headed down to the Kinabatangan River at 3:30pm and then made our way back up, to be in the deep forest at a different point at the right time. See if that brought any different luck. During the morning we had some sightings of raptors around accommodation complex including Wallace's hawk eagle and black eagle. On the afternoon drive down to the river we had some very nice birds including silver-rumped spinetails, whiskered treeswifts, oriental honey buzzard, bronzed drongos, blue-crowned hanging parrot and some hornbills including nice views of flying wreathed hornbills, black hornbills and perched rhinoceros hornbills.

Mike also spotted a lone Borneo Muller's gibbon just resting near the canopy of a tree and then a sounder of bearded pigs crossed the road and went running swiftly away, they were two adult females and around 15 young piglets.

Nearer the river we spotted a Prevost's squirrel climbing quickly around a tree near the road and then at the river we had a break and waited for the sun to set, before turning around and heading back. the lack of rain recently was obvious in two ways, firstly the air was hazy with the smoke of numerous forest fires in Sarawak and Kalimantan and the river was very low, at least 5m lower than previous Royle Safaris tours. We hoped the lack of rain would hold off until we got the river in a few days and the chances of flat-headed cat increase a lot with low water levels.

On the way back we had an island palm civet cross the road and nice views of a roosting rhinoceros hornbill. This was followed by the usual assortment of giant red flying squirrels, Thomas's flying squirrels, striped palm civets, Sunda leopard cats and Philippine slow loris.

But we had some other sightings tonight including a hanging diademed roundleaf bat and a female and fawn sambar deer just off the road and in the long grass and a lone elephant feeding in the grass on the side of the road. In general it was quiet tonight.

We had a nice Sunda leopard cat walking along the side of the road and then across the road and next to the vehicle and scent marking briefly on a rock before entering the grass. This was nearby a roosting black-headed pitta and then the first of many greater mousedeer around. Some of these tiny deer were very confident and were not shy as they believed we couldn't hear or see them as they walked next to the vehicle and allowed for very close and good views.

We arrived back at the complex and had dinner before heading back out for a couple more hours. This last section resulted in lots of greater mousedeer and one lesser mousedeer as well as more Sunda leopard cats, including one walking along a clearing and giving us prolonged views; a few striped palm civets and of course flying squirrels.

The last sightings before heading back and going to bed was a grey morph colugo and a huge stick insect that would be more appropriately called a branch insect.

Day 6 **Deramakot FR**

Wildlife Watching

Today we repeated the timetable for the first few days and had the day around the complex and then the full night out looking for wildlife. Today was the first day we had rain, it started as we were having dinner and lasted for around 1.5 hours, it wasn't torrential but it was enough to quieten down the wildlife activity.

However at first we had a lot of Sunda leopard cats, no less than 5 in quick succession and 2 of them giving us incredible prolonged and very close sightings. Walking up to the vehicle, stopping next to us and just being incredibly relaxed around us.

We also had a brief Malay civet cross the road and then the elephants on the road again, there were 6 elephants, 4 adult females and two youngsters, the younger ones being escorted shoulder to shoulder between the adults in two groups of 3 as they marched down the road ahead of us until they cut into the forest and went their own way.

There were also a couple of large tree in fruit, they had attracted large number of large flying foxes. They were whirling around the trees, landing, feeding and leaving again. But it was strange that neither of these trees had any of the fruit eating animals in them. There were also two Philippine slow loris in the same tree, one was much smaller than normal and possibly a baby of the other one. There were also Thomas's flying squirrels and giant red flying squirrels as normal and a couple of striped palm civets in the trees (but not in the numbers we had seen on previous days; however the number of squirrels did increase as the night warmed up and got drier after the rain). We then found a sleeping crested garden lizard high up a tree, just its head sticking out and being bright green against the duller green of the leaves.

Because the rain had brought the frogs out of the forest to the road we were seeing more leopard cats and also Malay civets on the road and we had two Malay civet sightings in quick succession. Including one which stayed on the road for a while and allowed us to get some nice pictures.

We then headed back and on the way found a lone elephant feeding on the side of the road, a hanging grey morph colugo and a greater mousedeer nearby the first staff accommodation.

Day 7 **Deramakot FR**

Wildlife Watching

This morning Oleg was walking around and found cream-coloured giant squirrel (the largest arboreal squirrel in Borneo) and also a Borneo pygmy squirrel (the smallest) which was nice.



We once again went out after dinner, tonight was our last full night of driving as tomorrow we would retire earlier as we due to leave for the Kinabatangan River (Sukau) tomorrow morning. So we left at 7pm as usual and quickly found a greater mousedeer running down the road towards us, we had great views as it came right passed us and spent a considerable amount of time very close to the vehicle. As normal there were the resident Thomas's and giant red flying squirrels and we also had great views of a crested serpent eagle roosting above the road. There were more greater mousedeer and also some island palm civets around as we continued along the road. We had a brief view of a Sunda leopard cat as it entered the vegetation and the a very nice small group of rhinoceros hornbills all roosting on dead trees and a small islet in the middle of a little lake next to the road.

On a nearby tree we found a huge Borneo black tarantula on the trunk next to its hole, next to this enormous spider were a few smaller ones (most likely its offspring) but they were still pretty big (such as the size of the mother).

There were more Sunda leopard cats and then Mike flushed a greater mousedeer when he went into the forest a little way to see what was causing eye-shine that we couldn't get a good look at with the binoculars or thermal. We then found a sleeping crested garden lizard and a pair of striped palm civets in the same tree, they were grooming and interacting and lying next to each other for a while.

We then had a nice island palm civet climbing nimbly up a tree as well before more greater mousedeer (including two together) and great views of a large frogmouth.

On our way back to the accommodation we had a brilliant black flying squirrel, it glided right over us and then climbed into a vegetated tree and then a Malay civet followed by a striped palm civet crossed the road.

In general it was pretty quiet for the last 2 hours or so with just Thomas's flying squirrels, striped palm civets and greater mousedeer again. We did have a nice Sunda leopard cat walking away from us down the road, scent marking and stopped periodically to look back at us, all in all a very good sighting of the most common cat in Borneo.

The last sighting was a boobok high up in the tree before we returned to the accommodation for rest.

Day 8 Deramakot FR

Wildlife Watching

This morning Oleg got a Jambu fruit dove before breakfast, we headed out earlier today as we would be leaving tomorrow morning after breakfast.

We quickly found a feeding rhinoceros hornbill and had great views of this wonderful bird, there we many birds around this afternoon including rufous-backed kingfisher, changeable hawk-eagle, wreathed hornbill, bronzed drongo, various swiftlets, whiskered treeswifts and orange-backed woodpecker.

As we continued to drive we had a very nice encounter with a troop of maroon langurs, they were moving through the trees on either side of the road energetically and jumping far from one tree to the next. At the same time a wreathed hornbill flew over and there was a whiskered treeswift sallying for insects just over the vehicle.

A little further we came to two elephants as they ran off into the forest ahead of us. So we went a little way down the road and killed the engine. We could hear the whole family calling, lots of rumbles, trumpets and roars as they waited for us to go before coming out. As their vision is poor they evidently thought we had gone after a few minutes as the matriarch came out and walked towards us. She was walking cautiously and we had great views as she got to around 10m away from us, as we were not sure if she had detected exactly where we were we started the engine to be safe (spooking an elephant when it is next to you is a very bad idea), she headed back to the forest and we left them in peace.

Along the rest of the journey towards the river we had a couple of black-naped monarchs and a slender treeshrew (moving fast on the ground and then understory and then higher). Just before the river we had a Prevost's squirrel as well and then at the river we had a break and waited for sunset. On the opposite bank of the river a large troop of long-tailed macaques foraged on the muddy banks as many oriental pied hornbills came by.

On our way back we had a Sunda short-nosed fruit bat feeding and flying back and forth across the road followed by a brief diademed roundleaf bat hunting. The normal Thomas's and giant red flying squirrels were common and we also had another black flying squirrel.

In quick succession we had a Sunda leopard cat, Malay civet, striped palm civet and another Sunda leopard cat before very nice views of a barred eagle owl, perched and looking down at us (making this the fourth owl species of the trip so far). We had a great sighting for pictures of a Borneo colugo and then a large number of large flying foxes feeding in the fruiting trees. It was strange to see so many large flying foxes and no other fruit eating animals in the trees at the moment, however there was a mass fruiting event in lots of Borneo (and other parts of SE Asia) around 3-4 weeks ago, this is a rare and unpredictable event and it has not been studied fully (as it is such a rare event) and so this abundance of fruit not long ago probably meant that many fruit eating species are more spread out and dispersed than usual.

Near headed back and one of our last sightings was a banded civet, it crossed the road and stayed around the vegetation on the side of the road for a short while, but it was hard to find and see. We then had a Philippine slow loris and striped palm civet before coming back for our final night in Deramakot.

Day 9 Kinabatangan River (Sukau)

Travelling & Wildlife Watching



This morning we left Deramakot after breakfast, the drive out produced a Storm's stork on the road, a couple of South East Asian water monitors and a Sumatran cobra (but only for the first car – as is often the case with these drives in and out) and when we got to the main road, we loaded up into the mini bus and headed to Sukau.

On arrival we had checked in and had lunch before meeting our guide for the next couple of days, Rossman. After lunch headed out onto the river.

The river was the lowest it had been in a long time and we were hopeful over a flat-headed cat sighting in the next couple of nights because of this. However this afternoon we focused on primates and in particular Borneo orangutans. They were proving hard at the moment, and most likely because they are more dispersed throughout the forest after the mass fruiting event. Colin had seen a couple of them (including a mother and baby) although no great views of any. Colin had left Deramakot after a couple of nights and had come ahead to the river, so had seen them in the last couple of days. On the river we saw many birds, including whiskered terns, black, Germain's and edible nest swiftlets, green imperial pigeons, pink-necked green pigeons, oriental pied hornbills and also a very nice wrinkled hornbill flying along.

There were also sightings of many of the thousands of long-tailed macaques that inhabit the riverine forest here. We also had very nice proboscis monkey sightings, including a large male on his own and several youngsters playing and some adults feeding and jumping from one tree to the next as they moved through the forest. It was nice to watch the interactions and behaviour in particular a female and young baby.

We also had a very nice grey-headed fish eagle sighting and a few oriental dollarbirds perched high on dead trees before a pair of wrinkled hornbills flew over head and we came to our second troop of proboscis monkeys. There were many proboscis monkeys on this stretch of the river today. Seeing this many it is hard to remember that they are endangered and declining in number.

Down a narrow tributary we found a black hornbill and a troop of southern pig-tailed macaques, they were getting ready to roost, with one large adult male not tolerating a younger one to be near him on the same large branch. The younger one getting the point eventually and climbing away. Further along the tributary there were many long-tailed macaques, some still foraging and some settling down, there were some low down near the water and allowing for nice photography. We had some nice birds too with stork-billed kingfishers and then on the main river as we headed back to the lodge a Storm's stork at sunset.

At dinner we had a few Asiatic greater yellow house bats flying through the dining room before we left for our night cruise. The first animal we saw was a nice buffy fish owl perched on the banks of the river we also found a roosting white-breasted waterhen and then a couple of small saltwater crocodiles and many sleeping monkeys (found with the thermal and not disturbed with the spotlight). There were many grey large-footed bats feeding on small animals from the surface of the water (identified by their spectrogram) as we headed to the tributaries. We then disturbed a huge crocodile in the middle of the river, really only seeing its massive tail as it silently and smoothly slide under the water out of the way of our boat. We then found a black-crowned night heron and a foraging island palm civet on the exposed mud banks at low tide. Another buffy fish owl flew over the river, perched and allowed for some good views and then another croc, a large one (around 4.5m long) and on the bank, it slide into the water as we approached. There were many other smaller crocs (around 1 – 1.5m long) as well as several Muller's rats on the river banks. Our last sighting was a Malay civet on the river bank also foraging. We returned around 11:30pm and hoped for more luck tomorrow.



Day 10 Kinabatangan River (Sukau)

Travelling & Wildlife Watching

This morning we were out at 6am again, it was misty this morning and the humidity combined in air conditioned rooms had fogged up our cameras and binoculars early on and we missed 3 bushy-crested hornbills flying over the forest. We went to a small colony of edible-nest swiftlets on a rock face just above the water level before carrying on down the river. A couple of white-bellied sea eagles flew overhead and there were many other bird species around including crested serpent eagles, crested goshawk, Wallace's hawk-eagle and Jerdon's baza (a good morning for raptors). We went to the Menaggul and found a lot of proboscis monkeys again, including a male feeding low down near the river and feeding on leaves.

There were more oriental darters than yesterday and we had nice views of a perched purple heron in great morning light and a male and female black hornbill flying over the river.



There was a flock of slender-billed crows and we couldn't see if there was a carcass or reason for their aggregation and on the oxbow lake near we found a pair of bat hawks in a tree with a nest and in the nest was a large chick and nearly at fledging age. There was also a nice lesser adjutant stork in a tree. Leaving the oxbow lake we found a baby reticulated python curled tightly around a branch overhanging the river, its camouflage working very well and it was hard to see unless you were right underneath it.

We then had breakfast and a break in the middle of day back at the lodge and in the late afternoon headed out once again. We once again saw black hornbills and had great views of a lesser fish-eagle which flew right passed us. A normal on the river there were many troops of long-tailed macaques and proboscis monkeys feeding and then later on in the afternoon finding somewhere to settle down for the night.

There were some hornbills around this afternoon, a male and female rhinoceros hornbills on opposite sides of the river calling to each other and we had the male very close and good views and then a wrinkled hornbill flew over and allowed good views too as it fed on fruit. Down another tributary there were many long-tailed macaques jumping from tree to tree and one shaking the top of a dead tree aggressively in a display of dominance. We then had a couple of red-and-black broadbills and a great-billed heron before turning around and heading back. Along the way we had more proboscis monkeys settling down to roost and then a lone male Sundiac silvered langur doing the same, it was in the same tree as several oriental pied hornbills, in fact a large flock (over 15) oriental pied hornbills flew over and entered the forest to roost, one male (that stayed in the same tree as the langur) was aggressively chasing the other hornbills off whenever one landed in 'his' tree.

Continuing on we found a braminhy kite and then the rest of the old male Sundiac silvered langurs' troop all settling down, we were lucky to see a red morph langur, all Sundaic silvered langurs are bright orange when they are born and they lose this colouration as they get to around 6 months old, but some stay the orange/red colour all their life.

After dinner we headed out to the Menanggul again, we were in luck, it was not long into the spotlighting when Rossman got very excited and we found a flat-headed cat, walking along the bank and very close to the river at first. We were going to position ourselves against the shore a little way away (in the direction it was walking) and then use the light to entice the cat out, this works well in Rossman's experience. But a second boat (with a very loud engine) was nearby and revved loudly and in trying to get into position near us rammed into the shore in front of the cat and it was spooked and entered deep into the forest. We didn't see if again, however before then we had views for a couple of minutes as it walked around 10m into the forest and in between the trees as it looked for a good place to hunt. As we looked for the cat again we found a Malay civet, but that was it tonight. Except for 2 enormous crocodiles, both at least 5m long, the first looked like a fallen tree trunk on the mudbank and then slowly entered the water as we approached and the second was lying parallel to us against the bank and under the trees. It was huge and allowed us to get closer than the other crocs, before it too disappeared into the water.

So we returned after a good night, great flat-headed cat and some monster corcodiles, all was good heading to our final place. We would have one last morning cruise before departing for Tabin, via Gomantong Caves tomorrow.

Day 11 Gomantong & Tabin Wildlife Resort *Wildlife Watching & Travelling*

This morning was our last on the river, we had a cruise pre-breakfast and found many long-tailed macaques and also a troop of Sundiac silvered langurs as well as a pair of white-breasted woodpeckers which flew over us and then a male and female black hornbill.

There were several fresh orangutan nests but we couldn't find any orangutans this morning. Down one of the tributaries we had a pair of stork-billed kingfishers and also a black-and-yellow broadbill, in the same tree as the broadbill there was a Borneo pygmy squirrel which we had good views of as it quickly moved around the branches, never staying still. In the same tree was a plantain squirrel too. Leaving the tributary we found a Storm's stork perched and also a flying oriental darter and many pink-necked green pigeons before returning at 8am for breakfast at the lodge.

We then packed up and left for Tabin, along the way we would stop at the famous Gomatong cave.

Featured on the BBC's *Planet Earth* the enormous cave is home to millions of bats and swiftlets as well as a billion plus cockroaches, spiders, centipedes, whip-scorpions and crabs, all feeding on the mountain of guano (most of which had been recently cleared away – so it wasn't as impressive or smelly as usual) and the dead and dying swiftlets and bats that fall to the floor of the cave.

We walked around the cave and of course saw hundreds of thousands of the residents. There are 4 species of swift in the cave and there have been 27 species of bat recorded from here, however we saw and could identify just 3 species of swiftlet (black, mossy and edible-nest swiftlets) and just 3 species of bats today. There is the very abundant Asian wrinkle-lipped free-tail bat, which makes up the vast majority of the 2 million strong mixed colony and then another very abundant bat here, the large-eared horseshoe bat which were roosting much lower down than many of the Asiatic wrinkle-lipped free-tailed bats and were easily visible and photographable. The other easily identified bat species today was a large roost of fawn leaf-nosed bats which were occupying a wall lower down than the Asiatic wrinkle-lipped free-tail bats and around many mossy-nest swiftlets.

Also in the cave we saw many cockroaches, crabs walking along the small streams which trickled out of the cave and alien like long-legged centipedes kept to the dark recesses of the cave and scurried around whenever a torch light fell on them. We didn't find the bat hawk or cave racer, which are two predators that specialise on feeding on



the animals in the cave. On the walk out of the caves we found a cream-coloured giant squirrel close by the boardwalk and also a chestnut-breasted malkoha.

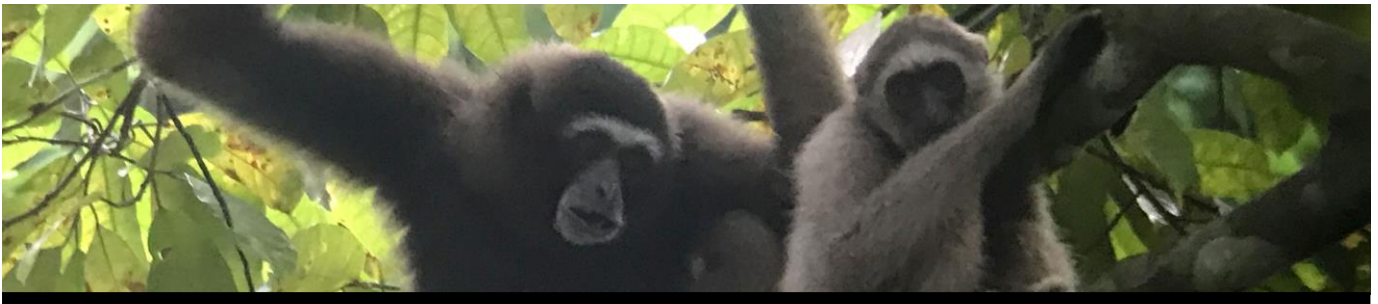
We then loaded up the vehicle again and headed to Lahad Datu, when we arrived at the office Tabin we registered and then had lunch in the town. From here we entered the palm oil plantations that surround Tabin and finally made it to the forest reserve. We arrived at the resort at around 3:30pm and checked in and then before dinner had a dusk drive into the core area with our guide Mawly.

There were many southern pig-tailed macaques around and some nice birds, including rhinoceros hornbills, chestnut winged babblers and a lone short-tailed babbler and then a Borneo pygmy squirrel scurrying up a tree. As we returned back towards the lodge we started to spotlight a little and found a sounder of bearded pigs, there were mothers and babies in abundance, but they darted off as soon as stopped and reversed back to see them better. We also had a brief view of a Sunda leopard cat crossing the road in front of us.

After dinner we had a night drive and quickly found a giant red flying squirrel quite close to us and then also close to the road island palm and striped palm civets. We found more island palm and striped palm civets as well as Sunda leopard cats patrolling the roadsides and also entering the palm oil plantation to look for food. As well as these species we had some of the other common nocturnal mammals of the Sabah forests, including Thomas's flying squirrel and Philippine slow loris; as well as a roosting Wallace's hawk eagle.

Near the Sumatran rhino sanctuary and rhino food plantation we found a small group of elephants walking along the road and then entering the forest.

Back along the plantation border we had great views of a reddish scops owl perched, more Sunda leopard cats and then a group of very young bearded pigs without any adults. They were running back and forth along the road and looked confused and scared as they ran into the grass and away. The last sighting we had was a quick Temminck's flying squirrel climbing up a large tree in front of the main lodge as we returned.



Day 12 Tabin Wildlife Resort

Wildlife Watching

This morning at 6am we had a walk along the main road, early on there were great views of the resident family of north Borneo gibbons around the lodge grounds. They are nearly always around and offer incredible views and nice behaviours too. There was some good birds, but only a white-fronted flaconet being particularly noteworthy, other mammals included a female sambar deer giving good views and then a couple of large bearded pigs. The walk took us to a well used great argus lekking site, however it was late in the morning and the lek was empty, tomorrow morning Mawly would take Oleg here to try and see this amazing bird.

After breakfast there was a walk to a nice waterfall and refreshing pool, it was great to have a dip and cool off in the tropical oasis.

Then after lunch we had a drive and walk to the nearby lipad mud volcano. Along the way we found a stork-billed kingfisher, oriental darter, little and intermediate egret at a small pool and on the walk we stopped and called for a black-crowned pitta and eventually found one flitting around the undergrowth. Near the mud volcano there was fresh evidence of a sun bear ripping into a eating from a rotting tree trunk and at the mud volcano there were elephant footprints. But there was not much mud, the occasional bubble of methane bursting being the only tell tale sigh of the volcanic activity beneath the surface. Climbing the tower than overlooks the volcano we found a variety of hornbills, having great views of a rhinoceros hornbill feeding as well as a wrinkled hornbill also feeding on small berries and then various oriental pied hornbills. Southern pig-tailed macaques moved nosily through the trees on the far side and some nice birds flew among the branches of a neighbouring tree, including the brilliantly coloured male Temminck's sunbird. He was doing his best to impressive a couple of dull brown coloured females.

Walking back from the volcano we stopped and called a blue-headed pitta and also flushed a crested fireback.

After dinner we headed out for a long night drive, we immediately found a Malay stink badger (now known to be related to skunks and not mustelids) foraging in the lawn nest to the river cabins. We had great views of this unusual species as it went about its business, roosting around under the leaf litter and digging up insects. We then quickly found a bearded pig in the river and started onto the plantation road, we would do a few laps of this road as it is by far the most productive road for predators. In fact we found several Sunda leopard cats (having good views of a couple), many Malay civets (again great views of one), several buffy fish owls, island palm civets, striped palm civets and also found a banded civet. But the banded civet didn't come into the open and so the views were brief



and frustrating, we found the same banded civet twice in the same area, but both sightings were the same. As well as these predators we found a greater mousedeer (and had great views of it being stock still for a long time) and also the flying squirrels as normal (Thomas's and giant red and even a view of two black flying squirrels – including the best views we had had so far of this species). The thermal found a large Sunda tree mouse before a thick-spined porcupine crossed the road, all prickles raised as it was not happy about our vehicle.

We also had a Philippine slow loris and a trefoils roundleaf bat hanging from a fence wire before we found a second Malay stink badger in the forest. As it turned midnight it got noticeably quieter and the last 2.5 hours resulted in fewer sightings of Malay civet, island palm civet, striped palm civet, Sunda leopard cat a sleeping Borneo colugo (hanging from its feet, head all tucked up), a bearded pig near the road. The last sightings we had were a female sambar and Malay civet at the small pool and then a pair of young island palm civets up a tree and huddled together.

Day 13 **Tabin Wildlife Resort**

Wildlife Watching

This morning Oleg went alone with Mawmy we try and see the great argus at the lek, but they didn't have any luck, everyone else went for a walk around the lodge grounds after breakfast. But whilst Oleg and Mawmy were in the hide a Sunda shrew was spotting at Oleg's foot, he watched it as it caught a worm.

The gibbons and southern pig-tailed macaques were all over the area for most of the day and we had some great views of gibbons as they were at eye level from some of the cabins, one mother and her youngster were drinking, the mother would dip her hand into a hole in the bough of a tree and then let the youngster lap up the liquid from her fingers. It was amazing to watch, it was some of the best gibbon views you can ask for, to be eye level with them as they were relaxed in the tree tops. The macaques came down and started to play, swim and forage in the river as well as climb around the buildings and cabins as they looked for food. On another walk this afternoon Oleg was photographing bird species when a Malay weasel crossed the path in front of him.

Then in the evening we went for a drive again, immediately and just on the other side of the road we found a group of Asian short-clawed otters, they were largely hidden from view in the undergrowth and they were huddled up in a ball, they moved slowly through the forest and then away out of view. Once we were out on the main road we quickly found a black flying squirrel and a couple of Malaysian field rats ran across the road and into the palm oil plantation.

Also along the road we had the normal common rodent predators which patrol the road such as Malay civets, island palm civets (including baby island palm civets). There were also quite a few giant red flying squirrels around today before we spotted a Malayan brown snake crossing the road.

We then found a nice Sunda leopard cat trotting down the road towards us and then running away into the grass before we found another predator who patrols the road looking for the rodents that love the close proximity to the palm oil plantation; a perched Borneo brown owl.

After 11pm it became quite quiet and for the next 3 hours we didn't have many sightings, except that around 1:30am we had a large animal cross the road (very quickly) just at the edge of the spotlight beam, but it was (by size, movement and with no obvious tail) a sun bear, it was leaving the plantation and heading back into the forest, however it didn't stop at the side of the road and disappeared into the forest and away. Then as we entered the lodge complex we found the resident Malay stink badger foraging and also a greater mousedeer.



Day 14 **Tabin Wildlife Resort**

Wildlife Watching

This morning at 6am there was a birding walk along the main road into the core area, due to the late nights we had been having not everyone showed up. There were some nice birds seen including blue-throated bee-eaters, bushy-crested hornbills and a couple of Prevost's squirrels.

Then in the late afternoon we left for a drive into the core area. There were more birds around this afternoon including many oriental pied hornbills, black-headed oriole, a beautiful scarlet trogon, blue-throated bee-eaters and then a great view of a couple of young male bearded pigs on the road. They stopped and looked at us and allowed good views before they got spooked and ran off into the forest.

We continued on and then just as the sun was beginning to set we stopped overlooking several very large kapok trees. Then the show started, for around half an hour we had around 7-8 giant red flying squirrels emerging from their tree holes, climbing the trunks and branches and then taking off and gliding from one tree to another, running



up to the top and launching themselves off again. They were chasing each other around, it is the breeding season and they were very active and looking to mate with each other. It was great to watch as they very skilfully took off and navigated around the tree trunks and even spiralled down around a trunk until landing on the smooth bark and running back up. It was amazing to see their gliding skills and all of this is good light (unlike when they are usually seen which is in the dead of night).

We then came back to the lodge and after dinner went out for our final night drive. Once again we had many sightings of the common species which by now we were not spending much time on, such as island palm civets, striped palm civets, Malay civets, the various flying squirrels and Sunda leopard cats. One of the leopard cats was very close to the vehicle and intently sniffing the ground, it was a male and after it had sniffed at the scent (left from a female evidently) he started to call, it was an unusual sound, it was a loud bleating call as he searched for the female that had left the scent mark and was clearly receptive for mating.

We also found a couple more Malay stink badgers before as found another Sunda leopard cat chasing, playing cat and mouse and then catching, killing and eating a ricefield mouse in front of us. The last hour of the last drive was a little more eventful with a couple of Borneo colugo hanging next to each other, a very close Philippine slow loris next to the road and then the group of Asian short-clawed otters in the river near the bridge and allowing good views.

Day 15 Departure / Sepilok

Travelling, Sightseeing & Departure

This morning Colin left early on his own to make his early flight out of Lahad Datu and then at 8:30am everyone else left, we dropped Chris, Monty and Jim off in Lahad Datu for them to catch their return flight before Martin, Becky, Jill and Oleg continued onto Sandakan. On the way we stopped at the orangutan and sun bear sanctuary in Sepilok. Watching a mother and young baby orangutan feeding in the forest, before watching the rescued young ones playing in the nursery and seeing the good work being done by the sun bear sanctuary.

We then all went on our own ways to our hotels (Martin, Becky and Jill) and the airport in Oleg's case to catch his return flight home.

Species List

Borneo's Rare Mammals – September 2019

Mammals (* = heard or signs only / CT = camera trap only)

	Common Name	Binominal Name
1	Sunda short-faced fruit bat	<i>Acerodon mackloti</i>
2	Black flying squirrel	<i>Aeromys tephromelas</i>
3	Thomas's flying squirrel	<i>Aeromys thomasi</i>
4	Asian short-clawed otter	<i>Aonyx cinereus</i>
5	Binturong	<i>Arctictis binturong</i>
6	Coppery pipistrelle	<i>Arielulus cuprosus</i>
7	Ear-spot Squirrel	<i>Callosciurus adamsi</i>
8	Plantain squirrel	<i>Callosciurus notatus</i>
9	Prevost's squirrel	<i>Callosciurus prevostii</i>
10	Sambar	<i>Cervus unicolor</i>
11	Large Sunda tree mouse	<i>Chiropodomys major</i>
12	Sunda shrew	<i>Crocidura monticola</i>
13	Otter civet	<i>Cynogale bennettii</i>
14	Moonrat	<i>Echinosorex gymnura</i>
15	Asiatic elephant	<i>Elephas maximus</i>
16	Small Asiatic sheath-tailed bat	<i>Emballonura alecto</i>
17	Plain pygmy squirrel	<i>Exiliscirusu exilis</i>
18	Whitehead's pygmy squirrel	<i>Exilisciurus whiteheadi</i>
19	Sunda colugo	<i>Galeopterus varieagtus</i>
20	Ranee mouse	<i>Haeromys margarettae</i>
21	Sun bear	<i>Helarctos malayanus</i>
22	Banded civet	<i>Hemigalus derbyanus</i>
23	Collared mongoose	<i>Herpestes semitorquatus</i>
24	Large false serotine	<i>Hesperoptenus tomesi</i>
25	Fawn roundleaf bat	<i>Hipposideros cervinus</i>
26	Diadem leaf-nosed bat	<i>Hipposideros diadema</i>
27	Ridley's roundleaf bat	<i>Hipposideros ridleyi</i>
28	Muller's Bornean gibbon	<i>Hylobates mulleri</i>
29	Malay porcupine	<i>Hystrix brachyura</i>
30	Thick-spined porcupine	<i>Hystrix crassispinis</i>

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31	Crab-eating macaque	<i>Macaca fascicularis</i>
32	Southern pig-tailed macaque	<i>Macaca nemestrina</i>
33	Yellow-throated marten	<i>Martes flavigula</i>
34	Rajah spiny rat	<i>Maxomys rajah</i>
35	Lesser false vampire bat	<i>Megaderma spasma</i>
36	Medium bent-winged bat	<i>Miniopterus medius</i>
37	Bornean yellow muntjac	<i>Muntiacus atherodes</i>
38	Red muntjac	<i>Muntiacus muntjak</i>
39	Ricefield mouse	<i>Mus caroli</i>
40	Malay weasel	<i>Mustela nudipes</i>
41	Malay stink badger	<i>Mydaus javanensis</i>
42	Grey large-footed bat	<i>Myotis adversus</i>
43	Horsfield's myotis	<i>Myotis horsfieldii</i>
44	Ridley's myotis	<i>Myotis ridleyi</i>
45	Proboscis monkey	<i>Nasalis larvatus</i>
46	Philippine slow loris	<i>Nycticebus menagensis</i>
47	Borneo striped palm civet	<i>Paguma stigmatica</i>
48	Island palm civet	<i>Paradoxurus philippinensis</i>
49	Red giant flying squirrel	<i>Petaurista petaurista</i>
50	Temminck's flying squirrel	<i>Petinomys setosus</i>
51	Java pipistrelle	<i>Pipistrellus javanicus</i>
52	Least pipistrelle	<i>Pipistrellus tenuis</i>
53	Bornean orangutan	<i>Pongo pygmarus</i>
54	Maroon langur	<i>Presbytis rubicunda</i>
55	Sunda leopard cat	<i>Prionailurus javanicus</i>
56	Flat-headed cat	<i>Prionailurus planiceps</i>
57	Large flying fox	<i>Pteropus vampyrus</i>
58	Polynesian rat	<i>Rattus exulans</i>
59	Malaysian field rat	<i>Rattus tiomanicus</i>
60	Cream-coloured giant squirrel	<i>Ratufa affinis</i>
61	Acuminate horseshoe bat	<i>Rhinolophus acuminatus</i>
62	Creagh's horseshoe bat	<i>Rhinolophus creaghi</i>
63	Large-eared horseshoe bat	<i>Rhinolophus philippinensis</i>
64	Least horseshoe bat	<i>Rhinolophus pusillus</i>
65	Trefoil horseshoe bat	<i>Rhinolophus trifolius</i>
66	Geoffrey's rousette	<i>Rousettus amplexicaudatus</i>
67	Lesser Asiatic house bat	<i>Scotophilus kuhlii</i>
68	Borneo pygmy shrew	<i>Suncus hosei</i>
69	Muller's giant Sunda rat	<i>Sundamys muelleri</i>

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Y	1	2	1	2		1		1	1	1		10	7	7	

† Oleg only
‡ Colin only in Kinabatangan

Birds (* = heard or signs only / CT = camera trap only)

[illegible]

22	Great egret	<i>Ardea alba</i>
23	Intermediate egret	<i>Ardea intermedia</i>
24	Purple heron	<i>Ardea purpurea</i>
25	Great-billed heron	<i>Ardea sumatrana</i>
26	Great argus	<i>Argusianus argus</i>
27	Jerdon's baza	<i>Aviceda jerdoni</i>
28	Large frogmouth	<i>Batrachostomus auritus</i>
29	White-crowned hornbill	<i>Berenicornis cornatus</i>
30	Buffy fish owl	<i>Bubo ketupu</i>
31	Barred eagle owl	<i>Bubo sumatranus</i>
32	Rhinoceros hornbill	<i>Buceros rhinoceros</i>
33	Striated heron	<i>Butorides striata</i>
34	Borneo brown barbet	<i>Calorhamphus fuliginosus</i>
35	Greater coucal	<i>Centropus sinensis</i>
36	Rufous-backed kingfisher	<i>Ceyx erithaca</i>
37	Emerald dove	<i>Chalcophaps indica</i>
38	Whiskered tern	<i>Chlidonias hybrida</i>
39	White-winged tern	<i>Chlidonias leucopterus</i>
40	Blue-winged leafbird	<i>Chloropsis cochinchinensis</i>
41	Lesser green leafbird	<i>Chloropsis cyanopogon</i>
42	Banded woodpecker	<i>Chrysophlegma miniaceum</i>
43	Storm's stork	<i>Ciconia stormi</i>
44	Olive-backed sunbird	<i>Cinnyris jugularis</i>
45	Glossy swiftlet	<i>Collocalia esculenta</i>
46	Feral pigeon	<i>Columba livia</i>
47	Oriental magpie robin	<i>Copsychus saularis</i>
48	White-capped shama	<i>Copsychus stricklandi</i>
49	Slender billed crow	<i>Corvus enca</i>
50	Dusky broadbill	<i>Corydon sumatranus</i>
51	Blue-and-white flycatcher	<i>Cyanoptila cyanomelana</i>
52	Red-and-black broadbill	<i>Cymbirbynchus macrorhynchos</i>
53	Hill blue flycatcher	<i>Cyornis whitei</i>
54	Grey-capped pygmy woodpecker	<i>Dendrocopos canicapillus</i>
55	Orange-bellied flowerpecker	<i>Dicaeum trigonostigma</i>
56	Bronzed drongo	<i>Dicrurus aeneus</i>
57	White-bellied woodpecker	<i>Dryocopus javensis</i>
58	Green imperial pigeon	<i>Ducula aenea</i>
59	Little egret	<i>Egretta garzetta</i>
60	Black-crowned pitta	<i>Erythropitta ussheri</i>
61	Black-and-yellow broadbill	<i>Eurylaimus ochromalus</i>

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102	Common tailorbird	<i>Orthotomus sutorius</i>
103	Reddish scops owl	<i>Otus rufescens</i>
104	Eurasian tree sparrow	<i>Passer montanus</i>
105	Stork-billed kingfisher	<i>Pelargopsis capensis</i>
106	Oriental honey buzzard	<i>Pernis ptilorhynchus</i>
107	Chestnut-breasted malkoha	<i>Phaenicophaeus curvirostris</i>
108	Crimson-winged woodpecker	<i>Picus puniceus</i>
109	Hooded pitta	<i>Pitta sordida</i>
110	Yellow-bellied prinia	<i>Prinia flaviventris</i>
111	Long-tailed parakeet	<i>Psittacula longicauda</i>
112	Jambu fruit dove	<i>Ptilinopus jambu</i>
113	Black-headed bulbul	<i>Pycnonotus atriceps</i>
114	Asian red-eyed bulbul	<i>Pycnonotus brunneus</i>
115	Spectacled bulbul	<i>Pycnonotus erythrophthalmos</i>
116	Yellow-vented bulbul	<i>Pycnonotus goiavier</i>
117	Cream-eyed bulbul	<i>Pycnonotus pseudosimplex</i>
118	Orange-backed woodpecker	<i>Reinwardtipicus validus</i>
119	Silver-rumped needletail	<i>Rhaphidura leucophygialis</i>
120	Helmeted hornbill	<i>Rhinoplax vigil</i>
121	Wreathed hornbill	<i>Rhyticeros undulatus</i>
122	Spotted dove	<i>Spilopelia chinensis</i>
123	Crested serpent eagle	<i>Spilornis cheela</i>
124	Chestnut-winged babbler	<i>Stachyris erythroptera</i>
125	Brown wood owl	<i>Strix leptogrammica</i>
126	Asian paradise flycatcher	<i>Terpsiphone paradisi</i>
127	Collared kingfisher	<i>Todiramphus chloris</i>
128	Little green pigeon	<i>Treron olax</i>
129	Pink-necked green pigeon	<i>Treron vernans</i>

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										~10	~15				

Reptiles (* = heard or signs only / CT = camera trap only)

	Common Name	Binominal Name
1	Striped Bornean tree skink	<i>Apterogogodon vittatum</i>
2	Dog-toothed cat snake	<i>Boiga cynodon</i>
3	Green crested lizard	<i>Bronchocela cristella</i>
4	Malaysian coral snake	<i>Calliophis bivirgata</i>
5	Saltwater crocodile	<i>Crocodylus porosus</i>
6	Malayan bent-toed gecko	<i>Cyrtodactylus pulchellus</i>

September															
Tawau	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
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