

Borneo's Mammals - Deramakot Forest Reserve

Naturetrek Tour Report

20 April - 3 May 2019



Asian (Bornean Pigmy) Elephant



Large Frogmouth



Banded Civet



Small-clawed Otter

Report by Tim Low
Photos by Andrew Riley (plus otter by Gordon Mitchell)



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With seven Naturetrek clients

Summary

We saw much that was remarkable. We encountered species that are difficult to find, including endangered Otter Civets, a Banded Civet, Malay Porcupine, Sunda Skunk, Yellow-throated Martens, Large Frogmouth, Barred Eagle-owl and Black-and-white Bulbul. We saw much that was entertaining including 40 elephants swimming, bathing and struggling through mud; otters plunging their arms into mud to grab food only 10 metres from us; Orangutans feeding on mangrove palm fronds and grass stems, including one that walked through elephant grass less than ten metres from us; and glides from trees performed by a Colugo, flying squirrels and a flying lizard. We saw Orangutans on seven of our days in the field. Many of our animal encounters were long and close, including 10 minutes watching otters, and twice that long with elephants and feeding Orangutans. We saw six civet species (if we count a largely-hidden Binturong) and had many fine sightings of Leopard Cats and excellent views of Slow Lorises. We saw all the gliding animals for which South East Asia is famed – flying lemurs (Colugos), flying squirrels, a flying snake, flying gecko, flying lizards and flying frogs. We saw five nocturnal bird species, including Borneo's three largest owls and the rarely seen Large Frogmouth. Those with an interest in insects saw some of Asia's best, including a Giant Atlas Moth (*Attacus atlas*), which is the world's largest moth, Swallowtail Moth (*Lysia*), Giant Katydid (*Pseudophyllus*), Giant Praying Mantis (*Paratoxodera*), Three-horned Rhinoceros Beetle (*Chalcosoma mollenkampii*), a stag beetle seven centimetres long and a giant Longicorn Beetle. Although we did not see a Clouded Leopard we had so many outstanding sightings that the trip counted as a great success.

Day 1

Saturday 20th April

Outbound to Kuala Lumpur

Three members of the group travelled from London, departing from Heathrow Airport on a Malaysian Airlines flight to Kuala Lumpur (KL), a journey of about 12 hours. Tim travelled from Brisbane, Australia, while four of the group reached Sandakan on earlier flights.

Day 2

Sunday 21st April

Outbound to Kuala Lumpur and on to Sandakan and Sepilok

The group met up at Sepilok Nature Resort in the early afternoon, and soon walked to the famous Sepilok Orangutan Rehabilitation Centre (SORC), just five minutes away. A White-bellied sea-eagle soared nearby as we reached the entrance. Within a few minutes of entering we came upon a young Orangutan less than two metres from the boardwalk, sprawled between two saplings as if it had been taught to pose for endearing photos, though it was far too close for those of us with long lenses. It was near one of the feeding centres and soon continued on its way there. We went inside and watched five Orangs feeding on the supplied fruit in an outdoor arena.

The other feeding station, a wooden platform set inside forest, was quiet when we arrived, but a mother and baby Orangutan soon arrived to feed. The mother smacked her lips in alarm when an Elephant trumpeted in the distance. Several of these are being held at Sepilok after removal from a palm plantation prior to release somewhere else.

At 5 pm we went to the Rainforest Discovery Centre where two Giant Squirrels and some appealing birds were seen. A Stork-billed Kingfisher was perched on a branch, staring intently at the lake edge below, waiting for a fish to rise to the surface. From the canopy walkway we saw a Black Hornbill, two White-rumped Woodpeckers and a Dollarbird perched high in trees. A Wallace's Hawk-eagle flew about and landed on a branch. At dusk a Red Giant Flying Squirrel emerged, clambered up its tree, and glided to another tree, then a few minutes later it glided to another. While walking back, Henry spotted two Brown Hawk-owls perched on a distant branch. Every so often one would sally out and return, evidently having caught a large insect in flight.

On the walk back Henry spotted a Colugo on the trunk of a nearby tree, and we watched this remarkable gliding mammal shuffle upwards and out of sight. The two Colugo species, which are confined to South East Asia, are placed in their own order, as the closest relatives of primates. A nearby tree offered us views of a Red Giant Flying Squirrel.

Day 3

Monday 22nd April

Sepilok and on to Deramakot Forest Reserve

In the morning many Long-tailed parakeets were flying about the resort calling loudly. Tim showed the group a Sunda Short-nosed Fruit Bat hanging from the ceiling of one chalet. A Green Crested Lizard perching for several minutes on a railing near the restrooms gave us all opportunities to admire and photograph this stunning lime-green reptile from little more than an arm's length away.

After breakfast we visited the Sun Bear Conservation Centre. The vulnerable Sun Bear, the world's smallest bear species, is threatened by habitat loss, illegal hunting and capture of cubs for the pet trade. The centre rehabilitates orphans and confiscated pets, keeping them in large fenced enclosures. One bear that began climbing a slender tree was soon challenged by a second bear higher up, which growled and began descending to confront it. The first bear retreated but then made a second and third attempt to climb up, only to be repelled again and again. We could see no fruit or other reason why two bears would covet this ordinary-looking tree, but were entertained for minutes by their action-packed altercation, which afforded many photographic opportunities.

When we arrived Henry had pointed out a Gliding Gecko pressed against a tree trunk, and while leaving he pointed out a Slender Tree-shrew flitting along a low branch, not far from a Plantain Squirrel.

Most of the rest of the day was taken up with the drive to Deramakot. The elephant dung we saw on the entrance road held the promise of good mammal sightings, and some guests saw a Bearded Pig on the drive in. Our first night drive, which went from 7.30 to midnight, served as a great start. Late afternoon rain had brought out enough frogs to attract the frog predators. In rapid succession we saw three Leopard Cats, all of which ran quickly from the road. The first animal seen properly was a Colugo dangling from the underside of a branch. It clambered to the main trunk, climbed higher, then glided across the road to gasps of admiration. Another animal seen well and greatly appreciated was a Slow Loris. It proceeded with slow deliberation along a horizontal branch. We saw two Lesser Mousedeer, one of which behaved strangely, approaching the idling truck until it was less than half a metre away, before wandering back up the road, giving us excellent views from many angles. A Malay Civet also provided remarkably close views. We could see it through gaps in foliage at the side of the road and it emerged in full view less than eight metres from the vehicle and trotted away, limping slightly. With its boldly-spotted coat it was a remarkable sight. A couple of frogs were seen as well.

When we stopped for a brief toilet break a Large Frogmouth called eerily nearby, and with a tape of its call, Henry called it in close enough to give us sustained views of this striking bird, described in one field guide as 'rare'.

Day 4

Tuesday 23rd April

Deramakot Forest Reserve

A heavy morning mist created plenty of atmosphere in the forest, but was not conducive to seeing birds clearly on our early morning drive, which began shortly after 6 am. A Crested Serpent-eagle, Greater Coucal, Racket-tailed Drongo and Raffles Malkoha showed well. We encountered a troop of Gibbons that slowly moved off, displaying the aerial agility for which they are renowned. A few Sambar Deer streaked across the road, and at one point so did something very special – a Sunda Skunk. These are difficult mammals to see, and this one showed that by looking like a black and white blur, giving Claire the best view because she was looking in the right place at the right time. Something else we saw was a giant *Koompassia* tree with an old ladder running up the trunk, put there by bee harvesters. Eight nests of giant honeybees hung from the undersides of high branches. Henry told us that bee harvesters carry fire up the ladder so the smoke will disorient the savage bees. The courage required of bee harvesters is something to marvel at, given the prospect of being attacked by savage bees while 60 metres or more up in a tree. A few of these bees entered the restaurant, giving us the chance to see them up close.

On the afternoon drive Henry searched diligently for Orangutans, eventually finding us our first completely-wild ones, a mother and baby attended by a very large male. To have a male with a female and young is unusual. While they were moving through high trees, Andrew photographed Whiskered Treeswifts in the very act of mating. A Black Hornbill called and flew above the road.

Our after-dinner drive proved productive. In the dusk gloom Gordon spotted a Red Giant Flying Squirrel clambering up a tree. Some of the group succeeded in snapping photos of it in 'flight' as it soared across the road close to the truck. In quick succession we saw three Island Palm Civets eating fruit in separate roadside trees, including one at eye level, only 10 metres away, which kept feeding while we watched. In another tree a baby Bornean Striped Civet followed its mother along a horizontal branch, first in one direction then back the way they had come, the mother going over the top of her baby to switch direction. Henry pointed out a Binturong high in a tree, but all we could see was a section of the dark prehensile tail framed by leaves. The fact that it didn't move was one pointer to its identity, for this, the largest of all civets, is sluggish. A Leopard Cat gave us a better view than those of the night before though it was still brief. The highlight of the evening was a Slow Loris that spent minutes climbing slowly along branches only 10 metres from us. The smallest animal seen was a whip scorpion crawling on the ground, provoking questions about where whip scorpions fit into the scheme of classification. We were back before 1 am.

Day 5

Wednesday 24th April

Deramakot Forest Reserve

A morning drive beginning at 7.30 produced good birds, notably a Blyth's Paradise Flycatcher trailing its long white tail, a White-fronted Falconet, Black-and-yellow Broadbills, Long-tailed Parakeets and White-crowned Shamas. A Giant Squirrel and Bornean Striped Tree-skink were seen as well.

The night drive produced ample sightings, the highlights being a Malayan Porcupine that retreated from the road edge with spines bristling, and an Elephant that strode with vigour and determination along the road ahead of us. We had our first decent views of Sambar Deer. A Palm Civet spent 15 minutes munching on fruit in a large roadside shrub about 10 metres from us, ignoring the idling of the truck, bright spotlight, and clicking of cameras. A Malay Civet gave us excellent side views as it wandered past. Other mammals seen were a Striped Civet, Colugo, Thomas' and Red Giant Flying Squirrels. Henry and the driver saw Clouded Leopard tracks on the road, which continued for two kilometres before re-entering the forest.

Day 6

Thursday 25th April

Deramakot Forest Reserve

Because the previous night's drive had continued until 1.30 am there was no morning activity apart from casual strolls around the area by those who were not sleeping in. This day at Deramakot, like those that followed, featured an afternoon drive beginning at 3 pm that continued into the early evening, followed by a longer post-dinner drive finishing well after midnight, leaving mornings and the heat of the day for strolls and sleep. On this day Sarah photographed a Pied Fantail and Nick saw a Lesser Green Leafbird from the restaurant. Tim watched a Yellow-rumped Flowerpecker eating *Melastoma* fruit.

On the afternoon drive Henry tried hard to find us another Orangutan. At 6 pm he succeeded, spotting a female and baby, although they were well back from the road. The female was eating small fruits. Birds seen included a Paradise Flycatcher, Racket-tailed Drongo and Emerald Dove. Our driver, Mr Ayang, spotted recent tracks of a Clouded Leopard and her cubs, and we were shown these in wet mud at the side of the road. Night descended as we drove back, bringing night animals out. We watched a very fluffy Slow Loris on a branch, and also saw a Red Giant Flying Squirrel and two Malay Civets.

The post-dinner drive, which went from 8.30 pm to 3.10 am, began with an amazing sequence of Leopard Cats. Unlike our previous fleeting views we had several minutes viewing one cat, and then another, as they strolled along the road ahead of us, every so often turning to provide side views and sometimes looking our way. When one of them eventually slipped into roadside weeds we could see its big soulful eyes looking our way from 10 metres away. We saw another two Leopard Cats more briefly, adding up to a feast of feline viewings.

At one point Claire was suddenly shouting and squirming. A massive Longicorn Beetle had landed on her in the dark and she could not see what it was. Longicorn Beetles include some of the world's largest insects, and this one certainly qualified as massive. Tim held it up so photos could be taken.

We paused at a pool around which large frogs were gathered. Of the three species, the Wallace's Flying Frog was a treat to see, given how famous they are as one of Asia's gliding animals. As one climbed up a vine we could see the massive yellow webbed feet that help it glide. We saw a new mammal for the trip, a Black Flying Squirrel at a clump of fruit. Other mammals seen were Malay Civets, Palm Civets and Striped Civets. A Buffy Fish Owl and an asleping bird, a young White-crowned Shama, were also sighted.

Back at our rooms, the wierd and wonderful insects gathered around the lights included a Giant Atlas Moth, the world's largest moth. Nick, Claire and Tim were up extra late this night and each night that followed, admiring

and photographing the largest and strangest insects, which included katydids, stag beetles and longicorn beetles, along with ants that attacked some of these, pinning them down by pulling at them from all sides.

Day 7

Friday 26th April

Deramakot Forest Reserve

Heavy rain fell during the afternoon, and though it subsided there was still enough falling that our afternoon outing had to be aborted. Birds active close to the restaurant provided some interest. Andrew photographed a Black-and-red Broadbill, and other birds seen included a Fairy Bluebird, White-crowned Shama and Grey-cheeked Bulbul.

We had an early (5 pm) dinner to make the most of the evening. Driving out before dusk we soon found Grey Leaf Monkeys, very high in an isolated tree, a new mammal for the trip. Two Black Hornbills perched nearby. After night fell we had not been driving very long when two grey animals, looking like otters, sprinted across the road in front of us, and one paused on the right hand verge – Otter Civets! We knew that heavy rain can bring these endangered animals on to roadsides, and after Clouded Leopards they were the animals we had been talking about the most as something we wanted to see. It was an uplifting experience.

The next excitement came when we rounded a curve in the road and came upon two Elephants, a mother and her calf. They pushed into the undergrowth and the mother trumpeted. An hour or so later we had another special sighting – a Banded Civet. We could see the striking barred pattern and long neck as it slowly moved past the truck and into a grove of wild ginger. Henry said it had been years since he last saw one. Gordon was ecstatic.

Rain began falling and Henry told Mr Alang to reverse the truck to three forestry bulldozers parked in mud at the side of the dirt road. He invited us to avail ourselves of this 'accommodation'. The rain soon eased off and only Claire climbed into a bulldozer cabin.

We had our first close and clear views of a Buffy Fish Owl, and as well as that, Henry found a Crested Serpent-eagle sleeping on a branch above the road, and we had close views as it glared down at us.

Other animals seen were our usual three civet species, a Leopard Cat and a Yoshi's Bow-fingered Gecko.

Day 8

Saturday 27th April

Deramakot Forest Reserve

Sarah and Gordon were strolling along the road in the morning when two Yellow-throated Martens, one after the other, scampered across the road. What luck!

On our afternoon outing we had barely left the forestry station when we encountered a very large Water Monitor on the road. We then saw a Black Hornbill and encountered a snake on the road. It was long, thin and dark, more than a metre long, and could not be identified at the time. When he returned home, Tim sent Gordon's photos of it to another Naturetrek Guide, Terry Reis, who identified it as a White-bellied Rat Snake. The picture

of this species in the Borneo snake book is misleading in showing a multi-coloured juvenile rather than the drab adult. We saw Whiskered Treeswifts and yet another Paradise Flycatcher, before Mr Alang stopped the truck and we had an hour walking along the road to enjoy the rainforest on foot, seeing tracks of Sambar Deer and Bearded Pigs in the mud and hearing Cricket Frogs calling from roadside puddles, but without seeing said frogs, or working out exactly where they were hiding. At 6 pm we resumed the drive and soon saw a Black Flying Squirrel, then something unusual, two Fireback Pheasants sleeping on a branch near the road.

On our after-dinner drive we saw a Thomas' Squirrel gliding dramatically (our third mammal species in 'flight'), a Colugo hanging from a twig, yet another Leopard Cat and the usual three civet species.

Day 9

Sunday 28th April

Deramakot Forest Reserve

On our afternoon drive Tim spotted Flying Lizards perched on a tree and we took photos of these. We saw a Crested Serpent Eagle, the same falconet on the same dead tree, and Henry found us an Orangutan in a small tree right beside the road, where it was feeding on flowers. It soon descended and hid behind foliage, but then Henry found a Red-bearded Bee-eater, which impressed us greatly. Tim found a click beetle and showed us how, when placed on its back on the ground, it can flip into the air by snapping its body, then land the right way up every time. Christine found this very entertaining. Driving back in the dark we saw a Sambar Deer, a Brown Wood Owl, and something intriguing in long grass that proved to be a Malay Civet rather than something rarer.

Our after-dinner drive yielded action – a fight on the road by two Palm Civets. One bounded after the other, caught it, and they fought each other while screeching. We saw a Leopard Cat stroll along a nearby log, a Sambar Deer, Black and Red Giant Flying Squirrels, Striped and Malay Civets, a Buffy Fish owl and, best of all, a Barred Eagle Owl perching on an exposed branch. On this, our last evening at Deramakot, we had seen the three largest owl species in Borneo, a very satisfying achievement given how scarce the eagle-owl is.

Day 10

Monday 29th April

Deramakot Forest Reserve, Gomantong Caves and on to Kinabatangan Wetlands Resort

Shortly after 8 am we left Deramakot. When we stopped for a toilet break just beyond the forest Nick saw a Flying Lizard glide into a small tree, providing photo opportunities from up close. The fence near the toilets had several thick wooden posts that were uprooted or askew – the work of passing Elephants.

Our next stop was Gomantong Cave. This location was made famous by David Attenborough filmed sitting on an enormous pile of bat guano and also being suspended high in a stream of exiting bats. The cave provides roosting for 2,000,000 Wrinkle-lipped Bats, with another eight bat species present, some of which issue forth each evening in tight flocks that sometimes coalesce into a stream. The cave is equally well known for the harvesting of swiftlet nests for the production of soup, both Edible-nest and Black-nest Swiftlet. A *Borneo Post* article in 2016 said that 22 kilogrammes of swiftlet nests was worth 165,000MYR (more than £30,000).

Just outside the caves, two Wallace's Hawk-eagles perched obligingly for photos and a Crested Serpent Eagle was seen, along with Common Sun Skinks. The cave is something that visitors admire or recoil from when they see

its dramatic contents. The boardwalk passes by enormous piles of bat guano and large congregations of cockroaches. We saw Long-legged Centipedes (Scutigermorphs), freshwater crabs, swiftlets flying around the cave entrance and sitting on nests an arm's length away, bats clinging to the walls or wheeling high above us, and a large rat. Among a group of Horseshoe Bats Henry pointed out a striking bat with white patches on brown fur – a Diadem Leaf-nose Bat.

From the caves it was a short drive to Sukau where we boarded a boat for the journey to Abai. On riverside trees we saw two Wrinkled Hornbills and several other birds.

The boat journey became very exciting when we rounded a bend and came upon swimming Elephants. At first there seemed to be eight or so but we noticed more and more as the minutes passed. The river became so busy we could not take in all the action. Some Elephants seemed to be enjoying the water while others were more interested in climbing out on to the bank. Some were so low in the water they looked like lumpy hippos, especially when the trunk was underwater leaving less than half a metre of the top of the head and back showing. Two Elephants appeared to be courting. The one in front curled its trunk back, while the one behind extended its trunk forwards until the tips were gripped together in a 'kiss'. Soon they were side by side with their whole trunks tightly entwined.

Other Elephants, struggling to leave the water, were flailing about in the deep mud on the bank. Their legs were sinking right up to their bellies, and they could withdraw them only with great effort. Often they would pause on their knees for a minute to recover their energy. Elephants are very much at ease in water and on firm ground, but here they were having much trouble transitioning from one to the other. One big Elephant had a baby just in front, and her struggles were so dramatic it seemed possible she might injure it, but did not do so. Several babies emerged with their mothers, having been hardly noticeable in the water. The mud was no problem for them. When the Elephants reached firmer ground beyond the mud, just before they disappeared into the forest, they sprayed loam over their backs, giving them a back that was red with soil, above a belly and legs that were grey and glistening from wet mud. Accompanying this show were trumpeting noises and roars, coming from Elephants in the water, on the bank, and inside in the forest.

After 20 minutes of this spectacle the boat took us slowly downstream, and we realised there were more and more Elephants in the water, close to the bank, walking or swimming upstream towards the low muddy reach where the others had exited. Henry said they were part of a herd of more than a hundred. It was impossible to count them all but we saw at least 40, some of them from no more than 20 metres away. They had obviously seen ample people in boats before because they hardly looked our way.

We were late reaching the Kinabatangan Wetlands Resort, but no one had any complaints about that! It had been a boat journey we would never forget. We met Dido, the resort guide, and enjoyed a very late lunch. When it was dark Dido led us on a nightwalk around the resort boardwalk. The highlight was a mother Colugo in a tree with a baby that peered down at us with large eyes. It was the closest we had been to one of these remarkable animals. We also saw a scorpion, Ant-eating Spider, and various pitcher plants. It was not an exciting walk, but after those elephants how could it be?

Day 11

Tuesday 30th April

Kinabatangan Wetlands Resort, Sungai Kinabatangan

We began the day with a 6 am boat cruise. We had only been going for two minutes when we encountered a Proboscis Monkey low down in a tree at the water's edge. It was familiar enough with people that we could watch it munching leaves from ten metres away. We then met more Proboscis Monkeys in a bachelor group, and could admire these strange monkeys with their huge noses. We saw leaping Long-tailed Macaques and Green Imperial Pigeons, Stork-billed Kingfisher and Darters. The best birds we encountered were two Black-and-red Broadbills perched above the river on dead palms, which contained their nest, mimicking a clump of fine flood debris.

The morning highlight came when Dido suddenly ordered the boat to change direction for he had sighted an Orangutan. It was a male about 15 years old, perched low down in a riverside tree, but was not keen to look our way, providing only occasional glimpses of his face. When it did look at us its eyes seemed soulful and thoughtful, as if we were meeting someone with a deep experience of life. After ten minutes he suddenly climbed down the tree to a low clumping palm and began tearing off the upper stems of palms, and chewing the white bases. This was happening only ten metres from us, and if we stood up it was happening at eye level. It was by far our closest encounter with a wild Orangutan so it was something to savour. Our previous sightings had been of animals up in trees and sometimes in fading afternoon light.

This feeding was fascinating but the show became more exciting when he climbed to the ground and began walking along the riverbank to the next group of trees. Rather than wade through the dense grass he kept to the very edge of the bank, giving us very clear and close views. Our boatman was able to stay so close that when he paused to eat some white stem bases of elephant grass, the boat was less than 6 metres away. After walking 20 metres he climbed into the base of a small tree to eat more palm bases. Tim was in the front and he tugged on some vines to bring the boat so close that he was less than 3 metres away, with a tangle of stems in the way to prevent this situation intimidating the Orang, who continued feeding after a brief glance at him. On this river the orangutans see enough fishermen and ecotourists in boats to think of humans as harmless.

We spent more than half an hour with this Orangutan, so close that with binoculars we could see every detail of his body, including his dainty eyelashes, creases on his dark fingers, wrinkles around his anus, hairs on his scrotum and (when he chewed) his thick pink tongue and dark stains at the bases of his teeth. The drought in Borneo, by curbing the fruit supply, had forced him down towards the ground to eat unusual foods. He did not, however, look thin. Orangutans mainly eat fruit but only one of the four foods we had seen them eating was fruit, the others being flowers and now palm and grass shoots.

We came back enormously satisfied with this outing. During the rest break in the middle of the day some guests wandered about on the boardwalks and saw and photographed various birds including a Velvet-fronted Nuthatch, Rufous Woodpecker and Crimson-breasted Flowerpecker.

Our afternoon boat outing was also spectacular. Dido soon found a Yellow-ringed Cat Snake coiled on a nypa palm frond at the water's edge. From up close we could see its bright yellow rings on a shiny black background. Other good sightings included a troop of bachelor Proboscis Monkeys avidly feeding on the flowers of a riverbank climbing legume, a family of grooming Proboscis Monkeys, a pair of Long-tailed Parakeets at their

nest-hole in a dead tree, a Grey-headed Fish Eagle, Pied Hornbill, and a White-bellied Sea Eagle that grabbed a bunch of leaves from the top of a tree, having presumably expected a squirrel instead.

The highlight came when Dido called out 'otter'. There were four of them feeding very actively on the wet mud of the riverbank, and they showed no response to our close approach, other than throwing us occasional brief glances. Again and again we saw one plunge a right arm deep into the mud, and withdraw an item of food, which went into the mouth, to be briefly chewed and swallowed, or be taken to the water's edge to be washed and eaten with the mouth just below the water's surface. We could not see what the items were but Henry suggested small crabs. After eating an item and moving along the bank an otter would sometimes drag the right arm as if was injured, a pose we could not interpret, unless the animals they were eating were nipping or stinging them. This spectacle was made remarkable by our proximity – at one point our boat was only five metres from a frisky otter. Dido said it was very unusual for otters to be so indifferent to people. After ten minutes we lost sight of them under the dense branches of a sprawling riverside tree. What an experience!

A boat outing after dinner produced a Crocodile more than three metres long, that lay on a submerged sandbank, with most of its body exposed above the water. Jay brought us closer and closer until the boat was only three metres from its great hulk. Long-tailed Macaques in nearby trees were awoken by us and obviously saw the Crocodile lit up by our spotlight because they broke into a series of alarm calls – not something they do here in the mere presence of people.

We were shown several trees full of flashing fireflies, a very pretty spectacle. We also saw sleeping Blue-eared and Collared Kingfishers.

Day 12

Wednesday 1st May

Kinabatangan Wetlands Resort, Sungai Kinabatangan

The first hour of the morning boat outing did not deliver much of interest, other than a White-bellied Sea-eagle and Stork-billed Kingfisher. The Kinabatangan forms a delta at its mouth, and we went downstream into channels lined entirely with nypa palms, seeing little in these apart from the occasional Darter. During our tea and coffee break Dido explained that we were searching for something unusual – Orangutans, including a very large male, that gain much of their sustenance by breaking off nypa palm fronds to eat the starchy bases.

Soon after this break ended Dido, or maybe it was Henry, spotted something and Jay brought the boat to a halt. We couldn't see anything, but after some minutes of waiting the tops of fronds started swaying dramatically as something large moved below in the gloom. It then showed itself in the sunshine at the river edge, a massive male Orangutan with big facial flanges. It began pushing at the base of a frond to weaken and break it, rocking the frond back and forth. It was standing on the bases of other fronds with its feet almost in the water. At one point, when it had paused in its exertions, it scooped up a handful of the brackish water and brought this to its mouth. It succeeded in breaking one frond stalk in half, making the sound you would get from snapping a giant stalk of celery, and briefly chewed the white interior, but the stem of a frond is more palatable at the very base than halfway up, and it hardly ate any, instead climbing lower and reaching an arm deep into the water, so low that its beard was wet, to pull on another frond to break at the base. It paused and made other attempts, at one point reaching so far into the river that one side of its head was under water, though not as far as its eye. After a

few minutes it achieved success, pulling up the detached frond, and breaking from the base a big chunk of white starch that it proceeded to chew, as if this was a big apple.

We witnessed all this from about 25 metres away on the other side of the channel. On a few occasions it threw us a quick look, but the only time it seemed to care was when the boat began drifting too close and Jay started the motor to return us to the far bank. It paused to watch, then resumed its operations when it saw the boat come to rest. Immense strength was needed to snap off the giant frond at the base, all the more so when you take into account the water resistance. We returned to the resort, greatly impressed by this second very unusual orangutan encounter.

During the heat of the day various species were seen as we wandered around on the boardwalks, including Bearded Pigs, a Sambar Deer, Blue-crowned Hanging Parrot, White-bellied Woodpecker and Red-throated Skink. Something special that was also seen was a Paradise Flying Snake, removed from a guest's room by a member of staff. We could feel the curvature of its belly that helps it glide. It took off quickly when released, back towards the guest's room (he was not one of us).

On our afternoon outing we passed a boat pulling a raft of logs more than half a kilometre long. All the logs were from very small trees, reflecting the hard reality that all large trees were taken from the Kinabatangan catchment decades ago. We saw another Grey-headed Fish Eagle, Silvered Langurs, and Long-tailed Macaques, including youngsters, eating grass shoots at the river edge.

We travelled a long way upstream to a tributary called the Resang River, the mouth of which bustled with activity. Pairs of cables have been strung between trees to help Orangutans cross this small river, and many monkeys were using these, and resting part way. A line of Proboscis Monkeys walking along one cable with hands gripping the second cable almost a metre above them proved an amazing sight, and so did the struggles of smaller monkeys, which could not, in the middle, reach both cables at once.

A Red-naped Trogon was darting between riverside trees but only flashes of red could be seen. A Blue-eared Kingfisher was diving into the water like a living spear, and returning each time to its perch, a dead branch thrusting above the water, with a tiny squirming fish, catching several fish in a couple of minutes, indicating a very easy lifestyle. It showed no concern when the boat drifted within three metres. Rhinoceros Hornbills landed nearby, one of them perching in the afternoon sun to provide a classic view of this iconic bird. A Wrinkled Hornbill was also seen to advantage.

A little further upstream we encountered a troop of Pig-tailed Macaques whose members were variously resting and cavorting in riverbank trees. One youngster was trying to climb a smooth straight tree which had adults resting in the crown, but its outstretched arms could not reach even halfway round the trunk, though that did not stop it making slow upward progress. It was resting part way when a second, larger youngster climbed up from below and bit its hand. It let go and fell into the shrubbery below. Such is a young monkey's life.

There was no outing on this, our last night, but we felt no need for one, given the outstanding sightings the Kinabatangan had given us of Elephants, Otters, Orangs and everything else.

Day 13

Thursday 2nd May

Kinabatangan Wetlands Resort, and homeward bound

As we walked down to the jetty for our last morning boat cruise we could see from the boardwalk Silvered Langurs and a Proboscis Monkey loafing in a tree.

We were warned that we might not see any new species on our last outing but we ended up seeing four. A small black bird with white wings made its way to dead stems at the top of a tree and sang musically – a Black-and-white Bulbul. Tim said that this is a scarce bird. Dido lives at Abai and takes guests out almost every day but admitted he had never seen one before. Henry said he had seen the species only once before. Tim had also had one previous encounter. Black-and-white bulbuls are nomadic, creating the possibility that this calling bird had wandered far from others of its kind.

Other new birds seen were a Changeable Hawk-eagle (pale phase) that perched generously on a branch beside the river, and Little Green pigeons and Blue-throated Bee-eaters seen only in flight. Other sightings included a Pied Hornbill, White-bellied Sea-eagle, Brahminy Kite, White-bellied Woodpecker, Stork-billed Kingfisher, Collared Kingfisher, Blue-eared Kingfisher, Raffles Malkoha, Long-tailed Parakeets, Green Imperial Pigeon, Hill Myna, Javan Mynas, White-crowned Shama and a Dollarbird at its nesting hole.

As well as these we were taken to a small (1 metre) saltwater crocodile resting on the mud of the riverbank, that did not move when Jay took the boat to less than three metres away, allowing many photos to be taken.

We then returned for breakfast and a shower. Near the restaurant, Tim saw a Scarlet-backed Flowerpecker. We were soon in a larger boat on our way home. At the jetty at Sandakan a last new bird for the trip, a Striated Heron, was sighted, along with Glossy Starlings and Tree Sparrows to remind us we were back in civilisation.

We were driven to the airport for our flights home, with many special memories to cherish.

Day 13

Thursday 2nd May

Arrival back in the UK

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Species Lists

No one participant saw all the species listed in the tables hereunder. Kinabatangan includes Gomantong Cave, Sungai Kinabatangan and its tributaries. Species listed but not noted for any location were seen in transit only

Mammals [S = seen; H = heard only; E = Endemic. Nomenclature follows Phillipps (2016)]

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Large Flying Fox	<i>Pteropus vampyrus</i>		S	S
Diadem roundleaf Bat	<i>Hipposideros diadema</i>			S
Wrinkle-lipped Bat	<i>Tadarida plicata</i>			S
Horseshoe Bat species	<i>Rhinolophus sp</i>			S
Slender Treeshrew	<i>Tupaia gracilis</i>	S		
Bornean Colugo	<i>Cynocephalus borneanus</i>	S	S	S
Philippine Slow Loris	<i>Nycticebus menagenisis</i>		S	
Sabah Grey Langur E	<i>Presbytis sabana</i>		S	
Silvered Langur	<i>Trachypithecus cristatus</i>			S
Proboscis Monkey E	<i>Nasalis larvatus</i>			S
Long-tailed Macaque	<i>Macaca fascicularis</i>		S	S
(Southern/Sunda) Pig-tailed Macaque	<i>Macaca nemestrina</i>		S	S
North Bornean Gibbon E	<i>Hylobates funereus</i>		S	
Bornean Orangutan E	<i>Pongo pygmaeus</i>	S	S	S
Sunda Giant Squirrel	<i>Ratufa affinis sandakanensis</i>	S	S	
Prevost's Squirrel	<i>Callosciurus prevostii pluto</i>	S	S	S
Plantain Squirrel	<i>Callosciurus notatus</i>	S		S
Black Flying Squirrel	<i>Aeronyx tephromelas</i>		S	
Red Giant Flying Squirrel	<i>Petaurista petaurista</i>	S	S	
Thomas's Flying Squirrel E	<i>Aeronyx thomasi</i>		S	
Malayan Porcupine	<i>Hystrix brachyura</i>		S	
Rat species	<i>Rattus sp</i>			S
Yellow-throated Martin	<i>Martes flavigula</i>		S	
Sunda Skunk	<i>Mydaus javanicus</i>		S	
Small-clawed Otter	<i>Aonyx cinereus</i>			S
Bornean Striped Palm Civet	<i>Arctogalidia stigmatica</i>		S	
Island Palm Civet	<i>Paradoxurus philippinensis</i>		S	
Malay Civet	<i>Viverra zangalunga</i>		S	
Otter civet	<i>Cynogale bennettii</i>		S	
Binturong	<i>Arctitis binturong</i>		S	
Banded Civet	<i>Hemigalus derbyanus</i>		S	
Leopard Cat	<i>Prionailurus bengalensis</i>		S	
Asian (Bornean Pigmy) Elephant	<i>Elephas maximus borneensis</i>		S	S
Bearded Pig	<i>Sus barbatus</i>		S	S
Lesser Mousedeer	<i>Tragulus kanchii</i>		S	
Greater Mousedeer	<i>Tragulus napu</i>		S	
Sambar	<i>Cervus unicolor</i>		S	S

Reptiles (S = seen; H = heard only; E = Endemic. No specific nomenclature is used. Names in brackets indicate some alternative common names.)

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Saltwater Crocodile	<i>Crocodylus porosus</i>			S
Crested green lizard	<i>Bronchocela cristatella</i>	S	S	

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Horned Flying lizard	<i>Draco cornutus</i>		S	
Flying lizard species	<i>Draco sp</i>	S		
Yoshi's bow-fingered gecko	<i>Cyrtodactylus yoshii</i>		S	
Warty House Gecko	<i>Gekko monarchus</i>			S
Smith's Giant Gecko (Barking Gecko)	<i>Gekko smithii</i>		H	H
Asian House Gecko	<i>Hemidactylus frenatus</i>	S	S	S
Horsfield's Parachute Gecko	<i>Ptychozoon horsfieldii</i>	S		
Striped Bornean Tree Skink E	<i>Apterygodon vittatum</i>		S	S
Common Sun Skink	<i>Eutropis multifasciata</i>			S
Red-throated Skink	<i>Eutropis rudis</i>			S
Water Monitor	<i>Varanus salvator</i>	S	S	
Yellow-ringed (mangrove) cat snake	<i>Boiga dendrophila</i>			S
Paradise Flying Snake	<i>Chrysopelea paradisi</i>			S
White-bellied Rat Snake	<i>Ptyas fusca</i>		S	

Amphibians [S = seen; H = heard only; E = Endemic; Names taken from *A field guide to the frogs of Borneo* (Inger et al. 2017)].

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
White-lipped Frog	<i>Chalcorana chalconota</i>		S	
Grass Frog	<i>Fejervarya limnocharis</i>			
Cricket Frog	<i>Hylarana nicobariensis</i>		H	
Dark-eared Tree Frog	<i>Polypedates macrotis</i>		S	
File-eared Tree Frog	<i>Polypedates otitophus</i>		S	
Wallace's Flying Frog	<i>Rhacophorus nigropalmatus</i>		S	

Birds (S = seen; H = heard only; E = Endemic; I = Introduced. Nomenclature follows the IOC. Not all species heard only during the trip are listed below, including species such as ubiquitous barbets. Only notable species and/or species brought to the attention of participants are included. Species seen but not listed for a location were seen in transit)

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Crested Fireback	<i>Lophura ignita nobilis</i>		S	
Great Argus	<i>Argusianus argus</i>		H	
Striated Heron	<i>Butorides striata</i>			S
Little Egret	<i>Ardea garzetta</i>			S
Great Egret	<i>Ardea alba</i>			S
Oriental Darter	<i>Anhinga melanogaster</i>		S	S
Crested Serpent Eagle	<i>Spilornis cheela</i>		S	S
Changeable Hawk-Eagle	<i>Nisaetus cirrhatus</i>			S
Wallace's Hawk-Eagle	<i>Nisaetus alboniger</i>	S		S
Crested Goshawk	<i>Accipiter trivirgatus</i>		S	
Brahminy Kite	<i>Haliastur indus</i>			S
White-bellied Sea Eagle	<i>Haliaeetus leucogaster</i>	S		S
Grey-headed Fish Eagle	<i>Haliaeetus ichthyaeus</i>			S
White-breasted waterhen	<i>Amaurornis phoenicurus</i>			
Common Sandpiper	<i>Actitis hypoleucos</i>			S
Spotted Dove	<i>Spilopelia chinensis</i>	S		
Emerald dove	<i>Chalcophaps indica</i>		S	
Little Green Pigeon	<i>Treron olax</i>			S

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Pink-necked Green Pigeon	<i>Treron vernans</i>			S
Green Imperial Pigeon	<i>Ducula aenea</i>			S
Greater Coucal	<i>Centropus sinensis</i>		S	S
Raffles Malkoha	<i>Rhinortha chlorophaeus</i>		S	S
Plaintive Cuckoo	<i>Cacomantis merulinus</i>		H	H
Barred Eagle-Owl	<i>Bubo sumatranus</i>		S	
Buffy Fish Owl	<i>Ketupa ketupu</i>		S	
Brown Wood Owl	<i>Strix leptogrammica</i>			S
Brown Hawk-owl	<i>Ninox scutulata</i>	S		
Large Frogmouth	<i>Batrachostomus auritus</i>		S	
Grey-rumped Treeswift	<i>Hemiprocne longipennis</i>		S	
Whiskered Treeswift	<i>Hemiprocne comata</i>		S	
Plume-toed (Glossy) Swiftlet	<i>Collocalia affinis (esculenta)</i>	S	S	S
Black-nest Swiftlet	<i>Aerodramus maximus</i>			S
Edible-nest Swiftlet	<i>Aerodramus fuciphaga</i>			S
Silver-rumped Spinetail	<i>Rhaphidura leucopygialis</i>		S	
Red-naped Trogon	<i>Harpactes kasumba</i>			S
Oriental Dollarbird	<i>Eurystomus orientalis</i>	S		S
Stork-billed Kingfisher	<i>Pelargopsis capensis</i>	S		S
Collared Kingfisher	<i>Todiramphus chloris</i>			S
Blue-eared Kingfisher	<i>Alcedo meninting</i>		S	S
Red-bearded Bee-eater	<i>Nyctyornis amictus</i>		S	
Blue-throated Bee-eater	<i>Merops viridis</i>			S
Rhinoceros Hornbill	<i>Buceros rhinoceros</i>		S	S
Oriental Pied Hornbill	<i>Anthracoceros albirostris</i>			S
Black Hornbill	<i>Anthracoceros malayanus</i>	S	S	S
Wrinkled Hornbill	<i>Rhabdotorrhinus corrugatus</i>			S
Yellow-crowned Barbet	<i>Psilopogon henricii</i>	H	H	H
Rufous Woodpecker	<i>Micropternus brachyurus</i>			S
Buff-necked Woodpecker	<i>Meiglyptes tukki</i>			S
White-fronted Falconet E	<i>Microhierax latifrons</i>		S	
Long-tailed Parakeet	<i>Psittacula longicauda</i>	S	S	S
Blue-crowned Hanging-Parrot	<i>Loriculus galgulus</i>			S
Black-and-red Broadbill	<i>Cymbirhynchus macrorhynchos</i>		S	S
Black-and-yellow Broadbill	<i>Eurylaimus ochromalus</i>		S	
Black-winged Flycatcher-Shrike	<i>Hemipus hirundinaceus</i>			S
Common Iora	<i>Aegithina tiphia</i>			S
Scarlet Minivet	<i>Pericrocotus speciosus</i>	S		
Bronzed Drongo	<i>Dicrurus aeneus</i>		S	
Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>		S	S
Malaysian Pied Fantail	<i>Rhipidura javanica</i>		S	S
Blyth's Paradise Flycatcher	<i>Terpsiphone affinis</i>		S	
Slender-billed Crow	<i>Corvus enca</i>		S	H
Black-and-white Bulbul	<i>Pycnonotus melanoleucos</i>			S
Yellow-vented Bulbul	<i>Pycnonotus goiavier analis</i>			S
Asian Red-eyed Bulbul	<i>Pycnonotus brunneus</i>		S	S
Grey-cheeked Bulbul	<i>Alophoixus bres</i>		S	
Pacific Swallow	<i>Hirundo tahitica</i>		S	S
Yellow-bellied Prinia	<i>Prinia flaviventris</i>		S	
Ashy Tailorbird	<i>Orthotomus ruficeps</i>			S
Chestnut-winged Babbler	<i>Stachyris erythroptera</i>		S	

Common Name	Scientific Name	Sepilok	Deramakot	Kinabatangan
Bold-striped Tit-Babbler	<i>Macronus bornensis</i>			S
Asian Fairy-bluebird	<i>Irena puella</i>		S	
Velvet-fronted Nuthatch	<i>Sitta frontalis</i>			S
Asian Glossy Starling	<i>Aplonis panayensis</i>	S		S
Common Hill Myna	<i>Gracula religiosa</i>	S		
Javan Myna I	<i>Acridotheres javanicus</i>	S		S
Oriental Magpie-Robin	<i>Copsychus saularis pluto</i>	S		
White-crowned Shama E	<i>Copsychus stricklandii</i>		S	S
Grey-streaked Flycatcher	<i>Muscicapa griseisticta</i>			S
Lesser Green Leafbird	<i>Chloropsis cyanopogon</i>			S
Crimson-breasted Flowerpecker	<i>Prionochilus percussus</i>			S
Yellow-rumped Flowerpecker E	<i>Prionochilus xanthopygius</i>		S	
Scarlet-backed Flowerpecker	<i>Dicaeum cruentatum</i>			S
Brown-throated Sunbird	<i>Anthreptes malacensis</i>	S		
Olive-backed Sunbird	<i>Cinnyris jugularis</i>			S
Eurasian Tree Sparrow I	<i>Passer montanus</i>		S	S
Dusky Munia	<i>Lonchura fuscans</i>		S	S
Chestnut Munia	<i>Lonchura atricapilla</i>			S

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Orang-utan