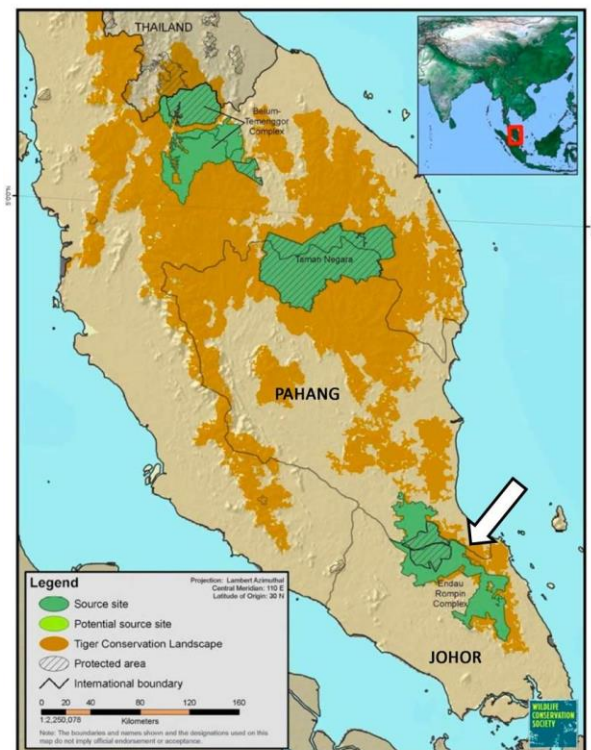


ENDAU ROMPIN MALAYSIA March 25-29, 2015

The river was now an expansive wide mirror, reflecting the scenic landscape of tall Dipterocarp trees and mountains that ascended steeply from the forested rivers. The early morning was still, save the whoops of lars gibbons that crossed both sides of the river as each group answered the other. And, the melodic songs of White-rumped Shamas floated across the forest, and the whine of cicadas. This was my fourth day on the Endau Rompin River on a week kayak trip with kayakasia. I stopped paddling for a while, drifting with the slow current on this wide river, taking in the beauty of the Malaysian rainforest on a clear day just after sunrise. Our group was passing through one of the last remaining pristine rainforest preserves in Peninsular Malaysia, filled with megafauna that are disappearing from the rest of Malaysia.

Endau-Rompin National Park is rich in biodiversity, the second largest national park in Peninsular Malaysia after Taman Negara, covering an area of 870 km² (336 miles²), the size of Mt Rainier national Park in my home state of Washington, US. It is located in the southernmost extension of the Tenasserim Hills that originates from Thailand, located at the southern end of the Malaysia Peninsula, south of the state of Pahang and northeast of Johor. Fashioned by volcanic eruptions in the past, Endau-Rompin's terrain alternates between steep mountains and sandy plateaus, an area of wilderness I wanted to explore.

The park takes its name from the Endau and Rompin Rivers that flow through it, and unique in that it is one of the few remaining watersheds of virgin lowland rain forest left in Peninsular Malaysia. Endau Rompin is a land of diverse landscapes, characterized by wild rivers, plateaus, isolated mountain peaks, and flat-topped sandstone plateau massifs that support a heath (kerangas) forest not found elsewhere in Peninsular Malaysia. The main river Sungai Endau, forms the centralized watershed, with its source headwaters originating from the highest mountain, Gunung Besar, 1036 m (3,432 feet) found in the westernmost mountainous part of the Park, and as a result of past geological activity, these mountains are one of the most picturesque landscapes in the country. Quartz crystal ignimbrite can be seen on the surface at many sections of rapids of Sungai Endau. Ignimbrite is volcanic, a product of past violent ash flow eruptions where high temperature gas carries sand-sized crystals of quartz and shards of glass, fragments of pumice and larger pieces of pre-existing rock to the surface.



Eventually the heavier particles settle after experiencing sufficient heat to weld themselves together.

Geologically, Endau Rompin National Park is a mix of volcanic and sedimentary. Dark colored Ignimbrite volcanic rocks form hard points that create spectacular waterfalls: Buaya Sangkut, Upeh Guling, Batu Hampar, and Takah Tinggi, areas where large scale faults create steep-sided cliffs and deep gorges. Bathtub-like depressions in the rock, a natural wonder created by the grinding action of smaller loose rocks moving in circular motion over the surface of large boulders, can be seen at the falls we would visit upriver from a tributary at Upeh Guling.



Endau Rompin River at the confluence of the Justin river

And there are sandstone plateaus and ridges found to the east, including the plateau of Gunung Janing Barat. The sedimentary rocks are the youngest rocks in Endau Rompin and fossils have been found in Buaya Sangkut, and on top of many mountains forming plateaus.

The lowland dipterocarp (dipterocarps are a family of rainforest trees with large two-winged seeds) forest abounds with over 47 species of palms, including the indigenous fan palm *Livistona endauensis*, *Rhopa Coblaste* known as the climbing bamboo, and the walking stick palm *Phychorapis Singaporensis*, identified by its slender stems and feather like leaf fronds. And there is pink Durian fruit *Durio sp.* sought after by elephant, and Rattle stink plant *Korthalsia hispida* where occupying red ants bang against extended leaf sheaths of this palm to give out an eerie sound when threatened. There is an amazing diversity of species, many that can be developed for potential pharmaceutical value. The Park has more than 120 species of orchids, 20 species of wild gingers, and 453 species of higher genera or Angiosperm plants.



New species red durian growing at tree base, unknown, piper fruit Thottea grandiflora



Orchid, Ridleyandra morganii ground cover, pitcher plants on poor sandy soils Endau Rompin



Orchid Bulbophyllum lobbi, unknown, ginger Amomum sp.



Ginger plants Alpenia sp, Amonimum sp, Etlingera sphaerocephala



Tacca chantrieri Black bat flower yam family Dioscoreaceae, Tacca chantrieri Black bat flower



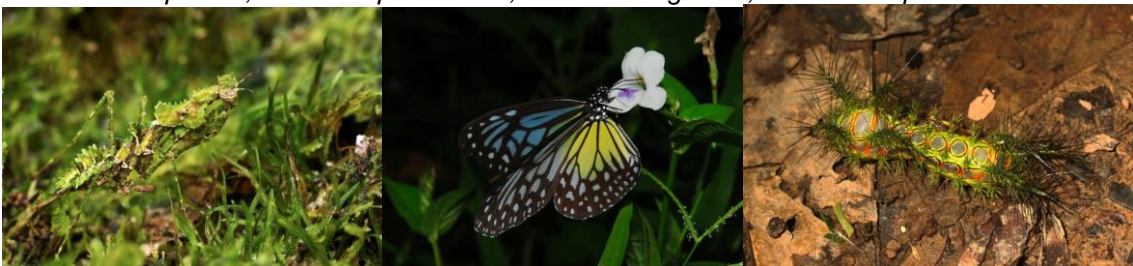
*Eared frog, Malaysian giant frog *Limonectes blythi*, Flying Harlequin frog*



Fire-tufted barbet, Red-bearded bee-eater, flame-backed woodpecker, Oriental pied hornbill



Banded woodpecker, white-rumped shama, common kingfisher, Endau Rompin



*Moss praying mantid, *Danaus aspasia* female on *Asystasia*, stinging slug caterpillar*



Black-backed kingfisher, elephant (HKK National Park, Thailand), Malaysian tapir



Rhinoceros hornbill, Justin River Endau Rompin, Tiger (captive Singaore Zoo)

The park has recorded at least 149 species of mammals, 250 species of birds, and 76 species of fish, 74 species of snakes and lizards, and 56 species of amphibians. Large and small mammals finding refuge in Endau Rompin include Sambar (look like the Pacific NW elk), muntjac (a small deer), Asian elephant, Malaysian tapir, tiger, leopard, flat-headed cat, Sunda otter civet, Sunda pangolin, Asiatic golden cat, bearded pig, and wild boar. The Sumatran rhinoceros once found in Peninsular Malaysia, a two-horned rhino related to the extinct woolly rhino is extinct, both from habitat loss, illegal poaching for its horn, and its genetic isolation and low reproductive cycle. Others include the binturong or bear cat and the Lar gibbon the only ape species in the region.

The forest is also home to a good bird diversity including drongos, hornbills, broadbills, trogons and pheasant including the peacock like Argus pheasant. Fish diversity includes Tapah fish *Wallago leerii*, kelah, and Green Arowana fish, were also found to inhabit the forests and the rivers. including the famous fighting fish mahseer in the Cyprininae family. Reptiles include *Gekko Smithi*, rare sightings of the brown Asian tortoise *Manouria emys*, the grand angle head lizard *Gonocephalus grandis* and the rough-necked monitor lizard *Varanus rudicollis*. Most amphibians include a diverse array of frog species whose noisy choruses characterize the wet season. Among these is the impressive Malayan giant frog *Limonectes blythi* which can weigh as much as a kilo (2.2 pounds) when full grown, a prized delicacy for Orang Asli.

I signed up through Kayakasia based in Singapore, and joined a group of 12 Singaporeans to Kayak for a week of exploring the Endau Rompin River. Our caravan includes a pickup truck loaded with our kayaks and gear, and our van that takes us to Johor customs. Malaysia. We waited in long lines through immigration, then finally drove northeast to Kota Tinggi, enduring 4 hours passing through endless sections of oil palm plantations and farms. We ascended the southern edge of the Tenassarim hills through mixed forest, then descended through more farms and plantations, finally reaching the coast. We stopped at the scenic sleepy fishing village of Mersing, and fueled up with seafood for early dinner, then walked the river where large fishing boats were moored.

As late afternoon approached we continued north along the coast until we reach the town of Endau and crossed the wide Sundai Endau, the river we would explore in its headwaters. We turned west and followed a sunset that became obscured as we headed into the mountains, and rainclouds. We followed a narrow paved C105 that passed large logged clearings and a massive dammed reservoir dammed lake, then past an open pit mine located on the edge of the park before the road entered secondary rainforest. We followed a dirt road another 10 kilometers to Kuala Kinchin, the ranger camp located on the edge of the Kinchin River, our put in for the beginning of our river journey. It now night, but the lights of the camp compound were lit up and we checked in with the guards. We unloaded our gear, then settled in a camp chalet where all 12 members of us slept on a dormitory floor on bamboo thatched mats. I took some people out with lights to try and spot wildlife, but only saw a lizard. Long night as two guys snored so loud it kept us all up all night.



The following morning at daybreak we had orientation, then packed our inflatable kayaks with gear and provisions. I walked upriver and meditated, prayed to the Lord, thanking Him for the opportunity to be back in the forest, watching a beautiful golden mist afire from the sun piercing through forest trees, lighting up the tannin stained pure river. I was so thankful for this time with the lord in nature. listening to birdsong. The forest was beautiful here, layered and primary, with strips of fog and mist weaving in and out of the canopy and nearby mountains.



Sungai Kinchin River by camp that originates from northern watershed emptying into Endau

Our second day we enjoyed a great breakfast followed by a half hour of kayak and river safety. I was accompanied by a personal guide Dula Nasir, an Orang Asli from the village below who would paddle with me in a tandem inflatable double kayak. We would leave ahead of the group each day during the morning to hopefully spot wildlife. I learned in our brief conversation as his English was very limited, that the Asli tradition is to treat the forest with reverence since they believed the trees, birds and animals have spirits. I knew from my past experience in Taman Negara they are animists.

Loaded our kayak and began the descent down the rocky but scenic Kinchin river. I startled a black backed kingfisher colored metallic blue and green. The first half hour we navigated through several rock drops and chutes, then passed through sand bars and sand banks along the river. Such beautiful light this morning and the river was filled with wondrous variety of birdsong. Such an enchanting and peaceful time drifting along the river current in silence. Flat



water, riffles, and partly cloudy, some rain. Great moods this morning. I saw a large giant flying squirrel leap then glide to reach a large primary forest tree. More kingfishers, and white handed heard gibbons calling two different times with their long ascending whoos. Wonderful sound of the forest in the early morning. Lots of trees in flower with colors of cream, yellow and red. We paddled for 4 hours before reaching the confluence of the Endau River where we stopped for lunch at a large sandbar. There were sambar deer *Rusa unicolor* tracks that were a few days old.

We now entered the wilder section of Endau River and enjoyed sections of flat water and beautiful primary forest interspersed with bamboo where there were



lots of elephant trails leading to the water. More sign of sambar. Flat sections of the river were interspersed with sections of rock outcroppings forming drops and small waterfalls. these proved to be exciting to navigate as they were cool and refreshing to get full of spray through narrow chutes. The final rock section brought us in the later afternoon to the large camp at the junction of the Justin River. Here was a park camp of chalets and buildings that are accessed through a long 4x4 road that connected to Pahang.



Below the confluence of the Kinchin River and the larger Endau River that flows from the west.

Night fell quickly on the river, and it is then the magnificent rainforest comes alive. The the river corridor is blazed by pulsing fireflies, starlight fallen to earth. But the nights were really alive with sounds: the river, night hawks, frogs and insects that mimicked footsteps on gravel, the clicking of knitting needles, or telephones; and the rustling of leaves that could be a palm civet, porcupine, rodents, or reptiles. Retreated finally to my small cabin and rested well; so nice to have my own room in a chalet with a bed facing the river. great meal of rice and chicken cooked by the park staff. wonderful sounds of the forest at night with cicadas, frogs, and lightning bugs glowing in the dark forest. Tomorrow we would ascend the Justin river to Upeh Guling waterfalls.

Day 3. Beautiful early morning light hit the trees with fog in the canopy and the forest was lovely and filled with birdsong. A dissipating mist rose from the river surface like vapor from a boiling tea kettle. I walked rivers edge then explored the forest, admiring giant buttressed trees, palms with barbed branches, winding





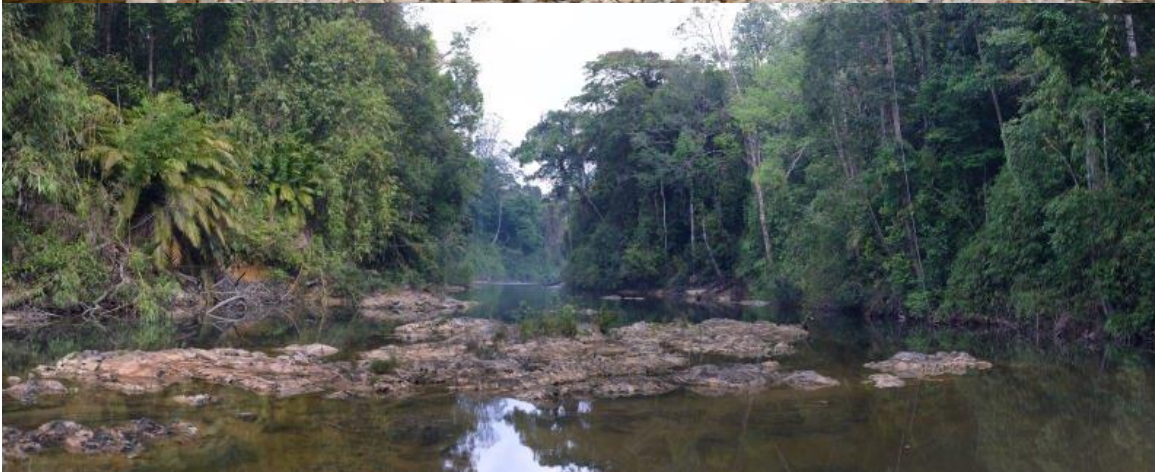
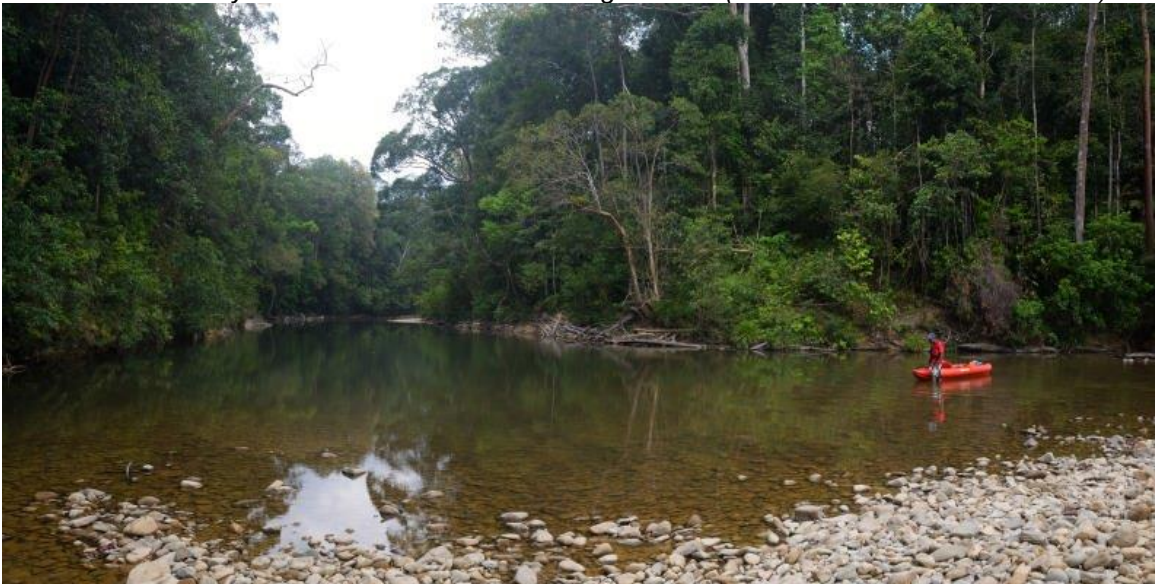
Sunrise on the Endau River at the confluence of the Justin River

vines on trunks that spiral towards the canopy; vines that contain drinkable water (indispensable if you're lost and thirsty); wood that makes the strongest walking stick in the world; purple, wild orchids; and a colony of moss-green pitcher plants.

After breakfast we untied all the inflatable kayaks that were lined together on the high banks, then began to walk upriver dragging inflatable kayaks through rapids and tea stained water chutes. this was such a scenic section of the forest with a closed canopy over the river. Saw a mouse deer swimming across upstream. Sections of gravel bars, and rock sections with deep pools as we ascended some four hours to have lunch at the blue lagoon confluence. Here there were huge schools of fish gathered on the edge of the clear blue lagoon stream and the more sediment laden Justin river flowing above through Upeh Guling falls. There



Justin River tributary filled with Mahseer and other game fish (fish seen schooled in the water)



Justin River tributary



were long narrow perch-like fish with stripes with a red dorsal fin, and bigger carp wit red fins. Swam with them in the cool water to watch. Picked up leeches on the way to the blue lagoon after we ate lunch.

Continued upriver a short distance to Upeh Guling falls, which was spectacular with smooth dark granite slides, chutes and punchbowls formed by hundreds of



Upeh Guling falls granitic formation. Scour pools shaped by small rocks trapped in larger pockets



years of scour. Black granite large pools were inviting to swim and jump in and we did, but the water was really low this time of year leaving shallow pools. Could see where a lot of energy scoured a large swath through the forest during the rainy season down river. And there were large gravel bars, much like sections of the Skykomish River in my home in the cascades. Found pitcher plants on the small island sandbar just below the falls and identified 4 species of *Nepenthes sp.* Amazing to see these here. We were tired dragging canoes up river so are, but was going to enjoy the downstream journey. I was in the lead again and spotted large 7 hornbills, beautiful birds that were croaking as they flew, with heavy wingbeats that whooshed with the downbeats. Another kingfisher flew across the river, blue in metallic color with white and black underbelly. So tired with the workout of sometimes lifting and then hauling the kayak upstream and muscling them through gravel bars and rock chutes downstream.



Once in camp, we all collapsed and rested, and within a half hour it began to rain. The cooks prepared dinner with curry and peppered rice, and we ate skinny chicken that was more bones than meat. I learned from Dula that there were more areas to explore from our base camp here, but we would not have time. One was the 700 meter (2320 feet) high hill that is a several hours hike from

here to Janing Barat which supports the fan palm *Livistona endauensis*. It grows on poor, sandy soil to the exclusion of other plant life. Another sandstone plateau of comparable steepness and height to Janing Barat is Padang Temanbong, believed haunted by the Orang Hulu.

That evening by the small campfire, I met Rasidi who was related to Dula and lived in the Orang Asli village Kampong Peta downriver. He shared many stories of his youth hunting as an Orang Asli in the park. He had also worked for WCS doing wildlife surveys in Endau, and shared the wildlife was more abundant 5 years ago, with more sambar, wild boar and bearded pig, the tigers prey. He documented and had seen tiger near the blue lagoon camp on the river. On one night near their camp he heard the cat call (like a lion roar) and the following morning saw fresh tiger prints in the wet sand along the river near them. He also had seen visually a tiger chase a sambar across a trail 200 meters in front of him upriver. He described two species of pigs: the Eurasian pig and the bearded pig.

There was no evidence of Sumatran rhino in surveys 2010m and several surveys in 1996 and 1998 showed a huge decline of female and calf tracks, scent areas and wallows. They are gone, impacted by both illegal poaching for rhino horn for the Chinese medicine trade, and with the impacts of isolation from the massive logging in the corridor areas to the north and south. The habitat rhino once preferred in Endau was in a north south range of low granite mountains from 600-1,020 meter (1987-3,380 feet) peaks that rise abruptly from the western coastal plain 150 m (500 feet), the dominant feature in western Endau-Rompin area.

The highest peak in Endau Rompin is Gunong Besar 1,020 m(3,380 feet), with the the entire area hilly, locally quite steep, and within the hilly areas there are high valleys, the most important is the upper reaches of the Sungai Selai. At one section this river flows for 10.6 km (6.4 miles) at an altitude between 390-480 m (1300 -1600 feet), then drops 280 meters (930 feet) in the next 1.6 km (1 mile) through a series of waterfalls and large drops. This has maintained the isolation of the upper watershed.

He shared about catching huge fish in this river, and of a giant frog *Limnonectes blythii* that is over 1 kg (2.2 pounds). The Orang Asli love to eat this frog and will head to the mountains near the blue lagoon camp and spend the night, and catch the frogs by hands. They hunted the Laris gibbon with a blow gun, which I saw the Asli make in the village downriver. The hunter would cover himself with clay and leaves to remove their smell before going after wary gibbons. I learned the blow pipe is made from hardwood tree stems cut in half, then put together and rattan razor sharp sections pulled through the center until they hollowed out a small grooved tube that would be straight, and allow passage of a small palm thorn dart with a cork base. The poison used for the dart was made from the sap of a tree that was considered very toxic and dangerous.

We had seen an amazing array of vine and wood traps used by the Asli, and men in the years past would hunt at night, and move through the forest almost naked and get covered with leeches, ignoring them until they stopped to rest, and removed off chest and legs with a machete style panga of knife. these were tough guys. The Asli around Endau Rompin harvest forest resources that include rattan (*Culumus spp*), gaharu, fuelwood, resin, fruits, medicinal plants, wild animals and fish. In the past, these resources were mainly for their own consumption and to a lesser extend for cash trade. Presently, the activities of the natives are more commercialized and with the introduction of firearms and the greed for wealth, forest harvest becomes more rampant. The use of snares for all kinds of wildlife including the Sumatran rhinoceros requires minimum effort and is maintenance free but promises excellent returns.

Was tired and after he finished sharing his stories, I returned to my cabin, listening to the waves of cicada calls that seemed extra loud tonight.. Fell asleep finally in my cabin room, enjoying the sounds of the rainforest.



Sunrise on the Endau confluence with the Justin River, Justin River early morning



Day 4. Beautiful sunrise with fog and I photographed the river and surrounding forest, and I thanked the Lord for this new day. Saw a variety of fruits on the forest floor, one chestnut like 4 cm (1.5 inches) across in diameter. Heard stories from Dula this morning of his hunting where Dula's cousin got bit by a green viper snake, and his leg swelled up. They killed the viper with a machete and used the brains to smear on the wound, a tradition that they think saved his life.



Today we would descend down river and make a camp at the edge of the park on a sandy beach. We moved the kayaks and gear to the river and began our descent through the end of the rock chute and falls, and below the Endau ran smoothly for several kilometers. The river swept through majestic primary forest in wide bends and sweeping where sand bars flanked either side through these flat sections. I was thankful it was overcast and raining at times as I lost my sunglasses on the Justin River.

Some stretches of river cut through gentle sloping mountains draped in primary forest to either side of us. There were sections exposing steep banks at rivers edge with huge Dipterocarp trees with straight silvery boles standing giant like guardians of the river. The area was so scenic with clouds and light hitting some sections of trees and leaving others quite dark from the rain cloud shadows. And there was amazing white-rumped shamas that sang such a melodic long songs that reverberated across the river through the forest. it was one of the most beautiful birdsongs I have heard. We continued through a beautiful forest of varying shades of green and violet-blue, and enjoyed immesnsley the tranquil scene amidst the backdrop of mountains.



Just before noon we came on a sandy beach where Dula stopped at a small shelter of an Orang Asli man from his village cooking fresh caught fish over a fire.

His wife and daughters were stripping rattan bamboo with huge thorns for selling down river. they would ascend the mountain slopes and amazingly cut this stuff with razor wire long segments and haul it to the river. They then stripped it and sold it for rattan buyers down river that would make it into furniture. it was hard work, and they worked very long days. The father shared his fish cooked or smoked on the fire cooked with a stick penetrating from mouth to gut, and it was so delicious. Better than perch.



We finally put first in to the amazing research and education center for WCS. They had done a wonderful series of exhibits to help translate the value of conservation for their rainforest ecosystem. What was amazing was how high the river rose during the winter monsoons, that floods the forest adjacent to the river. We continued downstream and came Orang Asli village of Kampung Peta. Orang Asli or "the first people Indigenous groups in modern Malaysia, account for less than one percent of the population. Dula takes us around the village and we meet twenty-one-year-old Machang who belongs to the Orang Hulu or Jakun, the "upriver people." His tribe, originally traditional hunters and gatherers and fishermen, settled permanently here in Kampong Peta, a village of three hundred people just outside of the park and the site of its headquarters. Here we enjoyed a great lunch of fried greens, eggs, a jackfruit curry, rice and chili sauce. We ate with our hands. Adult family members, their children and cats too numerous to count, came and went in the wooden house.

After we ate we were introduced to their variety of animal traps made from rattan palm and bamboo materials, and learned how to use a blowgun. I was lucky and scored a bullseye in our group competition. I learned that Malaysian Park Officials park fought to force the Asli out of Endau Rompin, but the government turned the request down. It was good for the village, but bad for the environment



as they still subsistence hunt and fish in the park, and drive motorcycles and have a modern lifestyle connected to the outside, conflict of interest. I saw a large turtle shell in one house we over a meter long. The Asli here collect wild fruits, roots and nuts, catch fish, set traps for squirrels, musk deer and hunt the bibi or bearded pig.

Park regulations require that aboriginal guides accompany visitors, but Peta, as elsewhere, is in a state of flux. The Asli once poled single log canoes to the coast and back for supplies, an undertaking that took three days, so they rarely went. The forest sustained them. Now their lands are a national park and the Asli its employees. Those who work as guides must seek employment elsewhere during the November to February rainy season when the park closes. They need money for petrol, rice and packaged foods.

We continued our float downstream through long stretches of primary forest, with beautiful light on the river. It was a long paddle but so rewarding to at times stop and just drift, listening to the water, wind and the few birds that stirred around the edge of the river, especially swallows and a few kingfishers. finally made our beach camp, and two long boats had ascended from downriver to bring tents and gear, and food. we had a beach bonfire, but was really disturbed by a bunch of drunk Malay and Chinese Malay poachers that seemed threatening, and fired off their rifles. we heard shots fired that night as they probably killed a sambar. There were tracks on this beach of sambar, mouse deer, and a small jungle cat? disturbed sleep in my tent with the gunshots going off in the middle of the night.

Day 5. Woke up early to a beautiful sunrise where dark thunderheads in blue and purple rose to the east, and the sun spread rays through them. Thankyou Lord for such a beautiful morning and prayer time. We entered the boats and packed up the kayaks and headed home. the river changed in character quickly, with cut forests, and oil palm plantations. there were multiple fishing boats, and the impact of people was greatly seen. I hoped that this forest will remain intact in the years to come, but saw encroachment already happening as we floated just outside the park. I had learned that lax enforcement by government officials was due to corruption and greed , an inherent problem in both Malaysia and



Indonesia, and it is a fact that timber firms almost always steal “extra” timber from adjacent forests that are not in their concession, as long as it is nearby and available. It is hard to pinpoint if illegal logging has taken place within Endau Rompin’s borders,

Taman Negara is suffering from the same problem of illegal logging, and poaching, especially on the Kelantan side of the park, where there is next to no buffer zone; almost all the forest cover outside the national park’s boundaries in Kelantan was logged/cleared to plant vast oil palm plantations right up to the very border of the park. And recently, further forest clearance further destroyed the environment near Kuala Koh. It is difficult to control resources when large sums of money are involved.

We landed at the take out, a series of wood docks where tourists come to take a boat ride on the river. We packed up our gear and deflated kayaks and placed the on the truck, and rested in our van as we headed back to Singapore. I was refreshed, and thankful to have seen a still remnant of wild river in a vastly depleting system in Malaysia of logging and creating oil palm plantations.

Reflecting on this refreshing journey, I was grateful that the forest had revealed itself best to me through the eyes and knowledge of Dula. Knowing that he shared his future with the forest made me hopeful for the successful outcome of whatever changes they both faced. It was why the image of Endau-Rompin that I took away with me was not just of the diversity and wonder of Malaysian rainforest, but also of my conversations with Dula paddling in tandem on the river. He had an amazing focus for spotting wildlife, the same focus given if he was fishing, hunting, or tracking. I came away with a deeper understanding of the Orang Asli, and their ties to the forest.



PLANT FAMILIES surveyed by the Forest Research Institute Malaysia. Altogether, 453 taxa of higher plants from 237 genera and 74 families were recorded. The big-tree families in order of commonness include: Dipterocarpaceae (23 species in 7 genera), Burseraceae (11 species in 4 genera), Anacardiaceae (20 species in 12 genera), Leguminosae (10 species in 8 genera), Sapotaceae (8 species in 4 genera), Olacaceae (2 species in 2 genera), Oxalidaceae (1 species in 1 genus), Bombacaceae (2 species in 2 genera), Apocynaceae (3 species in 2 genera) and Sterculiaceae (6 species in 3 genera). Of the Dipterocarpaceae family, the main species recorded were *Anisoptera laevis*, *Cotylelobium lanceolatum*, *Dipterocarpus cornutus*, *D. costulatus*, *D. crinitus*, *D. sublamellatus*, *Parashorea densiflora*, *Shorea acuminata*, *S. curtisii*, *S. leprosula*, *S. macroptera*, *S. maxwelliana*, *S. parviflora*, *S. pauciflora*, *Vatica bella* and *V. pauciflora*. The commonness of *D. costulatus*, *D. crinitus*, *D. sublamellatus* and 7 species of *Shorea* of the Red Meranti group in much of the lowland mixed dipterocarp forest lends support to its designation as Keruing-Red Meranti forest. Other big trees of canopy or emergent size include *Cannarium* spp., *Dryodes* spp., *Santiria* spp., *Triommamalaccensis* (Buseraceae); *Bouea* spp., *Campnospermauriculatum* var. *wallichii*, *Dracontomelon dao*, *Gluta wallichii*, *Mangifera* spp., *Melanochyla* spp., *Parishia* spp., *Swintonia* spp. (Anacardiaceae); *Coelostegia griffithii*, *Neesia synandra* (Bombacaceae); *Dialium platysepalum*, *Intsia palembanica*, *Koompassia malaccensis*, *Sindora* spp. (Leguminosae); *Sarcotheca griffithii* (Oxalidaceae); *Ochanostachys amentacea* (Olacaceae); *Madhuca laurifolia*, *Palaquium* spp., *Payena* spp. (Sapotaceae); *Alstonia* spp., *Dyera costulata* (Apocynaceae); *Dillenia* spp. (Dilleniaceae); *Baccaurea reticulata*, *Endospermum diadenum* (Euphorbiaceae); *Artocarpus* spp. (Moraceae); *Heritiera javanica* and *Scaphium* spp. (Sterculiaceae). Medium-sized trees or treelets common in the forest understory include members of the families Annonaceae (*Alphonsea elliptica*, *Cyathocalyx pruniferus*, *Enicosanthum fuscum*, *Mezzettia parvifolia*, *Polyalthia* spp., *Xylopia* spp.), Bombacaceae (*Durio* sp. nov.), Combretaceae (*Terminalia citrina*), Ebenaceae (*Disopyros* spp.), Euphorbiaceae (*Aporosa* spp., *Baccaurea racemosa*, *Blumeodendron kurzii*, *Croton aegyriatus*, *Drypetes pendula*, *Elateriospermum tapos*, *Pimelodendron griffithianum*), Guttiferae (*Calophyllum* spp., *Garcinia* spp., *Mesua* spp.), Lauraceae (*Actinodaphne macrophylla*, *Beilschmiedia palembanica*, *Cinnamomum* spp., *Litsea* spp.), Myristicaceae (*Horsfieldia* spp., *Knema* spp., *Myristica* spp.), Myrtaceae (*Syzygium* spp.), Rubiaceae (*Diplospora malaccensis*, *Nauclea officinalis*), Sapindaceae (*Nephelium* spp., *Pometia pinnata*, *Xerospermum noronhianum*), Tiliaceae (*Microcos latifolia*, *Pentace* spp., *Schoutenia accrescens*) and Ulmaceae (*Celtis rigescens*, *Gironniera* spp.). Palms were significant with 47 species recorded in the area. *Oncosperma horridum* was probably the most common tall palm in the area, but *Arenga westerhoutii*, *Eugeissona tristis* and *Iguanura wallichiana* were also frequently encountered.

In total, 149 mammal species from 11 orders (Carnivora, Cetartiodactyla, Chiroptera, Dermoptera, Eulipotyphla, Perissodactyla, Pholidota, Primates, Proboscidea, Rodentia, and Scandentia) were residents of the park. Seven endangered species, i.e. tiger (*Panthera tigris*), flat-headed cat (*Prionailurus planiceps*), Sunda otter civet (*Cynogale bennettii*), Malayan tapir (*Tapirus indicus*), Sunda pangolin (*Manis javanica*), Lar gibbon (*Hylobates lar*) and Asian elephant (*Elephas maximus*) were listed as inhabitants (Table 2). Although the critically endangered Sumatran rhinoceros (*Dicerorhinus sumatrensis*) was listed, park rangers informed that there was no evidence of its presence in Endau Rompin National Park in the past 10 years. The interviews showed that the orang asli, who have long lived in the forest, understand mammal behaviour because of their dependence on animals for food (although they no longer hunt for animals except in times of food insecurity). Ten years ago it was easy to find animals such as tapir and sambar in Kampung Peta but now only few, except for elephants, remain. Elephant population in Endau Rompin National Park has increased each year from 20 to 70 individuals due to translocation of rogue elephants as part of rescue operations. Their habitat outside the park in

Johore state has been disturbed by deforestation, illegal logging, illegal hunting and development. Consequently, some elephants have entered Kampung Peta in search of food, causing human–elephant conflict.

Carnivora Felidae *Catopuma temminckii* Asiatic golden cat NT Carnivora Felidae *Panthera pardus* Leopard NT EN Carnivora Felidae *Panthera tigris* Tiger EN EN Carnivora Felidae *Pardofelis marmorata* Marbled cat VU Carnivora Felidae *Prionailurus bengalensis* Leopard cat LC Carnivora Felidae *Prionailurus planiceps* Flat-headed cat EN NT Carnivora Herpestidae *Herpestes brachyurus* Short-tailed mongoose LC Carnivora Herpestidae *Herpestes javanicus* Small Asian mongoose LC Carnivora Mustelidae *Aonyx cinerea* Asian small-clawed otter VU Carnivora Mustelidae *Lutrogale perspicillata* Smooth-coated otter VU Carnivora Mustelidae *Martes flavigula* Yellow-throated marten LC NT Carnivora Mustelidae *Mustela nudipes* Malay weasel LC NT Carnivora Mustelidae *Prionodon linsang* Banded linsang LC NT Carnivora Ursidae *Helarctos malayanus* Sun bear VU VU Carnivora Viverridae *Arctictis binturong* Binturong VU Carnivora Viverridae *Arctogalidia trivirgata* Small-toothed palm civet LC Carnivora Viverridae *Cynogale bennettii* Sunda otter civet EN Carnivora Viverridae *Hemigalus derbyanus* Banded civet VU Carnivora Viverridae *Paguma larvata* Masked palm civet LC Carnivora Viverridae *Paradoxurus hermaphroditus* Common palm civet LC Carnivora Viverridae *Viverra megaspila* Large-spotted civet VU EN Carnivora Viverridae *Viverra zibetha* Large Indian civet LC Carnivora Viverridae *Viverricula indica* Small Indian civet LC NT Cetartiodactyla Cervidae *Muntiacus muntjak* Southern red muntjac LC NT Cetartiodactyla Cervidae *Rusa unicorn* Sambar deer VU VU Cetartiodactyla Suidae *Sus barbatus* Bearded pig VU NT Cetartiodactyla Suidae *Sus scrofa* Wild boar LC Cetartiodactyla Tragulidae *Tragulus kanchil* Lesser oriental chevrotain LC Cetartiodactyla Tragulidae *Tragulus napu* Greater oriental chevrotain LC Chiroptera Emballonuridae *Emballonura monticola* Lesser sheath-tailed bat LC Chiroptera Emballonuridae *Saccolaimus saccolaimus* Bare-rumped sheath-tailed bat LC Chiroptera Emballonuridae *Taphozous melanopogon* Black-bearded tomb bat LC Chiroptera Hipposideridae *Coelops frithii* Tail-less leaf-nosed Bat LC EN Chiroptera Hipposideridae *Hipposideros armiger* Great Himalayan leaf-nosed bat LC Chiroptera Hipposideridae *Hipposideros ater* Dusky leaf-nosed bat LC Chiroptera Hipposideridae *Hipposideros bicolor* Bicolored leaf-nosed bat LC Chiroptera Hipposideridae *Hipposideros cervinus* Fawn-colored leaf-nosed bat Chiroptera Vespertilionidae *Tylonycteris pachypus* Lesser bamboo bat LC Chiroptera Vespertilionidae *Tylonycteris robustula* Greater flat-headed bat LC Dermoptera Cynocephalidae *Galeopterus variegatus* Sunda flying lemur LC Eulipotyphla Erinaceidae *Echinosorex gymnura* Moonrat LC VU Eulipotyphla Erinaceidae *Hylomys suillus* Short-tailed gymnure LC Eulipotyphla Soricidae *Crociodura malayana* Malayan shrew LC Eulipotyphla Soricidae *Crociodura negligens* Peninsular shrew LC EN Eulipotyphla Soricidae *Suncus murinus* House shrew LC Perissodactyla Rhinocerotidae *Dicerorhinus sumatrensis* Sumatran rhinoceros CR CR Perissodactyla Tapiridae *Tapirus indicus* Malayan tapir EN NT Pholidota Manidae *Manis javanica* Sunda pangolin EN VU Primates Cercopithecidae *Macaca fascicularis* Crab-eating macaque LC Primates Cercopithecidae *Macaca nemestrina* Southern pig-tailed macaque LC Primates Cercopithecidae *Presbytis femoralis* Banded surili NT Primates Cercopithecidae *Presbytis siamensis* White-thighed surili NT VU Primates Cercopithecidae *Trachypithecus obscurus* Dusky leaf monkey NT Primates Hylobatidae *Hylobates lar* Lar gibbon EN Primates Lorisidae *Nycticebus coucang* Slow loris VU Proboscidea Elephantidae *Elephas maximus* Asian elephant