







# Hugging Trees, Touching Eternity

The Estates of  
Pangkor Laut.  
Architecture and  
nature in harmony.





## Foreword

### MAESTRO'S TRIBUTE

I will forever remember the remark my dear friend, the late Luciano Pavarotti made during his first visit to Pangkor Laut in 1994. Overwhelmed by the sheer spectacle of the island's pristine grandeur, he said: "I almost cried when I saw how beautiful God has made this paradise!" These are the eloquent words of a musical genius, resembling a glorious hymn of praise to God the Creator and in recognition of His wonderful handiwork. Not least, words that summarise the main reason why so many of us are utterly devoted to preserving Pangkor Laut as the paradise that age-old history remembers it to be.

Few things could ever surpass the privilege of developing Pangkor Laut into an island resort and having responsibility for its upkeep. We are grateful and humbled to have been entrusted by God with this slice of heaven that houses some of Tropical Earth's greatest biological treasures. Three hundred acres of living and breathing rain forest, surrounded by emerald waters! Yet, at the same time, profoundly aware that very little is needed to pollute and destroy this fragile beauty. For this very reason, from day one, we were fully determined to create a resort that would never compromise the island's ecology, but in turn contribute to its protection and conservation.

### A LABOUR OF LOVE

To subtly weave living spaces into the rain forest with minimal impact was by every stretch of imagination, a difficult exercise – even after assembling the best possible team of architects, landscapers, artisans and craftsmen. However, we had a Great Teacher! We studied the Master Creator's handiwork and felt it wise to play a complementary role to the island's existing ecological footprints. It certainly helped that all of us working on the project fell in love with this place just as Maestro Luciano did. With that, came untold passion, inspiration and patience that could only be deemed as heaven sent.

We invented ingenious ways to carefully blend man-made structures into the ecosystem, erecting buildings that are environmentally sustainable and architecturally in keeping with the rich cultural heritage of the region. Refusing to bulldoze trees, cut into ginormous rocks or disturb particular natural habitats, we painstakingly negotiated and built around them. As a result, many of the properties in The Estates are actually hidden from view, dwarfed

and shielded by trees and foliage which generously form lush green canopies above them. There is no denying, all this was a labour of love, with practically every task carried out by hand rather than with machinery.

By the grace and wisdom of God, Pangkor Laut today is where man and nature meet in harmony, but nature is centre stage. Wildlife continues to flourish in the virgin forest, while birds, four-legged animals and creepy crawlies roam freely unperturbed, confident that their space is respected. For the many guests who visit and revisit the island, the resort is their gateway to paradise. A world of tranquillity where time does stand still and one's soul finds rest, only to be enlightened by the breathtaking realities of creation.

### HOPE FOR TOMORROW

*Hugging Trees, Touching Eternity* traces the footsteps of how we met the challenges of developing Pangkor Laut and in particular, The Estates. But this book is always going to be more than that. With millions of acres of the world's rain forest denuded each year for the sake of development, and many beautiful beaches polluted and destroyed by businesses and hoteliers bent on crass commercialisation, this book is a testament of how both conservation and progress could coexist with remarkable success.

We want the world to hear our story and be inspired by the possibilities of development while preserving God's wonderful creation at the same time. That with dignity, passion and determination, we do not have to cede our world to ruins. Instead, we can prepare a beautiful world for our children and our children's children to inherit. And we are certainly doing it with Pangkor Laut. I pray that a hundred years from now, future generations will stand at the same spot Maestro Luciano stood in 1994 and proclaim: "I almost cried when I saw how beautiful God has made this paradise!"

All glory be to our Lord Jesus!

Tan Sri Francis Yeoh





*“Let there be light”; and there was light*





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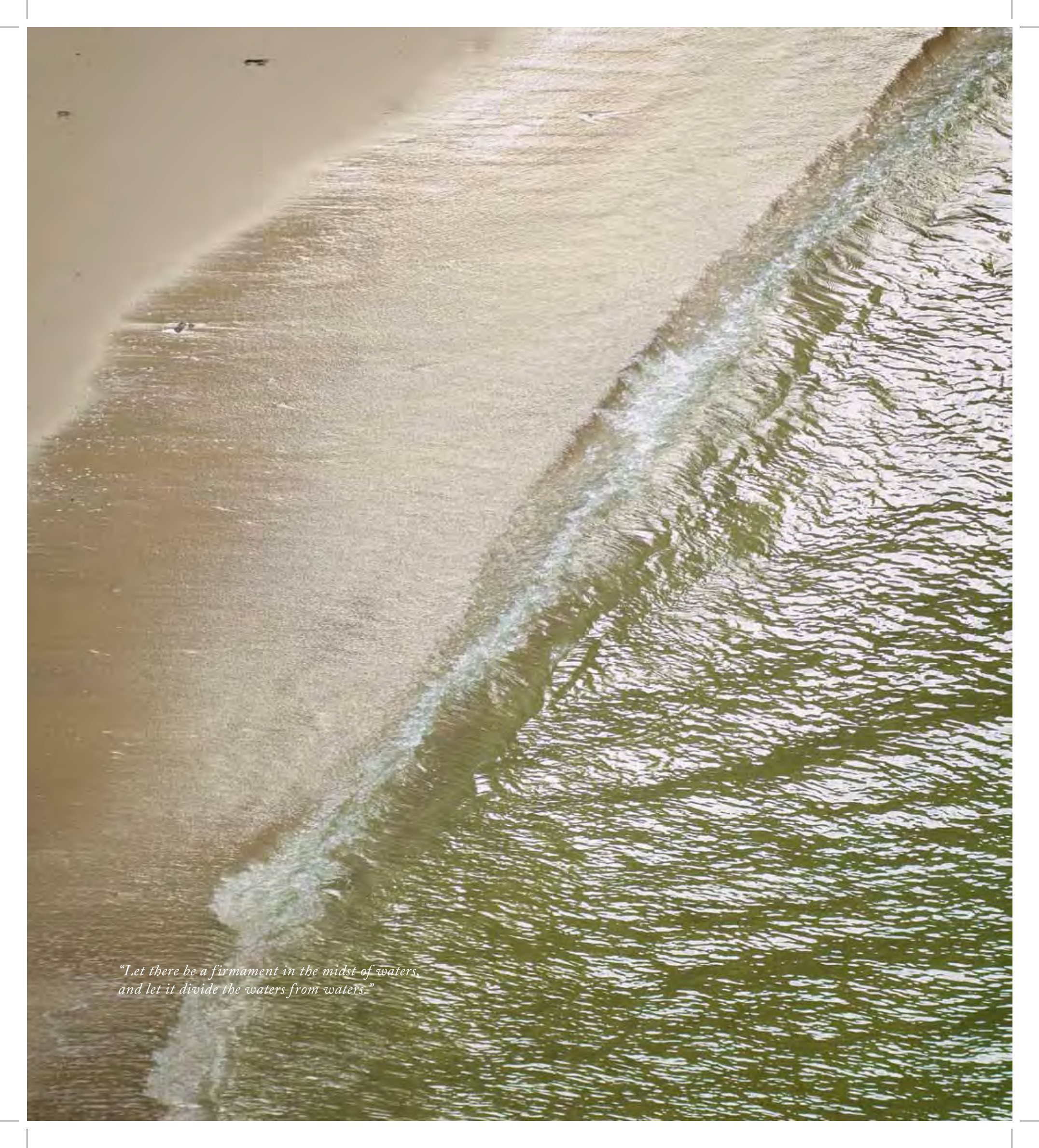
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Pangkor Laut Resort : 5-Star Rain Forest



An aerial photograph of a dam. The dam is a long, narrow concrete structure that runs diagonally from the top right towards the bottom left. Water is flowing over the dam, creating a white, foamy trail that follows the length of the structure. The water on the right side of the dam is a deep, dark green color, while the water on the left side is a lighter, brownish-green. The background shows a vast, flat expanse of water, likely a reservoir or a large lake, with some small, dark spots scattered across the surface.

*“Let there be a firmament in the midst of waters,  
and let it divide the waters from waters.”*



## Introduction

*“When one is at anchor, one sees not a single vestige or appearance of a city, because the great trees ... hide all its houses.”*

*- YMH de Querbeuf, 1780-1783 -*

The above was a Jesuit missionary scientist’s observation of a city in the Malay Archipelago in the 18th century. Records of other missionaries, travellers and merchants of that period echo that description; they write of cities with “houses ... set in a forest of coconut trees, bamboos ...” and urban centres “built in a Wood, so that we could not see a house till we were upon it.”

One needs to be mindful that these were not mere villages that the authors were talking about, but metropolises like Ayutthaya and Aceh – cities which had populations of 50,000-100,000 – rivalling virtually all European cities back then, with the possible exception of Paris and Naples.

One can also envisage how the soaring tree canopy cooled and shaded entire cities, to the point that all built structures were virtually invisible from a distance. Compare those ancient observations with the reality of today’s metropolitan cities, and the difference is patently obvious. Man has become disconnected from nature. Today, most homes have trees as mere tokens of environmental consciousness, planted in plots of soil slightly bigger than postage stamps amid jungles of concrete.

In that respect, the nine Estates of Pangkor Laut are an exception in the 21st century. This book’s cover photograph captures the view of all nine in March 2009; yet one can safely say that de Querbeuf’s 18th century description could have been that of The Estates. The highly acclaimed Estates are nine separate but interlinked parcels of property on Pangkor Laut, a 300-acre private island located off the west coast of Malaysia. Owned and managed by YTL Corporation Berhad, one of Malaysia’s leading integrated infrastructure conglomerates, Pangkor Laut Resort was ranked by *Condé Nast Traveller* UK as

“Number One in the World” in its Top 100 List in 2003; accorded The American Academy of Hospitality Sciences “Five Star Diamond Award” for seven years continuously; and listed as “Best Beach Resort” by Senses Wellness Guide Germany. Even its design received the “Spa Exterior of the Year” accolade from AsiaSpa Awards 2007.

However, this book is not a treatise on architecture, landscaping or natural history. It is, in a small way, an introduction to the vast richness of the Malaysian rain forest, replete with surprising finds of rare and endangered species. Glorious and mysterious, the rain forest is a veritable treasure trove waiting to be discovered by those who would take the time to explore its gems. The book hopes to whet the appetite for a more intimate knowledge of the flora and fauna of the ancient rain forest of which the island of Pangkor Laut is a microcosm.

This book also briefly traces how a branch of architecture has come full circle and returned to the principles of vernacular architecture. It highlights and celebrates an architectural philosophy which dictates that built structures must be so unobtrusive that from a distance, the casual observer would not even know that an entire community exists within the embrace of the rain forest. But over and above all, this book is a story of how peaceful co-existence of the structures of man with the pristine natural world of the rain forest is magnificently played out on the island of Pangkor Laut. It is a story of a high respect for the God-given beauty of the land on which we are, for a limited time only, merely guests and sojourners.





*“Let the earth bring forth grass, the herb that yields seed, and fruit tree that yields fruit according to its kind, whose seed is in itself, on the earth”; and it was so.*









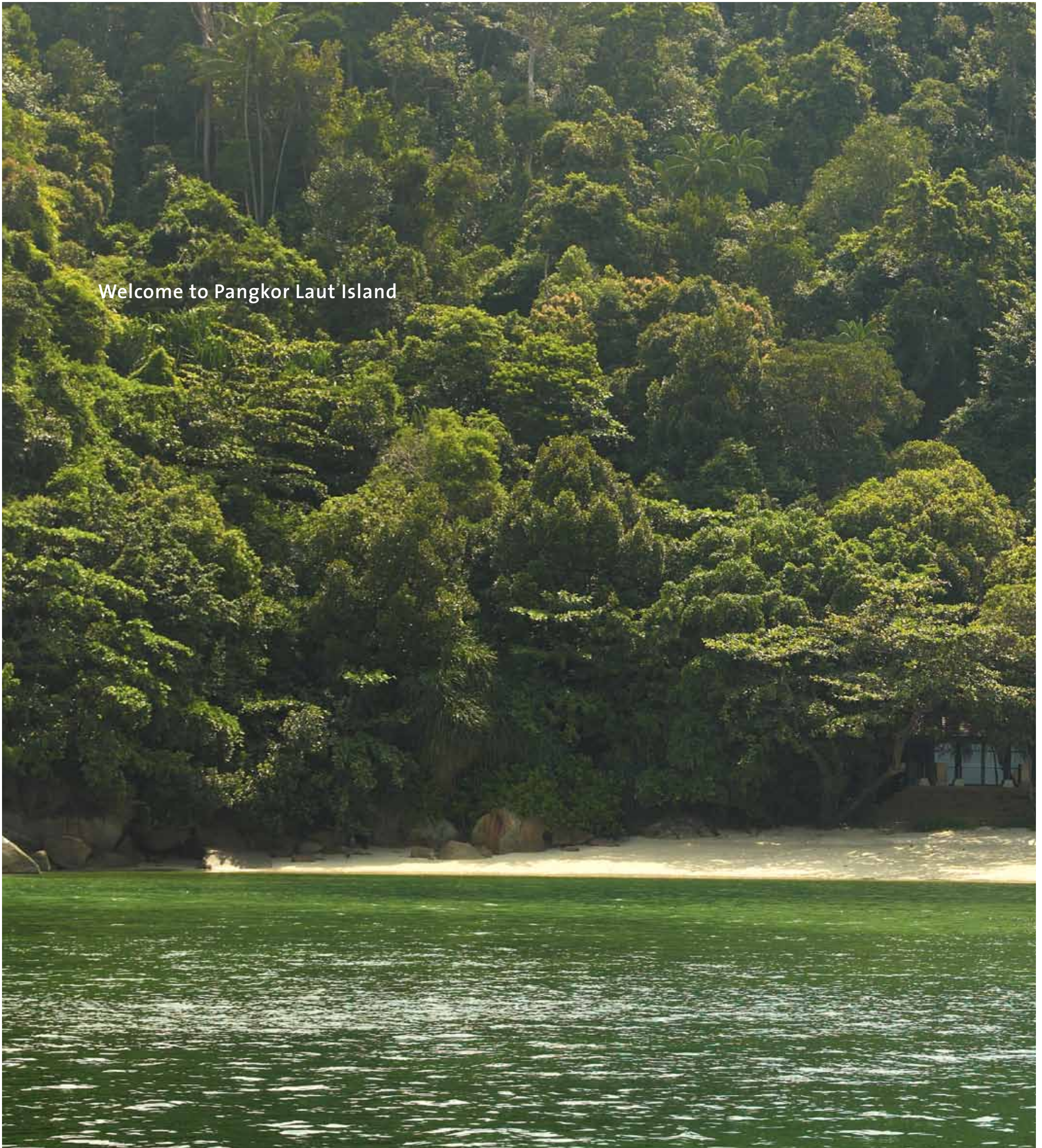
*“Let Us make man in Our image, according to Our likeness;  
let them have dominion over the fish of the sea, over the  
birds of the air, and over the cattle, over all the earth and  
over every creeping thing that creeps on the earth.”*





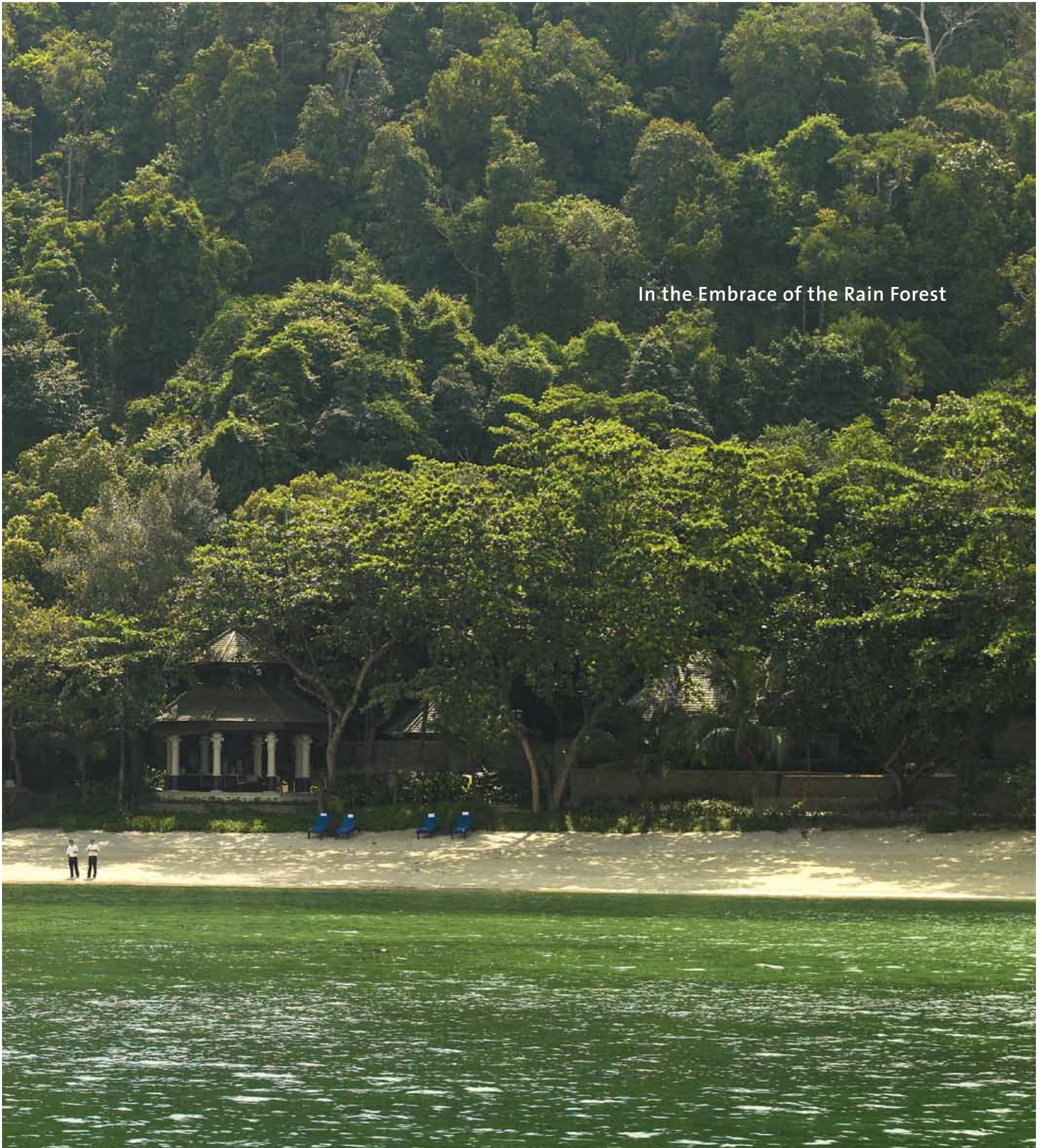


Welcome to Pangkor Laut Island





In the Embrace of the Rain Forest





The Origins





Opposite:  
Malaysian children playing in  
the emerald waters of Pangkor Laut,  
circa 1950s. This island's rain forest,  
pictured in the background, remains  
intact until today. (Photo courtesy of  
Timothy Chee, the boy in the water  
beside the *sampan*)

## of Pangkor Laut Island

Looking at the lush rain forest of Pangkor Laut, few would imagine that the island is actually 99% granite. Granite is an igneous rock, which means it was once liquid molten rock (also called magma), formed under intense heat and pressure.

About 200 million years ago, during the Permian and early Triassic period, most of the core terrane of Peninsular Malaysia was below sea level. Granite magma from within the earth forced up ridges at the crust. (Simply put, these granite bits eventually became Peninsular Malaysia's earliest mountains, and the island we now know as Pangkor Laut.) After the emplacement of these granitic masses, this region achieved geological stability.

Over time, weathered particles of this granite, organic material, air and water combined to form a layer of soil. Granite-derived soils have a sandy, clay-like texture, and this is what the rain forest of Pangkor Laut grows on. Its bio-diversity and luxuriant growth belies the relatively poor soil quality. In fact, virtually all the nutrients of the rain forest are tied up in the bio-mass. This is why it is very important to preserve the rain forest in its natural state in

every possible way, even down to leaving the decaying leaf litter unswept on the forest floor. Natural composting is essential for nutrient recycling. If this is disturbed, the torrential rains of this region will wash away the precious layer of top soil.

To maintain the rain forest in its pristine condition, Pangkor Laut instituted a strict island-wide injunction that every plant more than six inches in diameter be protected at all costs. It is only when a tree dies of natural causes that one can get permission for it to be removed.

In the development of the nine Estates of Pangkor Laut, this principle was strictly adhered to, with every tree carefully tagged all the way. Old tyres were wrapped around the base of every tree to protect them from accidental bumps. To minimise impact on the land, nothing bigger than a backhoe was allowed on the development. Most of the work was done by human hands. Working under close scrutiny, The Estates of Pangkor Laut have a 100% clean record – not a single tree above six inches in diameter was felled – and the environment remains as pristine as it was before work started.





### ONE ISLAND, THREE TYPES OF FOREST

Located at 4°14' North, 100°34' East on the world map, Pangkor Laut is about 300 acres in size. As an island, the bio-diversity is naturally restricted by the limited land area, and therefore not as varied as mainland Asia.

However, within the northern vicinity of Pangkor Laut where The Estates are sited, one will discover not just one type of forest, but three. This is exemplary of the conservation efforts at The Estates. The three types of forest are the beach forest, the heath forest, and the lowland dipterocarp rain forest.

#### Beach Forest

Occupying the narrow strip at the splash zone, it is also called the Indo-Pacific Strand Flora because it shares characteristics with coastlines around the Indian Ocean and the western Pacific. The dominant native tree species of the beach forest are the *ketapang* (*Terminalia catappa*), *putat laut* (*Barrington asiatica*), *bintangor laut* (*Calophyllum inophyllum*), and sea hearse (*Hernandia nymphaefolia*). The large gnarled and crooked trunks of these trees lean seawards and provide leafy shade from the sun. They thrive on the nutrient-poor and saline sands, with fruits that can float with the ocean current. Other trees one can see while strolling along the beach forest of The Estates are *nyatoh laut* (*Planchonella obovata*) and *pandan laut* (*Pandanus tectorius*). The type of low vegetation cover that grows on the sandy beach includes the beach

morning glory (*Ipomoea pes-caprae*) and the sea lettuce (*Scaevola taccada*) which tend to have deep spreading roots. Thus they are efficient sand binders that help to reduce erosion.

#### Heath Forest

This type of forest is located immediately behind the beach forest and extends to the hill slopes. Estates 1-4 are located partly in this zone. The dominant tree species here is the *kelat* (*Eugenia* spp) which is of the Myrtaceae family. Here the soil is poor in nutrients, because of its free-draining nature, and the trees are small, short-boled and open-crowned. The open conditions allow the epiphytic ant-plant (*Hydophytium fornacarium*) to develop to its best. The lower part of the plant swells into a soft and enlarged tuber, inside which is an astonishing network of tunnels where ants make their homes.

#### Lowland Dipterocarp Forest

Estimated to have evolved over millions of years, this forest is generally found in altitudes below 300 metres. The ridge tops of Pangkor Laut were once rich lowland dipterocarp rain forest. Despite logging done in the early 20th century, some of the magnificent trees survived and tower on the high ridges of Estates 5, 6 and 7.





HEIGHT ABOVE GROUND (M)

40

35

30

25

20

15

10

5

0



**THE RAIN FOREST**

The virgin Malaysian rain forest is multi-canopied, divided into the upper or emergent canopy, the main canopy, and the lower tree canopy or understorey.

**Upper Or Emergent Layer**

Recalling his observations in 1842, the Victorian zoologist Alfred Russell Wallace wrote this of the upper rain forest canopy: "... all is out of reach of the curious and admiring naturalist. It is only over the outside of the great dome of verdure exposed to the vertical rays of the sun that flowers are produced, and on many of these trees there is not a single blossom to be found. The whole glory of these forests could only be seen by sailing gently in a balloon over the undulating flowery surface above: such a treat is perhaps reserved for the traveller of a future age." In Estates 5 to 7, that 'future age' is now.

One just needs to look out the bedroom window to see the emergent canopy. To keep expectations realistic, however, one needs to be mindful that the exuberant and colourful mass flowering of rain forest trees like those observed by Wallace may happen only once every two to five years.

**Main Canopy Layer**

Considered the densest area of biodiversity, the main canopy layer is estimated to be home to 50 percent of the rain forest plant species. In 1917, naturalist William Beebe referred to this layer when he declared that "yet another continent of life remains to be discovered, not upon the Earth, but one to two hundred feet above it".

**Understorey Layer**

While most people are excited by the upper layers of the rain forest, the lower canopy or understorey is by no means less inspiring.

The idea of the now world-famous vertical gardens was sparked when a 19-year-old French boy by the name of Patrick Blanc came to Malaysia in 1973 and observed the plants in the understorey layer of the rain forest. In an interview in 2006, when asked how he managed to get plants to grow vertically without any soil, Blanc shared that "... in Malaysia, 2,500 out of the 8,000 known species are growing without any soil."





**All creatures great and small**

“Five times stronger by weight and vastly more ductile than high grade steel”, says the National Geographic of the delicate silk spun by spiders. (April 2008). On Pangkor Laut, the Giant Spider (*Nephilia maculate*) spins vast webs. In tests, this spider’s web is strong enough to momentarily entangle small birds.





#### The Servant King

Royally built, the white-bellied sea eagle (*Haliaeetus leucogaster*) of Pangkor Laut has a massive wingspan that grows up to 2.2 metres. Ironically, in old Malay folklore, this powerful raptor is called *burung hamba siput* ('servant of the shellfish') as it was believed that it calls out to shellfish on the shore to save them from tidal vagaries and to tell them when to take shelter or when to emerge to feed.

#### ON THE LAND AND IN THE AIR

Unlike the open savannas of Africa where one can see large herds of zebra and wildebeest being tracked by prides of lions, the fauna of the thick Pangkor Laut jungle is largely invisible. This is typical of Asian rain forest fauna; inconspicuous, shy and largely nocturnal. Nonetheless, the animals are there, observing the humans.

Being an island of just 300 acres, Pangkor Laut cannot support a viable breeding population of large predators like tigers or leopards. The closest thing to a carnivorous mammal one might come across here is the adorable smooth otter (*Lutra perspicillata*). The role of top predator is filled by birds of prey, like the white-bellied sea eagle (*Haliaeetus leucogaster*) and the brahmyn kite (*Haliastur indus*), as well as reptiles like the monitor lizard (*Varanus salvator*). Smaller reptilian predators found here include the non-poisonous paradise tree snake (*Chrysospelea paradisi*), sometimes called the 'flying snake' for its ability to glide from tree to tree for distances of up to 50 metres. It glides by keeping the bottom part of its body concave, like a parachute.

Up to 44 species of birds have been recorded on this island, a relatively large number when compared to other islands in the Straits of Malacca. Migrant birds like the Japanese sparrow hawk (*Accipiter gularis*) can be seen wintering on Pangkor Laut.

#### Reptilian-looking Mammal

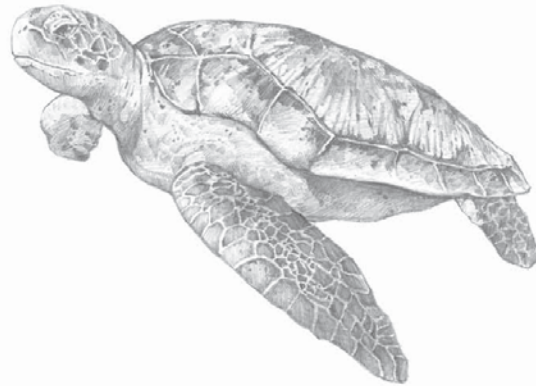
Though it is a mammal, the Malayan pangolin (*Manis javanica*) is covered by a reptilian-looking coat of moveable and sharp-tipped scales, instead of fur. Hence, it is also known as the scaly anteater. Its scales are largely keratin, the same material that hair, fingernails and rhino horn are made of. These overlapping scales cover the pangolin from just above their nostrils all the way to the tip of its tail. Not a fast reproducer, it usually has only one baby at a time. With one pair of mammary glands, mothers nurse their babies for about three months. When threatened, to protect its young, a mother pangolin will curl up into a tight ball of scales with her baby nestled within. At birth, the baby has soft scales, which harden soon after. On Pangkor Laut, baby pangolins have been observed riding piggyback on their mothers' tails.

With no teeth, the pangolin eats only ants and termites and is not at all harmful to humans. In fact, it presents a natural way of controlling insect populations, consuming an estimated 70 million insects annually.



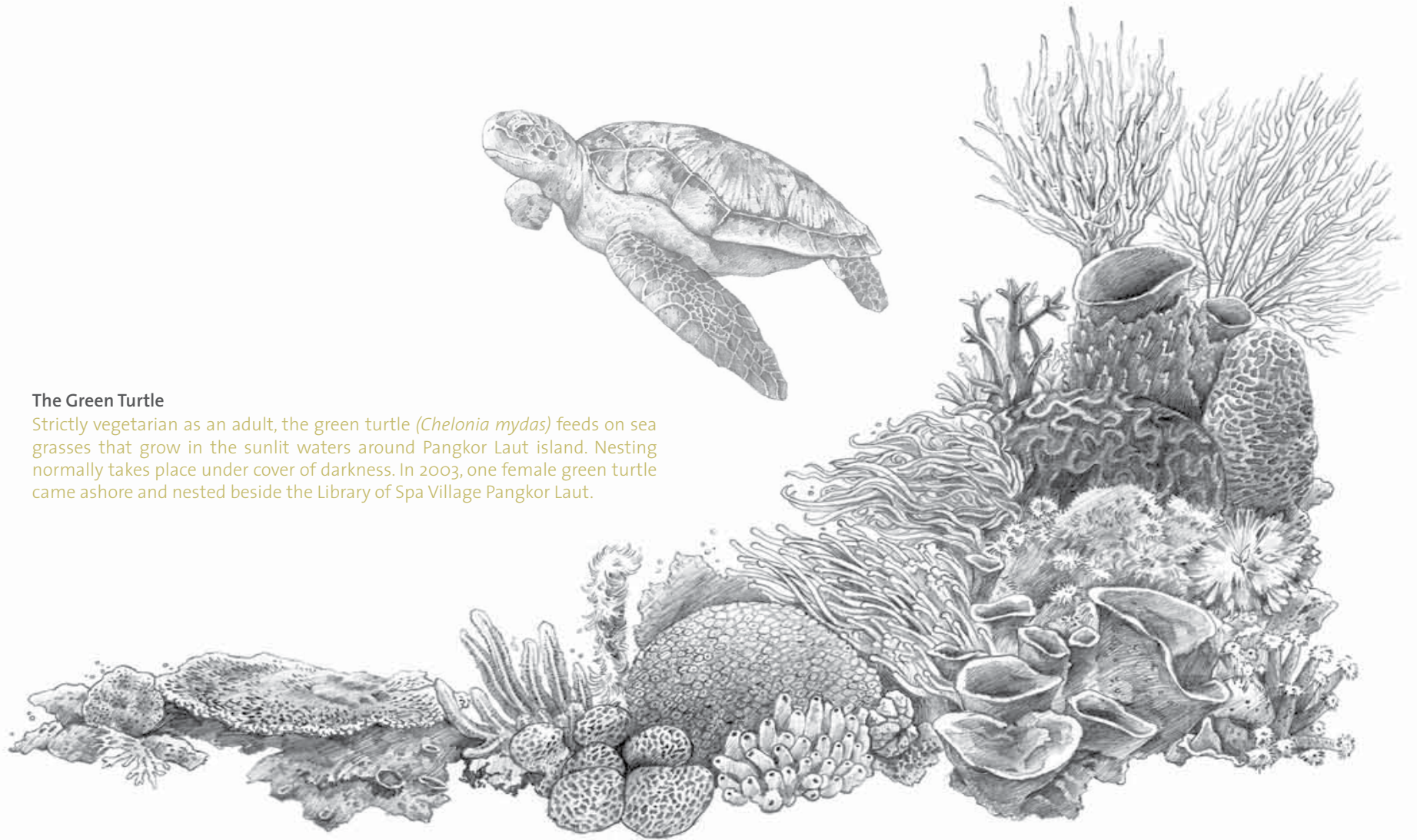
Malayan Pangolin





**The Green Turtle**

Strictly vegetarian as an adult, the green turtle (*Chelonia mydas*) feeds on sea grasses that grow in the sunlit waters around Pangkor Laut island. Nesting normally takes place under cover of darkness. In 2003, one female green turtle came ashore and nested beside the Library of Spa Village Pangkor Laut.



Being in the Sunda Basin, Pangkor Laut is in a comparatively shallow sea, with an average depth of only 50 metres. The exception is the Pulau Sembilan group of islands near Pangkor Laut, where the sea has extremely deep channels. (Guests of The Estates are invited to sail there on Pangkor Laut's exclusive Sembilan Island Adventure cruise.)

Pangkor Laut's shallow waters are conducive to coral growth as well sea grasses, because sunlight is required for photosynthesis. As such, one will find a surprising variety of hard and soft corals in the waters around here, accompanied by other forms of marine life which thrive in coral reefs. The best corals in Pangkor Laut's waters are to be found off Marina Bay, where Estates 1-4 are located. (More details on corals are available in Chapter 3: Estate 1.)

Sea grasses grow well in the shallow channel between Pangkor Laut and Pangkor Island. These marine plants serve as food for marine creatures like the green turtle (*Chelonia mydas*) and the dugong (*Dugong dugon*), a very rare marine mammal. Green turtles are the only sea turtles that are strictly herbivorous as adults. Unlike the *dugong*, which has not been sighted here in

recent years, in 2003 a green turtle nonchalantly climbed ashore beside Spa Village Pangkor Laut to lay its eggs in the sandy beach there. It was recorded that 46 baby green turtles hatched from this particular nest.

Another sea mammal, the dolphin (*Delphinus delphus*) can be sighted on very rare occasions here. Pangkor Laut's resident naturalist has even sighted a family pod of six of these steely grey-backed dolphins swimming just outside the jetty on Royal Bay.

The world's largest fish, the whale shark (*Rhincodon typus*) passes the waters of Pangkor Laut twice a year as it migrates from Ningaloo Reef in Australia to the Similan Islands in the Andaman Sea. This gentle giant's two migratory seasons are March-April, and September-October.

The whale shark migrates to follow supplies of microscopic plankton which are their main food. Although they are technically part of the shark family, whale sharks differ from regular sharks as they do not really hunt; to eat, they just cruise slowly at 2-3 knots with their mouths wide open, filtering tons of water containing tiny particles of food like plankton.





The playful otters seen gambolling in Pangkor Laut's waters, and occasionally using the koi ponds as their sushi bar, are smooth otters (*Lutra perspicillata*). Both the male and female smooth otter take part in digging the breeding den which has an underwater entrance. This species was named *Lutra perspicillata* by Geoffroy in 1826 and *Lutragale perspicillata* by Gray in 1865. Currently, it is categorised as "vulnerable" by the IUCN (International Union for Conservation of Nature). Malaysia's aborigines, the *Orang Asli*, believe the meat of the otter, even if cooked well, causes severe stomach ache. Because of its pungent fishy odour, otter meat is also not favoured by other ethnic groups in Malaysia. There are three subspecies of the smooth otter – one in northeast and southern India and Pakistan; with another, the *L.p. sindica* in north and northwestern India and Pakistan, and the rarest subspecies in the marshes of southern Iraq, the *L.p. maxwelli*.







Opposite:  
Perak royalty and guests fording  
the river on elephants in the royal  
town of Kuala Kangsar, probably  
during 1st Durbar, July 1897.

Right:  
HRH Sultan Idris Shah II of Perak  
in Kuala Lumpur, 17th Oct. 1970.

Far right:  
HRH Sultan Idris Shah II and guests  
at the Ipoh Airport, Perak, 1968,  
accompanied by court attendants with  
ceremonial umbrellas and traditional  
regalia. (Pictures & information courtesy  
of National Archives of Malaysia.)



## THE SULTAN'S REQUEST

Throughout millennia, the peaceful rhythm of nature was the rhythm of Pangkor Laut – and thus it has remained – even until today.

In May 1945, during World War II, a British colonel by the name of Freddy Spencer Chapman became one of the first Europeans to seek the tranquillity of Pangkor Laut. He had spent the previous three and half years hiding in the Malayan jungle from the Japanese forces. After making his way to Pangkor Laut, he left within 36 hours, not because he did not enjoy the soft sand and crystal clear waters of Emerald Bay but because a British submarine came to rescue him. Despite that short period, Pangkor Laut made enough of an impression on him to be recorded in his highly-acclaimed book "The Jungle is Neutral".

Over the decades before YTL came into the picture, many others came and went, some leaving more than fleeting footprints in the sand. Indiscriminate hunters practically decimated the native wild boar population. Illegal loggers plundered much of Pangkor Laut's virgin jungle of its huge dipterocarp trees, leaving swathes of bare logging trails in their wake. Fortunately, not everything was pillaged. Significant examples of these soaring trees were left untouched on the hilltop ridges. Today, the pavilions of Estates 5 and 6 sit under the living canopy of these ancient giants.

Pangkor Laut was also frequented by more environmentally-enlightened individuals. In 1957, as a lad of about 12, Timothy Chee was part of a group of Scouts who regularly went camping on the island. After registering themselves at the Lumut District Office on the mainland, they would take along all their provisions and then hire a fisherman to send them over to Pangkor Laut on a motorboat. There, in Emerald Bay, they would be left to fend for themselves for a week.

"Emerald Bay could be very dangerous back then," remembers Timothy Chee, "If you got injured, somebody on your team had better know first aid because there would be no medical help until the motorboat returned a week later. The sea current was so strong that it would not have been possible for us to paddle back, either to the nearby Pangkor Island or the mainland, for help.

You'd have to pray hard the fisherman does remember to come and fetch you on the appointed day. There were no mobile phones in 1957."

As part of their training, the Scouts had to find their own food once a week, so they pried the oysters off the rocks to cook. Many of them had diarrhoea after that. Every drop of drinking water had to be carried in tubs from the mainland. There was an old well on the island, but it was unfortunately contaminated by tin cans and other rubbish left by less responsible trippers.

At night, indigenous jungle rats that were as big as cats came onto the beach and nibbled the skin off the soles of the Scouts' feet when they slept; so eventually, they had to wear socks to bed. "That was the only thing we wore," grins Timothy, "because it was so hot." Conditions on Pangkor Laut today are just as pristine as it was in the 1950s, except that now The Estates exemplify 5-star creature comforts in harmony with its forest.

It was around the year 1960 when the late Sultan of Perak, HRH Sultan Idris Iskandar Shah II, discovered for himself the astonishing beauty of Pangkor Laut. Although he never did live there, His Royal Highness made frequent day trips to the island with his guests. Hearing word of the island's loveliness, some less environmentally-conscientious developers proposed massive clearing of the fragile rain forest to build an airstrip, and other glitzy attractions *a la* Las Vegas. In 1980 the Sultan spoke to Tan Sri Francis Yeoh, Managing Director of YTL Corporation, about the other developers' proposals.

When Tan Sri Francis Yeoh saw the natural wonders of the island, he expressed his concern to His Highness that Pangkor Laut was too beautiful for such development, as that would destroy its God-given beauty. Instead, Tan Sri suggested the opposite: that the island should be kept as pristine as possible, and steer clear of touristy trends.

Tan Sri Francis Yeoh also made a solemn promise to the Sultan that one day, Pangkor Laut would be the best resort in the world. In 2003, that promise came true when *Condé Nast Traveller* UK ranked Pangkor Laut "Number One in the World" in its Top 100 list.



Architecture and Nature in Harmony.





