



THE LAST ANCESTOR

John Francis Kinsella

THE LAST ANCESTOR

John Francis Kinsella

Copyright © 2018 John Francis Kinsella
all rights reserved

Published by John Francis Kinsella
Obooko Edition

Although you do not have to pay for this book, the author's intellectual property rights remain fully protected by international Copyright laws. You are licensed to use this digital copy strictly for your personal enjoyment only. This edition must not be hosted or redistributed on other websites without the author's written permission nor offered for sale in any form. If you paid for this book, or to gain access to it, we suggest you demand a refund and report the transaction to the author.

SW130920180838

johnfranciskinsella@gmail.com
<http://johnfranciskinsella.blogspot.fr/>
<https://www.facebook.com/john.f.kinsella>

BANKSTERBOOKS
LONDON-PARIS-BERLIN

CONTENTS

[Chapter 1 Old Bones](#)

[Chapter 2 A Trip to the Dayaks](#)

[Chapter 3 Up River](#)
[Chapter 4 A Strange Discovery](#)
[Chapter 5 Return to Paris](#)
[Chapter 6 A Good Friend in Jakarta](#)
[Chapter 7 Indonesia](#)
[Chapter 8 Palaeoanthropology in Brno](#)
[Chapter 9 Return to Batang Ai](#)
[Chapter 10 The Cave](#)
[Chapter 11 Strasbourg](#)
[Chapter 12 A Scientific Expedition](#)
[Chapter 13 The Academy of Science Moscow](#)
[Chapter 14 The Sunda Shelf](#)
[Chapter 15 The Zoological Institute](#)
[Chapter 16 Sarawak](#)
[Chapter 17 Borneo & Heirlooms](#)
[Chapter 18 With the Penans](#)
[Chapter 19 Pontianak to Putissibau](#)
[Chapter 20 The Expedition Sets Out](#)
[Chapter 21 Niah](#)
[Chapter 22 The Camp](#)
[Chapter 23 Dentition](#)
[Chapter 24 The Dig](#)
[Chapter 25 Out of Africa](#)
[Chapter 26 A Camden Passage Dealer](#)
[Chapter 27 A Brazilian](#)
[Chapter 28 Archaic Ancestors](#)
[Chapter 29 Beyond Africa](#)
[Chapter 30 Atapuerca](#)
[Chapter 31 The Chosen People](#)
[Chapter 32 Genocide](#)
[Chapter 33 Gold](#)
[Chapter 34 Moroccan Bones](#)
[Chapter 35 Land of the Dinosaurs](#)
[Chapter 36 An Oasis](#)
[Chapter 37 Amman to Jerusalem](#)
[Chapter 38 Pierre Finds a Friend](#)

[Chapter 39 Strange Happenings](#)
[Chapter 40 Violence in Kalimantan](#)
[Chapter 41 A Conference in London](#)
[Chapter 42 A Visit to Solo](#)
[Chapter 43 The Human Tribe](#)
[Chapter 44 Super Volcanoes](#)
[Chapter 45 The Story of a Hoax](#)
[Chapter 46 Meltdown in Java](#)
[Chapter 47 Australians](#)
[Chapter 48 News Breaks](#)
[Chapter 49 Zhoukoudian – China](#)
[Chapter 50 The Press Conference](#)
[Chapter 51 Erectus! Our Ancestor?](#)
[Chapter 52 An Unexpected Guest](#)
[Chapter 53 Meetings Old Friends](#)
[Epilogue](#)

*We should always be aware that what now lies in the past once lay in the
future.*

FW Maitland:

*In Pohjola there are thick, dark forests that dream wild dreams, forever secret.
Tapio's eerie dwellings are there and half-glimpsed spirits, and the voices of
twilight.*

Jean Sibelius

Chapter 1

OLD BONES

There were better ways of spending a Saturday morning than being dragged off for a talk about old bones. Kate had insisted that Scott accompany her to some lost Parisian suburb to listen to Michel Brunet, a renowned palaeoanthropologist, talk about his discovery of an important fossil in Chad, that of one of man's early ancestors.

It was wet and windy and spending the morning in bed with Kate would have certainly been more pleasant. Fitznorman, however, rationalised, at the worse that could be put back to Sunday, if he agreed to her expedition, or not at all if he baulked at her project.

There was not too much traffic and they arrived early at the brand new and expensive looking mediatheque where the talk was to be held. It was just as well if they were to have a good seat since the receptionist did not even mention the reservations Kate had taken the precaution of making.

The doors opened at ten and they made their way into the small conference hall. At the entrance, to their relief, they were told that those who had made reservations would find their seats marked by 'Postits' in the front rows. Michel Brunet sat alone on the low stage, behind him projected on a screen was the photo of a fairly battered looking skull.

Brunet, after a brief introduction by a representative of the local municipal council, commenced his talk. He was a man of about sixty with an unassuming appearance, wearing a close cut greying beard, bespectacled, and sporting a worn blazer, he was not unlike an older version of an off duty explorer.

It soon became evident that he was a passionate exponent of human evolution with a finely developed sense of humour and a fascinating talker. He started by recalling to his audience that the teaching of evolution was still forbidden by law in the State of Alabama, then going on to explain that during the greatest part of human civilisation, man had no past history, man was the result of divine creation, he was its *raison d'être*, and at the centre of the universe.

Brunet's twenty year search for the common ancestor of man and the great apes had finally borne its fruit in the harsh Djurab Desert, five hundred kilometres north of N'Djamena, the capital of Chad, in the form of a seven million year old fossil he had named 'Tuomai'.

The climax of the talk was the presentation of Tuomai's skull, when the suburban audience of mostly not too young people pressed around the table to touch what was in fact a resin copy.

As they returned to Paris, Kate enthused about Brunet's account of adventure and exploration in the vast expanses of the African desert, which he had provokingly described to his gawking audience, trapped in their inescapable humdrum suburban existence.

She was so excited by the talk that Fitznorman, in a weak moment and charmed by her girlish fervour, suggested she join him on his next trip to South East Asia in search of ancient ceramics and tribal art for his Parisian gallery.

Kate, whose knowledge of South East Asia, from a historical viewpoint and as a specialist in Asian art, was considerable, had never visited Borneo and jumped at his invitation, accepting it before he had time to change his mind. Back in his apartment they spent the rest of the afternoon poring over the maps and guides that Fitznorman dug out from his chaotically organised library.

Looking at the map of Borneo, she saw that to the north, facing the South China Sea, were the Malaysian states of Sabah and Sarawak with the tiny Sultanate of Brunei squeezed in between the two. To the south were the Indonesian provinces of Kalimantan that covered precisely 87% of the vast island.

From one of the guides, she read that the coastal areas were shallow, surrounded by impenetrable mangroves and without natural harbours, as a result the towns and villages were built well up-stream on the banks of the many vast rivers. The highland areas were far inland and difficult to reach, girdled by dense primary forests, deep rivers and swamps. The first European to cross the island was the Dutch explorer Schwaner, in the mid-nineteenth century.

At the end of the twentieth century all that was changing, fast, hundreds of thousands of hectares of rainforest were burning. A cloud of smoke invaded the region, almost asphyxiating the populations of Sumatra and Borneo. It was part of a recurring cycle of fires that regularly consumed the forests on the east coast of

Sumatra and the south coast of Borneo, all of which grew on a layer of turf up to fifteen metres thick.

With the cyclical variations caused by El Niño, less rain fell and the turf dried out, that is relatively speaking, but enough to burn, sparked by the ancestral methods of shifting cultivation practised by the island's villagers. Each year, towards the end of autumn, they burnt down parcels of forest to make new fields for rice paddies and in the years when the weather became too dry the fires got out of control taking hold of vast swaths of the surrounding forest.

The explosive growth of Indonesia's population brought the need for new agricultural land and an ever growing pressure on the primary forests that were disappearing at the rate of two percent per year. In an arc from Pontianak to Bandjermasin fires raged covering the vast island, the world's third largest, with dense clouds of smoke, which was then carried by the prevailing winds to Jakarta, on the island of Java to the south and Singapore to the north.

In the most part of Borneo, the soil was poor in nutrients which were normally stored in the trees and plants of the forest and recycled by the natural debris, that is dead leaves and plants, which formed the thin humus covering the forest floor. Borneo lacked the rich soil compared to its neighbours, Java and Sumatra, where as a consequence of permanent volcanic activity the soil was constantly regenerated.

Apart from certain coastal regions the ground beneath the humus was a laterite, formed by iron and aluminium hydroxide, up to ten metres deep and once the thin top soil was removed little or no vegetation could thrive, with the exception of tough wild grasses such as alang-alang.

The annual rainfall was as much as three metres and in some coastal cities it rained up to one hundred and eighty days a year, whilst in the mountainous regions it was considerably more with an almost unvarying average ambient temperature of about 28°C. In mid-afternoon hovering around 32°C, falling by between five to ten degrees before daybreak.

The canopy was so dense that little light penetrated to the forest floor. The huge dominant trees literally stood on feet, huge buttresses splayed out over the forest floor, whilst the canopy was supported on the tree's giant pillar like trunks and their huge branches, intermeshing with an endless variety of creepers to form a vast living tissue woven by the exuberance of nature.

Kate, like many who had studied history, could not help wondering about man's colonisation of Borneo and how he had lived in the dense and hostile forests that Fitznorman described to her.

Ancient man was probably not unlike the present day Punans, a tribe of hunter-gatherers. The forest teemed with game, but hunting by its human inhabitants was always an unpredictable venture, even nature's most experienced predators depend on luck, with kill rates often being as little as one in six for every animal tracked.

Hunting had always been a time-consuming occupation and whilst hunters could starve, mostly herbivorous animals, such as the orangutan, could always find an abundance of fruits and plants, though at the cost of spending most of their lives foraging and eating.

The early men who inhabited the forests were omnivores, eating meat when the hunt was good, though most of the time were satisfied by a diet of fruit and vegetables, supplemented by small animals and insects. Unlike their contemporaries living on the African savannah, the possibilities for scavenging were rare in Borneo. In the hot humid jungle dead animal were difficult to find, they either decomposed rapidly or were eaten by insects, birds and small animals that lived in great profusion amongst the dense vegetation.

Scavenging would have been easier in Africa, in spite of competition from other large animals, where even today in the game reserves of the broad open African savannah, millions of large herbivores live, where zebras, gnu and antelopes graze. The life of these herbivores being about ten years meant that each year one to two hundred thousand animals were born and died, three thousand a day, providing a feast for efficient scavengers.

In comparison the jungles of Borneo were dark and lonely with relatively few larger animals on the ground compared to a profusion

of animal life in the canopy high above. Early man no doubt hunted wild pig, deer and smaller animals, as the Punans, tribespeople, do today. The buffalo and rhinoceros that also lived in the forest were certainly too dangerous to hunt.

Fitznorman explained to Kate that little systematic scientific exploration had been carried in Borneo until after World War II, and even then it had been very slow. Before then most of Borneo had existed in its undisturbed prehistoric state for millions of years and only in very recent historical times had a small number of towns and villages been established on its coast and river banks.

During the last ice ages between 18,000 and 40,000 years ago the temperature in Borneo fell by five to seven degrees with a much dryer climate, rainfall was much less than it is at present, as water froze into the huge ice caps that covered the northern hemisphere and sea levels fell by more than one hundred metres opening a land bridge that joined Borneo to the Asian land mass.

The climatic change brought modifications to the forests that covered a vast region that geologists know as Sundaland, where the forests were certainly less dense than they are today in many places. Early men arrived, forced southwards by climatic pressure and slowly extended their habitat into Sundaland and what is today Borneo.

The first Homo sapiens arrived across the landbridge from Asia around 40,000 ago with new tools and weapons, followed thousands of years later by further waves of migrants who brought rudimentary agriculture with them and then boats and all the implements of Neolithic man.

Chapter 2

A TRIP TO THE DAYAKS

It was a cold, rainy, Thursday afternoon at the end of October when the couple left Paris, taking a taxi from Fitznorman's apartment situated nearby the Bastille to Charles de Gaulle Airport.

At the Air France business class check-in desk there were relatively few people and they were informed by the smiling hostess, pleased to be giving some good news for once, that the flight was not full and they would have plenty of space during the long hours ahead.

The final destination of AF126 was Jakarta with a stop in Singapore where they were to disembark. The news was not good from the Indonesian capital and Fitznorman was pleased that he would be giving it a miss. The political crisis and its repercussions had discouraged a lot of visitors, especially business people.

Fitznorman had not heard from his friend Aris for weeks. Indonesia was going through a bad time and it would certainly become worse.

He and Kate settled into their seats and accepted with pleasure the Champagne offered them. The girl at the check-in had exaggerated when she had told them that the flight was not full – it was almost empty, they almost had the whole business class cabin to themselves.

He congratulated himself on inviting Kate along, being with her over the next three weeks would be great. Their relationship had become serious, perhaps a little bit too serious, though it had not gone as far as her moving in with him, rather she drifted between her place and his, which suited them both. Whatever the situation at that precise moment he basked in the pleasure that radiated from her. She was a lively, slim, blonde, with a very girlish figure, the kind that he was often attracted to. They sipped their Champagne and the steward topped up their glasses as they waited for the departure.

The motors started and Kate took a last look at Charles de Gaulle Airport through the window of the Airbus. Fitznorman knew the airport only too well, it was an evergrowing, faceless and transient crossroad, where people barely paused to wonder why it existed, its army of workers, technicians and officials, all dedicated to servicing movement. He turned his attention to one of the newspapers that a

stewardess had distributed, the International Herald Tribune. He scanned the pages before an article caught his eye:

New Demonstrations

Jakarta: A suspected car bomb exploded near the parliament building in Jakarta yesterday. A second blast occurred outside the Hilton Hotel, adding to the tensions, as University student demonstrations have become daily events since mid-October demanding the president's resignation. The students claimed that his government was corrupt and blame his family and their cronies for the nation's financial crisis.

Over the last months Indonesia's rupiah currency has plunged more than seventy percent against the dollar as the crisis deepens and unrest spreads across the country.

In Singapore, they were booked into the Sheraton Towers on Scotts Road in the city centre. After the long and uneventful flight they were eager to take advantage of what was left of the day, the drive in from the airport along the startling tropical green avenues with the bright sunshine had whetted their appetites.

They quickly showered and prepared themselves for the evening, there was a seven hour time difference with Paris, and the sun was fading quickly as it did near the equator, a sure sign that it would soon be time to eat and drink. They opted for the MRT, it was cool and rapid, getting off at Boat Quay and making their way to the riverside restaurants. Not surprisingly it was throbbing with the noise of the usual Friday evening excitement, strangely seeming almost exactly as Fitznorman had left it on his last visit, an endless party for some.

Even after many years, each visit to South East Asia was a new adventure for Fitznorman and the possibility of sharing it only

enhanced his pleasure. He had first met Kate Lundy, almost fifteen years his junior, a couple of years previously at the inauguration of an exhibition at the Musée Guimet in Paris, one of the world's leading museums of Asian art, where she was specialised in the research and history of Asian art and especially ceramics.

Kate had been responsible for compiling one of the most complete catalogues on the subject with countless references and photographic records, a good number of which she had taken herself.

He remembered how they had got off on the wrong foot when they had found themselves arguing about the origin of a Martaban, a very large type of ovoid stoneware jar that were made in China, which transited by the Burmese port of Martaban on the Irrawaddy River from the 14th century onwards. The jars had a long history in Malaysia and Indonesia, traditionally considered as precious heirlooms by the tribal peoples, who even gave the individual jars names, attributing them with magical powers.

Things had however improved little by little as Scott and Kate got to know each other better, discovering they shared more than just a professional interest in Asian art and antiquities.

The bars were full of bankers and traders, it reminded Fitznorman of Nick Leeson, and he could not help thinking how the hapless banker spent several years at the invitation of the Singaporean government in Changi Jail, a few kilometres to the east of the city centre, after he broke the Queen of England's bank, the Barings, the United Kingdom's oldest merchant bank, with his huge trading losses on the Singapore stock exchange.

Singapore was not a place to play with the law.

In appearance the crowd had not changed though the bankers had abandoned speculative trading and unrealistic investment projects, turning their attention to oil, gas, or China, where growth continued in a spectacular fashion.

The noisy crowd was dense and overflowed out onto the pavement, although glancing through the gaps Fitznorman saw the bars were not that full inside. The evening crowd consisted mostly of Brits and Australians, who holding their pints of local Tiger or

foreign beer, mimicked their respective tribal roles as though they were on the pavements outside of fashionable pubs in the City of London, the Kings Road in Chelsea, or off Flinders in Melbourne. Many of the men still wore their jackets and ties, with the power girls in their dark pin striped costumes. Mixed with them were fashionably dressed European girlfriends and a scattering of attractive Chinese girls hanging onto the arms of their status symbols.

They strolled towards the bridge at the end of the Quay, pausing to check out the menus, looking at the diners and more exactly what they had on their plates, deciding whether they would eat, Chinese, Indonesian, Indian, Japanese or Thai.

Fitznorman stopped, taking a double look at a table on the riverside terrace of a Chinese restaurant. It was Erkki Erkkila. They looked at each other a couple of brief instants before their faces lit up with startled recognition, then holding out hands and smiling with the surprise and pleasure of their unexpected reunion, they greeted each other enthusiastically.

Erkki was an international lawyer representing several major Scandinavian multi-nationals with large investments in South East Asia. He was an old friend of Fitznorman and was also an avid collector of Khmer art. The empire of the Khmers had been one of the greatest civilisations of Asia covering all of Indo-China, which was a contemporary of Borobudur, built by the Sailendra princes in East Java during the ninth century.

A quick glance at the couple at Erkki's table told Fitznorman they were also Finns, and in addition of no particular interest. After an exchange of friendly banalities Fitznorman left his room and Erkki promised to call him to fix a moment to meet when he was free from his business obligations.

They then returned their attention to food and Kate opted for an Indonesian restaurant where they ordered an old favourite, Satay and Nasi Goreng, it was a good choice. Then after talking of the coincidence and the smallness of the world they quickly forgot Erkki and relaxed in the humid warmth of the tropical evening, more than a

pleasant change after the cold Parisian autumn weather, enjoying the spicy food and frothy chilled draught beer.

The next morning they took a late breakfast on Orchard Road like a couple of typical tourists before heading to a small reliable travel agent in Peoples Centre, which Fitznorman had used over the years, where he checked out flights and timetables for Kuching in Sarawak. On their return to the hotel there was a voice mail message from Erkki inviting them for dinner. 'As long as we don't spend the evening endlessly talking about business,' said Kate only half joking, meaning Erkki's business and the political crisis in Indonesia.

Fitznorman returned the call and they agreed to a restaurant that Erkki suggested in China Town. Amusing thought Fitznorman, if Singapore wasn't Chinese then what was it? The difference however, was that China Town was one of the last remaining districts of the city where the traditional style architecture of the Chinese 'shop houses' still survived. The district had been saved from the demolisher's ball and renovated as both a tourist zone and a souvenir of how the city had once been, before the metamorphose that had transformed Singapore into another faceless city full of sky scrapers, crowded highways and commercial centres, resembling Hongkong, Bangkok, Kuala Lumpur and to a lesser degree Jakarta.

That afternoon they toured the more serious antique dealers, where Fitznorman chatted with their shrewd owners, trying to worm out the latest collectors' trends and potential new sources of antiques. Business was not good, there were few local buyers, many had lost their shirts on the Asian stock markets. The dealers were tight-lipped, their sources were often illegal, smuggling antiques out of China, pottery and porcelain looted from undeclared shipwrecks in Indonesian and Philipino waters, or from ancient burial sites.

They took a taxi to the restaurant that was situated in a quiet street in the older Chinese Town district of the city a couple of streets away from the dense throng of the evening street market. Erkki was waiting for them, by his side stood an attractive Chinese girl in her early thirties. He warmly shook hands with Fitznorman and gallantly kissed Kate's hand.

‘Let me introduce you to Chen Li.’

The girl was tall, she was not Singaporean.

‘Chen Li is from Beijing, where she’s an expert in Ming porcelain.’

They were shown to their table.

‘This is a Sichuanese restaurant,’ explained Erkki, ‘the food is excellent.’

The restaurant catered to the upper class amateur of good Chinese food, in a discrete Western ambience, it was tastefully furnished with the simple stylish lines of Qing period rosewood furniture. The tables were set with authentic Kitchen Ming stoneware bowls and plates in perfect condition, more than four hundred years after they had left the kilns in the coastal cities of South China, the chop sticks were in ivory. Both of the girls politely appraised the grey blue bowls and plates as the two men exchanged news.

‘So Scott what is it that really brings you back to Singapore? I’m sure that it’s more than a simple vacation?’ he said with a wry smile.

‘Well it’s my usual tour, half business and half pleasure, always on the look out for bargains, this time I’ve decided to check out the Ibans and Dayaks, there’s a few outlying longhouses I spotted on my last visit that could be interesting.’

Erkki laughed, ‘On the footsteps of Levi-Strauss I see.’

‘Well not exactly,’ Fitznorman replied looking down at his antique plate. ‘What I’m interested in really are the heirlooms of the Ibans.’

‘Ah, I see, beads for treasure!’ Erkki laughed.

‘Well if I can find a few good Martabans why not!’

‘So then, you’re off to Sarawak and Kalimantan, for how long?’

‘Two or three weeks, no real fixed date, it depends on what we find. Kate wants to get up to Taipei.’

‘We’re trying to set up an exhibition of treasures from the National Museum, it’s a little complicated, they’re afraid of Beijing trying to seize them,’ said Kate a little too quickly, embarrassed by the presence Chen Li.

Chen Li laughed politely, 'Don't worry about me. In any case the government in Beijing sees Taiwan as part of China, so for them the treasures are in safe keeping.'

'Chen Li doesn't get involved in politics,' Erkki said with a laugh.

He was right about the food, it really was excellent, accompanied by a fine Australian white wine. After many years in Singapore, Erkki knew his restaurants. He was a man of taste and cultivated to a degree untypical of most Finns, even those who had attained a worldly status.

Scott Fitznorman was a reputed and successful dealer in fine antiques and owned a fine arts gallery at the upper end of Faubourg Saint Honoré in Paris, specialised in Asiatic and ethnic art, with branches in Zurich and London, and links to galleries in the USA, notably in Los Angeles, the home of many wealthy collectors. He travelled frequently to Asia in his search of the kind of fine art objects he had on show in his galleries, destined for discerning collectors. On occasions he acquired special pieces on behalf of clients who wished to remain anonymous, from the great auction houses such as Drouot, or Christie's, in Paris or London, but the discovery of rare and original pieces was his greatest reward, which was also question of business. A fine objet d'art discovered in some small remote town or village in Asia could fetch many many times the investment made in finding it when compared to the prices proposed by auction houses and international wholesale antique dealers.

Fitznorman was well-known in the world of rare Asian antique art, especially for his flair in tracking down highly valued collectors items in an ever shrinking world, and also for his discerning taste in valued ethnic art. His spacious apartment in the Marais, on place des Vosges, was a well protected treasure house, decorated with some of the finest objects collected over many years from the remote corners of the Asia.

Pleased with himself, Erkki explained that though technically speaking business was lousy, he personally was doing extremely well, his clients were waiting for the turn around in the local

economies, which banks and financial institution were predicting for the end of the following year. Fitznorman, however, was not so sure the things would improve quickly, as news broke of fresh rioting in Jakarta and political corruption at high level in Kuala Lumpur.

‘In any case you could say that we’re in a holding position at the moment,’ Erkki continued. ‘My clients have several major contracts in Indonesia which have virtually stalled and there’s a lot of outstanding monies, in addition to that there’s also contracts they have signed, but not come into force because of the crisis. I suppose it’s a case of wait and see!’

‘And your own position?’

‘As steady as a rock, the bastards can’t do without me,’ he laughed. His fees continued to roll in and would continue to do so. His clients could not just bail out, the financial consequences would be too great. Besides Erkki spoke the local languages and had all the connections, he persuaded them it was not the first and would not be last regional crisis to make waves in their business.

He reminded his Finnish friends their most serious crisis had arrived with the collapse of the Soviet Union, which had been a decisive factor for certain of his clients investing heavily in the Asian market.

Since then certain Asian economies had tanked and Russia had started looking up, but that was before Putin got too ambitious. There were not that many other possibilities, South America was one, but it was a difficult market with a reputation for economic ups and downs, in addition they spoke Spanish, which the Finns did not. So, with Erkki’s convincing arguments they decided to hang-in, in the meantime reducing their expenses to sustainable levels, ready for the ‘Rebound’ the Malaysian leader was promising the markets.

In addition to his interest in Khmer art, Erkki was also a keen collector of Chinese ceramics and South East Asian ethnic art. The interests that the two men shared had formed the base for the solid friendship they had built up over the years.

‘So apart from business have you discovered anything new recently?’ Fitznorman asked, changing the subject.

‘Not much, with this mess of a crisis I’ve been pretty busy, you know they’re flying in and out, trying to make head or tail of what’s going on with their contracts, giving me a real headache.’

‘Too bad.’

The two girls had struck it off and were engaged in a deep conversation, uninterested by the men’s business, exchanging opinions on Chinese porcelain.

‘I’ve got a little bit of information that might interest you,’ Erkki said lowering his voice.

‘Oh,’

“Yes, if you can find something interesting for me?” Erkki said with a sly wink.

‘Okay, okay,’ Fitznorman laughed. It was a little game they had played before. Erkki picked up titbits of information from clients that he had passed on to Fitznorman in return for a something to add to his collection, if the hunt turned out to be good.

‘The other day, I had dinner with a couple of guys from a Finnish engineering firm, they’d been carrying out survey work for a mining company near the Indonesian-Malaysian border in Borneo. They visited a few very isolated longhouses and talked about seeing a number of human skulls and what they described as large jars...’

‘Martabans!’

‘Right, and apparently the villagers have very little contact with the outside.’

‘Can you be more precise about the location?’

‘I have a copy of their survey maps in the office. Drop by tomorrow and I’ll run you off a copy, if you don’t flash it about.’

‘Don’t worry Erkki, count on my discretion, it’s just between the two of us.’

Chapter 3

UP RIVER

Fitznorman made reservations at the Hilton Batang Ai Longhouse Resort Hotel, almost three hundred kilometres from Kuching, a four hour drive and a fast boat ride to the hotel jetty. The Longhouse Resort was built on the banks of a broad man-made lake surrounded by dense jungle covered hills. The lake was formed by a hydroelectric dam built to provide power to the rapidly developing region of West Sarawak.

The hotel had been conceived by the Sarawak government for the development of eco-tourism and completed a couple of years previously, it was managed by the Kuching Hilton that advertised it as Borneo's nature retreat. It offered one hundred comfortable guest rooms with jungle trekking in the national park and river safaris up the nearby rivers to visit the Iban, descendants of head-hunters, and their longhouses.

It was quite unlike any other Hilton, constructed in a form designed to resemble the local longhouses, built in wood and natural materials and decorated in the traditions of Borneo's ethnic arts.

After crossing the mist covered lake they arrived in the vast and airy reception area of the hotel, it was decorated with beautifully carved hardwood panels and beams from the nearby forests, with traditional furniture and textiles. It did not take them long to discover that though they were not totally alone, the hotel was almost deserted with the exception of the personnel. There were very few guests, less than a dozen rooms were occupied, a sure sign that the crisis was beginning to bite.

Fitznorman had visited the hotel on his last expedition and had started to explore the longhouses reachable by river, one or two day's boat journey into the interior. He had found that whilst they offered a certain authenticity, they had been transformed by the influence of the outside world since the construction of the dam, and tourism

following the opening of the hotel, even though tourism was still in a very hesitant phase.

Jungle trekking was not exactly designed for the ‘sun, sand and booze’ trippers, though unfortunately that would certainly come with a little persistence and patience on the part of tour operators, encouraged by the Sarawak state government. For the present its appeal was more to those who wanted a little eco-exploration in comfort and without any serious danger. The upper ranks of business people and expatriates from Singapore and Kuala Lumpur were amongst the pioneers exploring the region.

On the other hand, however, it could not really be said that the Hilton was designed for hardy adventurers, mountaineers, potholers, or new age anthropologists, who scorned tourists as if they themselves were amongst the daring explorers of the late nineteenth century.

At the start of the new millennium there were no longer any distant frontiers to be explored. Any backpacking explorer with time and a shoestring budget could hop on a Singapore Airlines flight to Pontianak and then head inland by river bus, or road, to a town such as Putussibau, where he could find guides who would help him to risk his life crossing the Muller Mountains to some unheard-of remote village before continuing on to the east coast town of Samarinda.

Dangerous? It was certainly not for the weak hearted or those having fragile constitutions. But who cared if a few amateur adventurers of the extreme wanted to risk their lives, as do tens of thousands do each year, either on the face of Mount Blanc, or on trips to a thousand strange distant adventure parks around the world, potholing, scuba diving, trekking across deserts or exploring volcanoes.

Fitznorman had no illusions about the risks of such adventures, he sought no challenge or proof of his own mortality by leaving his body to rot in a dark corner of the humid rainforest. His own justification was more down to earth – business – searching out rare examples of ethnic art and antique heirlooms that he could sell at a

profit in one of his galleries. His travels represented a significant but worthwhile investment, the costs were always well justified, paid by his discoveries, always sold at a substantial profit, the rarer the object the higher the price he paid, the higher the gain. He ran a successful business assisted by Marie-Helene Springer, his executive manager, her dedication to the business gave him, as owner and founder of the East Asia Galleries SA., freedom, freedom to travel, to stay in fine hotels, to eat in good restaurants and to appreciate the finer things in life. Success also gave him what he desired most, independence to indulge his own pleasure, and when the going got hard, in some hot and dusty corner of the world, he could return to the comfort of a king-size bed in a five star hotel by the next flight back to civilisation.

He entertained relations with wealthy collectors and institutions in Europe, the USA and Japan, they were his privileged clients, willing to pay thousands and tens of thousands and on occasions hundreds of thousands of dollars for the fine art objects, rare tribal art and textiles that formed the core of the 'collections' presented in his galleries and at the major antique fairs. The private collectors were the anonymous rich, who were not a disappearing species, on the contrary they existed in much greater numbers than could be imagined, crisis or no crisis. It was the rare tribal art and the heirlooms of tribal peoples that were in short supply and very few places remained on the planet where they could still be found. The search was his adventure, the satisfaction of finding the unfindable, a rare object in an isolated longhouse, where the headman or 'Tuay' had not already exchanged the family's heirlooms against a chainsaw 'Made in China'.

On his previous trip to Sarawak Fitznorman had chartered a light plane, a four seater Piper 28 at the Flying Club in Kuching, explaining to the curious owner, he was an ethnologist and wanted explore the upper reaches of the rivers that flowed down from the border region to localise the isolated longhouses built along their banks for his research. He had obtained a photography permit and flew up to Bandar Sri Aman, a small market town, an hour's flight from Kuching on the small plane, it was situated on the Lupar River

and had an airstrip from which he could fly over the area leading up to the Batang Ai National Park and along the Sarawak-Kalimantan border. Flying into the adjoining Indonesian airspace was not permitted.

That was almost seven months earlier and he now planned to continue his exploration by a small expedition, heading upriver to the longhouses he had pinpointed and suspected had very little contact with the outside world.

He had hired a reputable local guide, Winston Marshall, who took charge of organising the ten day jungle expedition. Marshall, who Fitznorman had got to know during his past visits, respected him as a specialist in ethnic art and knew he was no novice, capable of living rough when the need arose.

The transport was composed of four 'perau' – longboats, each with a crew of two Iban tribesmen. Marshall wore a slouch hat in the style of a Hollywood hero, under the hat was a red bandana that prevented transpiration dripping into his eyes, hidden by coke bottom glasses in very thick black frames, attached by a boot lace behind his head. He cut a very raffish figure with his machete slung in his belt, wearing high laced jungle boots.

Winston Marshall was a jungle survival specialist who had spent many years in the Gurkha Regiment of the British Army, training commandos and airmen in survival techniques in the dense Borneo jungles that covered the mountainous Malaysian-Indonesian border region, a terrain that he knew like the back of his hand.

In spite of his very Anglo-Saxon name, he was in fact a mixture of Indian, Burmese, Scots and Australian. His father had fought during World War II in Burma where he had met and married Winston's mother.

After retiring from the army, Winston had set up his small company Borneo Exploration Sdn. Bhd., where he hired his services to all kinds of businesses and government organisations. Amongst his clients he could count the armies of Singapore, Malaysia and Indonesia, the major oil companies that explored and drilled wells in Borneo, the forestry departments of Malaysia and Indonesia, and a

multitude of logging and mining companies that operated throughout the region.

His wife came from one of the so-called Hill Tribes of the region. He had lived amongst them for years, learning to identify many hundreds of trees and plants as well as the animals, birds and insects that lived in the forest. He knew exactly what plant was needed to care for the daily ills and even more serious sicknesses without recourse to modern medicine. He knew exactly what trees or creepers supplied the required materials for making weapons, tools, clothes and shelters. He knew all the fruits, leaves and roots that could supply food and drink in the forest. He knew how to hunt every kind of animal and bird, where to find honey or edible insects and how to fish in the rivers and streams of the jungle.

Experience had shown him that the forest could be hell or a Garden of Eden and whilst his knowledge was no greater than that of the ancient communities of forest dwellers, he had the advantage of the know-how and training of a soldier with benefits of modern technology.

The following morning they left soon after breakfast. The four longboats were moored at the jetty and their crews waiting patiently. Winston gave instructions to the hotel porter to load their belongings onto the boats that were to carry equipment and supplies, and hopefully, on the return journey filled with valuable collectors' items, another boat was loaded with drums of fuel and a spare motor. As soon as they were installed, the small convoy headed across the mist covered lake in an easterly direction towards one of the rivers that flowed down from the mountains. The boats cut through the still waters where the only other movement was the occasional bird, which rose from the still dense vegetation that overhung the river, disturbed by the noise of the boats motors.

They had planned ten days on the Sungai, spending two or three nights in each of the longhouses and with side trips to their nearby neighbours. That would be enough to explore the potential stock of quality heirlooms in the catchment area of the Sungai.

The first day was a four hour journey to the nearest longhouse of any interest, broken by a couple of brief stops to stretch their legs and drink. Winston had settled down his hat pulled over his forehead for a nap in the first longboat, seated between the look-out who was half standing in the prow and the helmsman who manoeuvred the boat following the cries and signs from the look-out. The river was a mine field of logs and branches that sometimes floated just below the surface, with stones and boulders in the shallower reaches, which could swamp or overturn a boat in an instant, throwing its unwary passengers into the river.

The endless staccato hammering of the motor was hypnotic, only the rush through the rapids broke the monotony as they pushed upstream, passing isolated Iban longhouses surrounded by small patches of pepper and mountain rice. It was just after midday when they caught a glimpse of the longhouse where they planned to spend their first night, it lay at a bifurcation in the river, almost hidden by the forest, where a small floating jetty, built of bamboo poles bound together by rattan cords, and a couple of dugout pirogues moored alongside, swung gently in the current.

The traditional longhouse was built on stilts in axe-hewn timber, tied with rattan cords, roofed with leaf thatch, with a boardwalk and steps leading down to a boat jetty. The Ibans built their longhouses to last for several years, then when the small plots of land they cultivated in jungle clearings, along the river banks, were exhausted of nutrients, they gathered together their belongings, animals and reusable elements of the structure, and moved upriver, to another site where they built a new longhouse.

The steps leading up the slope to the boardwalk were cut into the laterite clay, reinforced by rough cut lengths of wood. A couple of black pigs were sprawled on the steps surrounded by a litter of squealing piglets. The doorway to the long house was three metres above the ground, a platform standing on the stilts that provided protection from flooding whenever the river rose with the heavy rains during the rainy season.

Winston pointed the way upwards, climbing a steep notched log that served as a ladder, followed by Fitznorman and Kate. A dog

barked and the headman, a small Iban with a deeply wrinkled face dressed in jeans and a blue tee shirt, appeared on the platform. He smiled slightly to Winston and languidly lifted his hand in a sign of welcome to the visitors.

The sun was high above the canopy of the trees, beams of light, traversed by small winged creatures, fell like columns through the vegetation on the opposite bank of the river.

They followed the old man into the longhouse, the light was dim in the ruai, where a wide veranda known as an awah, served as a common space, overlooking the river, a communal area where the people of the long house socialised. Two or three oil lamps, suspended from the ceiling, gave off a dim glow above a small group of people seated on rattan mats, curls of blue smoke drifted upwards through the heavy air.

The headman led them forward and invited them to be seated on the mats. The ruai was in effect a veranda open on one side overlooking the river, to the left hand side were the individual family rooms, or biliks as they were called by the Iban. The seated Ibans nodded to the new arrivals and made signs of welcome. Winston translated the simple exchanges as the Tuay lifted a hand and a bottle of tuak appeared on a tray with several small glasses.

The Tuay sat next to Fitznorman and Kate, as the women of the longhouse, who had gathered around, observed her with unabashed curiosity. A young Iban man, who appeared to be mentally retarded, smiled at them and touched Kate's hair. He giggled and pointed to a rattan basket suspended on the bamboo rafters overhead, at first glance it seemed to contain dusty coconut shells, then as their eyes pierced the murky shadows they saw the gaping eyes of human skulls and large grinning teeth.

The heads of the Iban's enemies, whose skulls were preserved, symbolised bravery. A head was believed to bring strength, good luck and prosperity to a longhouse. It was one of the most prized possessions and not long ago it had not been uncommon for fathers, whose daughters were about to marry, to demand human heads as dowries from the bridegroom.

‘They are very old, from my grandfather’s time or before,’ the Tuay reassured us in broken English.

Fitznorman was comforted to learn they were not too recent. Looking at the Tuay, he calculated he was probably about sixty-five years old, maybe more, possibly less, it was difficult to know if Ibans in the forest aged more rapidly or lived to great ages. In any case sixty-five plus, or two generations, would situate his grandfather’s time somewhere back in the early to mid-twentieth century, before WW II, when the forests of Borneo were known to a mere handful of hardy Europeans and when head hunting was still fashionable.

After welcoming toasts and exchange of news in the Iban dialect Winston got down to practical matters. They unloaded their bags and material carrying them to the bilik indicated by the Tuay. That evening before eating, they slowly got around to business with questions on the handicrafts, which the women of the longhouse made for sale to local traders who passed by from time to time taking them for sale in the markets of the towns beyond the lake.

Fitznorman and Kate politely examined the rattan baskets and mats, then one of the men presented a pahang, its handle carved in the form of a fish eagle’s head, in a wooden scabbard, to illustrate its usefulness he pointed to others hanging on the wall, worn and obviously well used.

Winston carefully broached the question of heirlooms and ritual textiles in the catchment area of the Sungai, as Kate with the permission of the Tuay and some small gifts occupied herself making a photographic record of their visit.

They were then invited to eat the meal that had been prepared, rice and chicken – the wiry kind that scratched the earth under the longhouse. After dinner they set up the insect repellent unrolled their sleeping bags and settled down under their anti-mosquito nets to sleep after their long day up the Sungai Batang Ai and Sungai Lalang. The noise from the forest was incessant, the whirring and clicking of insects with the calls and cries of birds and animals.

The next morning they were awoken as dawn was just breaking by the crowing of the rooster followed by barking dogs and the creaking

of the longhouse as the families rose in the adjoining biliks. The morning shower consisted of a quick plunge in the river avoiding the thought of tropical parasites which theoretically could not survive in the fast flowing current. Then breakfast, instant coffee in freshly boiled mineral water and a couple of slices of supermarket bread and marmalade from the stock of food that Winston had included in the supplies brought up river with them. That, together with the beer, soft drinks and bottled water was the only concession made for food. The rest was from the longhouse gardens and the Ibans domestic animals, mostly chicken and pork.

Outside life got slowly under way as the blue smoke from the fires drifted upwards in the moist early morning air, the temperature was refreshing 23°C. Very few animals or birds could be seen in the forest, though insects were present everywhere and in every form and colour imaginable.

There was nothing of particular of interest for Fitznorman in the longhouse, but through Winston's probing they learnt that further upriver there was a longhouse where the old Tuay had recently died and the younger people were eager to sell their old useless things to buy motors and radios.

They left after breakfast and continued their boat journey up stream. Fitznorman compared the map he had prepared with the aid of his aerial photographs and satellite images to that Erkki had given him in Singapore. The details on the map made by the Finnish engineering team who had exploring for mineral deposits in the region was more technical, but they had carefully noted all the longhouses they had seen.

On the fourth day they made a halt at a remote longhouse, near to the border with Indonesian Kalimantan, where it seemed the families had visibly very little contact with the exterior.

They decided to stop for a couple of nights to explore the area, it was a much needed pause, they were both exhausted after the constant noise and buffeting in the rapids as the boats had struggled against the current as the river rose amongst the densely forested hills.

Unable to sleep Fitznorman made his way down to the river bank, the night sky was clear, lit by a full moon. He looked at the stars unhampered by the haze of pollution that covered civilisation. His mind wandered back in time to when men lived in the same forest in primitive isolation, probably not more than one or two hundred years previously, before the arrival of the outsiders. A time when the forest provided their every need for both body and mind. They depended entirely on themselves and their family, the group consisted of close relatives, when even the notion of tribes was vague, perhaps the next nearest neighbours spoke another dialect or language, maybe they were friends or perhaps enemies, in any case they were probably head-hunters, even cannibals. Life was certainly fraught with dangers, but it was not necessarily nasty.

What was extraordinary in those remote areas was that life had not changed on Borneo for thousands of years, since a time long before civilization and history had been invented, or before countries and political boundaries had been imagined.

Today's inhabitants of Borneo, such as the Ibans and the Dayaks were very recent peoples, arriving probably not more than three thousand years ago. Before that other men had lived on the islands of South East Asia, for tens of thousands of years, for hundreds of thousands of years, as climates changed and as the oceans rose and fell.

The prehistoric site at Mulu, a few hundred kilometres to the north was the proof that man had lived on the island of Borneo 40,000 years before. But the most significant evidence of ancient man was the discovery in the gravel deposits on the banks of the Solo River, on Java, of the remains of *Pithecanthropus erectus*, in 1890, when Indonesia had been part of the Dutch East Indies Empire.

The skull was later dated to being 1,800,000 years old. Its finder, Eugene Dubois, died a recluse, after being ridiculed and heaped with scorn by the learned anthropologists of that time. It was only many decades later that his discovery was recognized for its true value, a fossil hominid who had lived in Java at the very dawn of humanity.

Dubois had commenced by exploring caves in Sumatra, he was the first person to search for the prehistory of man in the Indies, and he was rewarded for his work by his extraordinary discoveries. The same principal was applied in Borneo by the British anthropologist, Tom Harrison, in the nineteen thirties, at Mulu, where there were countless unknown and unexplored caves, certain had already yielded evidence of Stone Age man and primitive cave art.

Were those primitive men the ancestors of the present day Papuans of Niu Guini, or the Aborigines of Australia? It was difficult to say. If the Australian aborigines' ancestors had reached the southern continent 60,000 years ago, there should be signs of their presence along the route that they took on their long voyage of island hopping.

It was not unreasonable to think that Borneo was one of the stops on their long voyage. When Homo sapiens arrived on Borneo did they find other men?

Primitive men had lived undisturbed for countless generations on the coast or on the banks of rivers at the edge of the virtually impenetrable primary forests?

Even today the forest is impenetrable, the proof is that even the Ibans and Dayaks live on the river banks and only use the forest for hunting and foraging. A European could survive not more than three days or so alone in such a hostile environment as the primary rain forest, no doubt an explanation why Borneo was colonized so late in history.

Whenever primitive man migrated, it was essentially in search of food. When game or foraging became scarce, or if competition became too great, whether from others of their own kind or from the animals, they simply moved on. They had advanced by short steps, very short steps, perhaps a mere couple of kilometres a year. But 10,000 years represents a great distance.

The inhabitants of these isles, those who had crossed when land bridges existed, established their dwelling places on coasts and river banks. When waves of aggressive new migrant populations arrived, maybe more evolved forms of men with more advanced

technologies, they pushed the existing populations deeper and deeper into the forest taking the best living sites for themselves.

For Kate Lundy, ten days with the Ibans, was not simply a personal experience, she had also agreed to prepare an article for the review 'Art and Ethnology' a bi-monthly monthly publication, edited in collaboration with the Musée Guimet. She had persuaded the editor, an old family friend, to agree to an article, a discussion on the impact of modern civilisation on the use of traditional utensils in the everyday life of longhouse communities.

For centuries Borneo had been one of the main destinations of the heavily laden Chinese junks that plied their wares of porcelain and stoneware in exchange for spices, exotic wood and feathers. Until recent times these ceramics were still abundantly found in every day use, or as revered heirlooms amongst the tribal communities. Her research would be supplemented by data she hoped to find at the University of Sarawak and in the State Museum and Library.

With that in mind they had briefly visited the museum on their arrival in Kuching and discussed their project with the director of Anthropology and Ethnology, Doctor Nordin Ibrahim, with whom Fitznorman had exchange information over many years. Nordin was charmed by Kate and gave them a personal tour of the museum. Kate was particularly interested by the photographic archives that gave a considerable insight into the everyday life and traditions of the local tribes, more interesting than many of the reports of travellers and administrators of the period, as they at least transformed the reports into graphic images with real people in the environment of that time. It was not unusual to see in the background of the photographs artefacts and objects that were of great interest to modern specialists.

They paused at one of the displays where Fitznorman had his attention drawn to a photograph that was entitled 'The dance of the heads'. A group of young women in sarongs woven in the traditional patterns of the Ibans and adorned with necklaces and bracelets appeared to dance in a slow moving choreography, seeming to move rather stiffly not unlike well brought-up young women, the objects

they were passing from hand to hand were heads, human heads, those of young men whose skin looked dark, but not wizened or shrivelled, to all evidence heads that had been recently severed.

Kate looked in silent horror at the faces of the young women, frozen in enigmatic smiles not unlike La Gioconda, there was no sign of repulsion, it was no different to a coconut harvest dance.

In another gallery of the museum were the reconstructions of longhouse dwellings and several baskets containing human skulls hung from the roof beams, certainly the trophies of past forays against neighbouring enemies, after all it was a tradition that ran through the whole of the South East Asian archipelago, from Malaya through Borneo, the Celebes, the Molocas and the islands of Papua New Guinea.

Who were these peoples? Where did they come from? These were questions that had always fascinated Fitznorman.

Nordin replied to their questions in great detail, guiding them with his vast knowledge of the tribes of Borneo. His own ancestry included an Iban grandfather and a Bidayuh grandmother, on one side, and on the other, two Chinese grandparents, all of whom had contributed to his multi-cultural education. His father had married a Chinese girl and he later converted to Islam. As a result Nordin spoke many of the languages of the ethnically mixed population of Sarawak, composed of Malay, Chinese and Dayak communities.

Chapter 4

A STRANGE DISCOVERY

Winston learnt from the Iban headman that there were caves in the nearby mountainous border region where the spirits of great headmen and warriors dwelt. Such caves had been held sacred for generations and Fitznorman knew that burial jars and other interesting artefacts had been found in similar caves.

After studying the Erkki's map, Fitznorman decided to continue upriver to a couple of isolated longhouses nearby the caves that the Tuay had described, close to the Indonesian border. If they caves yielded nothing of interest, he remembered Erkki talking of Martabans and with a little luck he could perhaps make a good barter deal with one of the younger longhouse headmen.

He never dwelt too long on the ethical arguments against such transactions, he knew only too well that it was either he, or the Chinese dealers from Kuching, who would end up with the heirlooms.

It was a hard ride, almost six hours to the first longhouse, the river had become shallow and the swiftly flowing rapids greatly slowed their progress, forcing them to advance on foot pushing the longboats knee deep through the swirling waters when the passage became too difficult.

It was early in the afternoon when they arrived at the longhouse where the Tuay agreed to them spending the night in exchange for fuel and batteries. He led them into the ruai and invited them to be seated on the rattan mats, making a sign to one of the Iban men who were watching, and who disappeared for a moment then returned with a bottle of tuak and several small glasses.

The Tuay filled the glasses and handed them around to each of the guests. They toasted and drank.

They talked in subdued voices as Winston enquired about the conditions up river and whether there were other longhouses further upstream. Then carefully he questioned the Tuay about the nearby hills that formed the vague the border area between Malaysia and Indonesian Kalimantan, asking if on their hunting forays his men had seen any signs of Indonesian army patrols. The Tuay merely nodded, then talked about the spirits that lived in the nearby hills.

‘He says there are caves here haunted by the spirits of ancestors.’

‘Spirits?’

‘Yes.’

‘Ask him which spirits.’

‘They believe in all kinds of spirits in the jungle, animals, plants and those of their ancestors. There are spirits and individuals of evil intent, like humans, who they believe can enter into a bilik through the front door. They protect themselves by carving powerful figures on the door of the bilik such as twin tailed crocodiles and twin pythons coiled along each side,’ Winston translated. ‘Between the open fangs of the python and the head of the crocodile is carved a frog to serve as food for these spirits in the belief that should no food be provided, the hungry spirits could turn upon them and devour them. Crocodiles and pythons have great power in the Iban spirit world.’

Another round of drinks was served.

The discussion continued between Winston and the Tuay with the other Iban men joining in. It was an earnest discussion in low voices.

Winston turned to Fitznorman, ‘He says there are ancestor’s spirits there and they cannot disturb them.’

‘Try offering him something.’

They talked a moment and Winston nodded to Fitznorman, who dug into his rucksack took out a fine hunting knife. The Tuay took the gift and placed it to one side, then poured another round of tuak and toasted his visitors. They drank. The Tuay stood up and indicated them that he was ready to leave. Fitznorman looked at his watch, there were still three hours to nightfall, Winston understood the question and nodded to the Tuay in agreement.

They would take two boats. Fitznorman took time to slip a powerful flashlight into his rucksack before climbing into the second boat, as Winston joined the Tuay in the first. Kate decided to remain behind, she had enough of the river for the day and preferred to photograph the longhouse women and their children.

After twenty minutes upstream the Tuay waved in the direction of a shallow bank of stones and pebbles near a bend in the river where they beached the boats. As the other men occupied themselves with hauling the boats up to a secure mooring point, the Tuay pointed further along the bank at the end of the stony beach to a spot where a small stream cascaded out from a rocky gully into the river.

The Tuay refused to venture any further than the mooring point leaving Winston, followed by Fitznorman, to make their way forward to the cascade. They carefully clambered up the moss covered rocks making their way further into the gully where they saw a water fall that ran down the face of a weathered limestone cliff. Urged on by shouts from the Tuay who had advanced a little further along the riverbank they made their way up towards the fall where they found a pool of fresh clear water. It was surrounded by a jumble of moss covered limestone slabs that had at some time been detached from the cliff. They continued, having the doubtful choice between the slippery rocks and the vigorous vegetation at the foot of the surrounding cliff. Reaching the fall they could go no further than peer through the thick creepers that hung down forming a dense curtain that obstructed an opening.

Winston made a sign, Fitznorman stood to one side, then he hacked at the creepers with his pahang exposing a cleft in the face of the limestone cliff, then with after hacking and forcing the vegetation aside, they climbed through the opening and found themselves under the rock overhang, where in the half-light they made out a dark hole, the entrance to a cave.

They advanced cautiously along the slippery edge, where to one side the curtain of water crashed down into the pool. Fitznorman pointed, indicating Winston should explore the other side of fall, as he, taking out his flashlight, stepped cautiously into darkness. Once inside the cave's entrance the floor was wet and flat, he carefully made his way further inside, directing the beam first on the floor and then on the walls of the cave.

It was not very large, more like a tunnel, the floor rose at a shallow angle and after a few metres he arrived in a small gallery filled with strange white limestone stalactites and stalagmites that glistened in the beam of his flashlight, where the air was very much cooler. He searched in his sack and found a whistle and a ball of twine, part of the exploration kit that he had learnt to carry with him after a few alarming experiences in the forest and other strange places. The last thing he wanted to do was get lost, he attached one end of the twine to a stalactite, as Ariane's thread, letting it unwind

as he continued, following the beam of his flashlight deeper into the cavern.

Feeling a slight current of air, he shone his flashlight on the wall of another small gallery, on the left there was a breach in the rock, an opening that rose to the roof. He advanced carefully over the damp rock, and could feel the current of air becoming more tangible. A little further it became evident there an opening of some sort in the rock where the outside air could enter. Then the floor sloped downwards rather steeply, which explained the rise of the warmer air to the other galleries. He moved down the slope about twenty metres shinning the flashlight ahead until the beam was lost in the darkness of what appeared to be a much larger gallery. He did not have very much more string and would have to retrace his steps after another few minutes.

The floor of the gallery was relatively flat and dry. He swung the torch towards the roof, which at the point where he stood seemed to be about four or five metres high. It also appeared unusually dry. He directed the beam ahead and saw the roof rose confirming it was indeed a large gallery.

There were dense black traces on the roof just above him, a sure sign that previous visitors had used burning torches to find their way in the darkness. On closer inspection he saw that the soot was covered with a light crystalline structure...it was not recent.

On the floor were the remains of rattan baskets and a pile of stones. There were also the scattered bones, the remains of long dead men, it was certainly a kind of burial ground and did not appear to have been visited for a very long time.

A little further on he heard the noise of running water, he swung his torch across the floor and saw a small stream of water crossing the gallery, it had cut a shallow gully in the floor. Beneath the smooth surface the ground seemed to be composed of deposits accumulated over eons of time, earth and other debris carried by a stream or flash flooding, the droppings of bats and other creatures that had inhabited the cave, or perhaps airborne matter that had been drawn in by the air currents that ventilated the galleries.

Fitznorman shone the torch over the stream's irregular bed, a reflection caught his eye, a pale coloured stone embedded in edge just above the water. He prodded it with his stick, it gave slightly, he pushed harder dislodging the stone which tumbled into the water. He stooped down and picked it up shaking the water off. It was broad and flat, a little larger than a man's hand, not heavy, perhaps a bone or some kind of ivory.

He pointed his camera at the floor and snapped the spot as a precaution, remembering mechanically that once an artefact had been removed from the spot where it was discovered, only the finder could know where it had come from, with the risk that any essential scientific evidence be lost forever. He wiped his find on his shirt he slipped it into his sack. If it was of interest and he could return the next day, he then started to wind up his ball of twine following it back to the water fall.

Once back outside the damp heat hit him like a sauna. Winston was sitting wearily on a rock. It was just the moment to take a refreshing shower under the cascading water fall, cooling off before returning to the boats. Once relaxed and feeling refreshed he realised that the cave may hide something interesting. On the beach he said nothing, making no sign that he had found anything special. Winston squinted at him through his thick lens, he was now in a hurry to get to the longhouse to change and eat.

When they retired to their bilik he took the bone from the knapsack and showed it to Kate, who shrugged, it was just an old bone, nothing very interesting. He ignored her and under the dim light he turned it over inspecting it closely. It was not heavy and was covered with a thin layer of what appeared to be hardened earth or dust and filled on the inner concave surface with a thick gangue, he scrapped it with his thumb nail uncovering a greyish white surface. The outside surface had been worn smooth, the bone was no doubt from one of the many animals that had probably been pursued by predators into the caves, perhaps dragged there by tigers or other felines to be devoured, or had simply got lost in the dark and starved to death.

As he turned it over he saw that it thickened into what appeared to be a heavy ridge under which were a pair shallow arcs about ten centimetres wide – orbital ridges! To the back was another thick edge that he recognised as the occipital ridge. It was a clearly a skull cap of some kind of an animal, perhaps an orangutan or a honey bear. The dim orange light of the lamp they'd hung from the bamboo ceiling was insufficient to provide him with any further information.

The evening heat in the bilik was intense, the only noise was that of the tropical deluge that suddenly fell without any warning hammering on the roof of the longhouse, at that time of the year it came like clockwork, every day as night fell. It stopped as suddenly as it had started and Fitznorman stepped out of the longhouse seeking relief from the stifling atmosphere. Though the rain had ceased though heavy drops continued to fall from the canopy of the forest and a mist rose from the damp ground. The night insects then started their infernal ballet, whirring, clicking and buzzing, attracted by the lamps, endless numbers, many seemingly seeking his tender skin as a likely source of nourishment.

He returned to the bilik and lit another coil of insect repellent then crawled under the mosquito net onto the mattress next to Kate and fell into an uneasy sleep.

He was awakened by the crowing of the longhouse cocks and the creaking of the bamboo floor as the Ibans began to stir preparing for their day. A child cried softly for his morning milk. A bird cry echoed from the surrounding jungle.

It must have been six as the dawn light filtered though the flimsy walls of his bilik. The sun rose quickly on the equator, with no more than a quarter of an hour from night to full daylight.

He rose and turning his back to Kate, still dozing, and urinated into a plastic bucket, the longhouse was not the Kuching Hilton. He then washed his hands and face in a small basin of water which he then threw into a bucket that he carried from his bilik to the river, passing the elderly Iban women preparing the breakfast, who hardly lifted their heads.

Outside the air had a certain freshness, he looked at the morning mist hanging heavily in the dense forest on the opposite side of the river, he made his way down to the water's edge, past the pigs that had started nosing the ground in search of food, then past the boats tied to the jetty that swung gently in the stream. He emptied the bucket from the end of the jetty into the fast flowing river on the downstream side of the longhouse, rinsing it carefully, hygiene in the jungle was not a luxury.

He joined Winston Marshall squatting Iban style on the rattan mat for a breakfast of boiled rice, vegetables and eggs washed down with hot tea. Winston was speaking to the Tuay who explained that they were leaving to hunt in the forest after breakfast inviting Fitznorman to join them.

‘Well I’d like to go back to the caves after and explore a little further if you don’t mind.’

‘That’s no problem,’ said Winston, ‘I’ll get the Tuay to send a couple of the men with you.’

Fitznorman was relieved by the thought he would be unhindered, two of the Iban men would ferry him to the caves, waiting whilst he made a little more exploration.

After breakfast Marshall left with the Tuay, ‘a small expedition into the forest,’ he said. Once they were gone Fitznorman returned to the bilik where he collected his things to return to the cave. To the amusement of Kate he took the skull from his knapsack and started to examine it, turning it around in his hands, it resembled an oversize castanet with the wide ridges to the front and a smaller ridge to the back.

It did not seem to be fossilised as he had first thought. He vaguely recalled what he had heard when Kate had dragged him off to the conference given by Michel Brunet in Paris a few weeks earlier, a fossil is a bone that is mineralised, over thousands of years under certain conditions, the bone tissue being slowly replaced by minerals whilst the form of the bone remained.

It could have been the skull cap of an orangutan, but the form was too domed. It could not be that of a man either modern or very

ancient. A modern human skull did not have those ridges and an ancient or prehistoric skull would be certainly fossilised.

Fitznorman was puzzled, he would show it to Marshall and the Ibans when they returned, in the meantime he would explore the cave a little further.

Back in the cave he had some difficulty to relocate the gallery where he had found the bone. He carefully inspected the floor as he searched through the tunnels, there were bird and bat droppings in the first part, but as he penetrated further the floor was less encumbered by guano. There were dead leaves and some feathers probably carried in by the wind, perhaps there were small rodents or the like who had made their home there.

Birds did not go that far into caves and bats could only penetrate in numbers when the access was relatively easy. It was obvious that the entrance to the cave must have been blocked for a very long time.

When he found the large gallery, he noted that the floor was as he had thought, fairly smooth, there was no debris not even dust, it glistened in the light as though covered with a thin film of humidity. The point where he had found the bone seemed to have been disturbed, probably by a flood stream that at some recent point in time had been diverted by a rock fall and cut a channel into the floor beneath its crystalline surface. The stream had now slowed to a trickle at the bottom of the channel.

He directed his flashlight up stream of the channel as it turned towards the wall of the gallery, the ground became uneven and shadows danced as he made his way to a pile of rocks that had probably been detached from the roof in some distant time. He continued carefully for another fifteen or twenty metres, turning to the left as he followed the stream. Then he saw a dim column of light that fell at an angle on a jagged mound of rock, part of the upper wall of the gallery had collapsed opening the way for a stream of water that trickled in gently from above.

There was no way to know when the flooding had occurred, underground streams like all flowing water follow the path of least

resistance, if a rock fall occurs they are diverted following the next easiest downhill path.

The cave floor was made up of an accumulation of deposits, composed of dust blown in mixed with debris that had fallen from the roofs and walls. Sand and pebbles were carried in by the streams that formed over thousands of years with changes in the climate. Small animals such as mice or bats had left their droppings and bones. Bigger animals were much rarer, but left the bones of their prey. All this debris had accumulated in layers from a few centimetres thick to several metres thick in place. It was a kind of breccia that formed, solidified, cemented together by mineralised deposits from the water, drying and hardening with time. The action of the stream had cut into the breccia through the more friable agglomerate. Here and there large stones or pieces of rock jutted out.

Looking at the rough edges of the stream, he figured that its present path must have been fairly recent, probably due to a collapse somewhere deep inside the hill. During the rainy season, or in a heavy downpour, the stream had been transformed into a torrent, carrying debris and eroding a broader passage. The result was the rough edges along the banks of the stream.

After a few moments he arrived the point where he had made his find and now noticed different layers of accumulated debris, stones, gravel, and compact earth. He prodded the spot where he had picked up the bone with his stick, dislodging smaller pieces of rubble, he picked up what at first appeared to be two small stones whose form, on closer examination he recognised them at once...teeth.

It was nothing very unusual, in the past men had lived in such caves, or had used them as burial places, as was the case at Niah, just a few hundred kilometres to the north. Perhaps there had been cave dwellers who lived there in the more recent past. He pocketed the teeth and decided to leave things as they were undisturbed, he would check out the skull cap once he was back in Kuching.

Later that morning Winston returned from the hunt with the Ibans, they had killed a wild pig, whose bloody head lay on the floor of the longhouse. The animal had been shot, the days of hunting with bows

and arrows or blow pipes were long gone, even in those isolated areas, the authorities allowed tribal peoples to own small calibre rifles for hunting.

‘So Scott, did you find anything interesting in your cave?’

Winston Marshall’s instinct had told him that Fitznorman had something and wanted to ask him some questions.

‘Well, I’ve found a few bones.’

‘Let’s have a look then.’

Fitznorman showed him the skull cap.

‘It looks like part of an orangutan’s skull,’ he said turning it over. He handed it to the Tuay.

‘It’s not an orangutan Sir, maybe a honey bear.’

Winston wiped his brow with his bandana, giving a doubtful look at the object.

‘A funny looking bear to me, I’d personally go for an orangutan.’

The Tuay said nothing, it was not in the Iban culture to contradict an outsider.

‘Is that all you found?’ he asked Fitznorman a little disappointedly.

Back in Kuching Fitznorman summed up the meagre results of the expedition, they had collected one unextraordinary Martaban, a boat paddle and a sword, both in black iron wood, and three Iban crises. Winston sensing his disappointment, proposed, if he had time before leaving for Singapore, they could visit one of his friends, a certain Sammy Kwok, an old trader who had accumulated a godown full of odds and ends received in payment from the Ibans for goods he had delivered to them over the years when they were short of cash.

In their suite at the Kuching Hilton Kate made an effort to console Fitznorman, telling him that she had enjoyed the expedition, even though from the business point of view it had not been an extraordinary success. ‘Perhaps the visit to Winston’s friend will turn up something interesting,’ she said hopefully.

He then busied himself putting some organisation into his affairs, then coming across the skull cap he re-examined it carefully, he prodded the gangue with the point of a pencil, it was quite friable, there was something troubling about it. Of the two teeth, one he recognised as a molar and the other an incisor, they were small, and whilst he was no expert, he concluded that they neither belonged to an orangutan or a honeybear, perhaps they did not even belong to the skull, the cave had no doubt been the home to many animals, and those who had inhabited it, whether they were men or carnivorous animals, had no doubt brought back a many different kinds of prey from their hunts.

The next day Kate planned to return to the Sarawak Natural History Museum, leaving Fitznorman with the morning free whilst she went about her work for the Art and Ethnology article she was preparing. He decided he would visit Sammy Kwok with Winston, then join Kate at the museum, where he could compare his find with the skulls of orangutans and men he had seen there ten days previously. In the meantime he switched on his laptop, as Kate took her shower and prepared herself for dinner he could make a quick Internet search. After a few moments he connected to a specialised site, it was the department of anthropology at the University of Wisconsin.

Randomly he started to click away at the images of the skulls of human ancestors that appeared on the screen, he was surprised by the extraordinary quality of the pictures. He commenced with modern *Homo sapiens*. Their skulls were domed with a high almost vertical forehead and with ridges neither above the eye orbits nor at the nape of the skull.

He then selected *Homo neanderthalensis* and was surprised to see there were some resemblances, the brows were heavier and forehead slanted, however it appeared too 'human' compared to the skull cap he had laid on the writing desk next to him.

He then continued to click through the images, Peking Man, *Homo ergaster* and others, and as he did so he felt a mounting excitement. He stopped at Java Man, to be precise a picture with the reference *Homo erectus* Trinil 2. He felt weak with excitement as he turned to

his skull cap and turned it over and around in his hand. The similarity was incredible. He had found a prehistoric fossil a major find. He wanted to jump up and run around the room, open the door and shout into the corridor.

He then came back to earth with a bump. His skull was not a fossil, there was not the slightest sign of mineralization. It was recent, maybe a few hundred years old at the most, nothing compared to the 1.8 million years of Java Man.

He downloaded the images to his PC, copied them, switched off the laptop and took his shower.

A shower and clean towels in a luxurious modern bathroom was not a hedonistic pleasure after ten days in the jungle. Fifteen minutes later taking the lift down he stopped off at the business centre and asked the girl on duty to print out the images from the USB, asking her to have them delivered to his room.

They dined in the hotel's excellent Chinese restaurant and after took an evening walk through the nearby shopping complex, for once admiring the lights and the bustle of late shoppers and strollers.

Back in the suite he found the envelope from the business centre. He took a beer from the minibar, installed himself on the bed, and commenced flipping through the pictures before Kate pushed them aside, she had other ideas on how to celebrate their evening back in civilisation in a clean soft bed.

The next morning after Kate left for her appointment at the museum, Fitznorman called Winston Marshall for a visit to Sammy Kwok's, just a couple of kilometres outside of Kuching City. After a short drive they turned off the road and parked on an unsurfaced siding, next to a dilapidated godown on a bank of the Kuching River.

Sammy was a wrinkled Chinese of indeterminate age, he pumped Fitznorman's hand welcoming him like an old friend.

'So, Winston has told you about my collection,' he said laughing. 'Come, I'll show you.'

They discovered a vast and disorderly stock of goods of every description mixed together in an incredible confusion. Sammy complained he was too old, his family's only thought was to get their hands on the site, demolish his godown and build an assembly plant for computer accessories. As Fitznorman made his way through the disorganised piles of rattan furniture, he found sacks of rice and drums of cooking oil and old packing cases, he followed Sammy through a vague passage between the jumble to the end of the godown, a kind of warehouse, where almost hidden from view in the dim light they came upon a vast dust covered assortment of junk that on closer inspection he saw consisted of jars, vases, Martabans, broken Chinese furniture and traditional textiles, stacked along with jumbles of spears, wooden statues, tribal art and even a dugout.

'It needs sorting out,' said Sammy. A remarkable understatement, thought Fitznorman.

At first glance it appeared to be junk, but then experience told him to look closer and he soon realised that there were many pieces that could have a considerable value in Europe. He feigned disappointment and disinterest as though it was almost worthless and asked the once wily Sammy Kwok what he intended to do with it all.

Sammy shrugged his shoulders, he was tired, his courage had waned, his only thought was retirement to a nice little house, modern, with a garden, which his family had offered him in exchange for the godown and a little money each month to pay for his beer and mahjong with his friends.

'He'd just like to unload it all as quick as possible,' said Winston after a quick exchange in some dialect that Fitznorman did not recognise.

'All of it?'

Sammy nodded in agreement.

'How much?'

'You take it all?'

'Depends.'

'All?'

‘Maybe.’

They shook hands after coming to a deal, whereby Fitznorman would arrange immediate payment from his bank and with the help of his agent in Singapore would organize a local transport company to have all the material promptly moved to a godown near the Kuching Airport, where he would have one of his staff fly out to sort the collection and have the most interesting objects shipped to Europe. He confided Winston the job of supervising the removal so as to ensure nothing would be pilfered or dissimulated, and care to avoid damage or breakage.

That settled Winston then dropped Fitznorman off at the hotel, where he went to his room and picked up the skull cap again, wrapping it in a plastic laundry sack marked ‘Kuching Hilton’. He decided he would go by foot to the museum, along the river front, past the colourful market place and then on to the museum where he would join Kate.

It was hot, like it was every day in Sarawak, the daily temperature hovering around thirty degrees, year in year out. He was feeling lighter, business was definitely beginning to look a little more promising following his deal with Sammy, it was equally unexpected and quickly settled. He relaxed as he walked at an easy pace past the market towards the boat pier looking at the sparkling reflection of the brilliant equatorial sun on the Kuching River.

His mind wandered back to the photos the business centre had printed-out, there was an eerie likeness to the Trinil skull in Java, but it was physically impossible. *Homo erectus* had disappeared from the face of the earth many thousand of years ago.

The State Museum had two sections, the old colonial building situated in a spacious park dating back a century or so, and the modern section, on the other side of one of the city’s main avenues that ran right through the park.

After a moments hesitation he decide not ask for Professor Nordin with whom Kate had her meeting, but bought a ticket and made his way to the section where he found exhibits relating to the State’s wild life. Sure enough there was complete an orangutan skeleton as

well as several skulls, just as he had remembered. He immediately remarked that the brain case of an orangutan was very much smaller than the skull cap.

The only other skulls were those of modern humans, which bore a somewhat closer resemblance to his find.

It was a puzzle and he considered questioning Nordin on the subject, but his possessive instinct got the better of him, from experience he realised that if the skull cap was of some special interest he would certainly be obliged to hand it over as an archaeological find.

Chapter 5

RETURN TO PARIS

The return to Paris was filled with all the business problems that needed his personal attention after a three week absence. As usual Fitznorman had maintained daily contact with Marie-Helene by phone or internet, even during their expedition in the forest. However, there had been nothing that she could not directly handle in Paris and she never bothered him with unnecessary details, he had total confidence in her ability to handle the business.

Nevertheless, once back in his office, it was his responsibility to go over all the decisions that had been taken during his absence, bills that had been paid, taxes declarations and all the usual French administrative paperwork, before finally turning his attention to all the calls to be returned and appointments fixed for him over the next weeks.

He instructed Marie-Helene on the pressing need to get one of their experts out to Kuching, where an inventory had to be made on the contents of Kwok's godown, expertising and photographing items of value, assisting their agents with export licences and customs formalities, a tricky business, finally instructing the shipping company in Kuching on the packing specifications and insurance

arrangements for the different objects that were to be air-freighted to Paris.

His small and highly professional team of staff had been fully occupied with the preparations for the annual Antiques Fair held every year at the Grand Palais off the Champs Elysée. Then plans were to be made to handle increased activity in the North American market, where there were unexpected signs of activity with a buoyant market and a growing enthusiasm for tribal art from South East Asia.

It was almost a week before Fitznorman had time to get around to the skull cap that he had carefully placed in a drawer in his apartment office. It was a cover heading in a cultural events magazine on an exhibition at the Musée de l'Homme, dedicated to the evolution of man, which jogged his memory.

He at once tidied his papers and left, walking to the nearby metro station, Saint Paul, where he took the direction to Etoile and then changing for Trocadero, there he made his way to the museum for a quick visit.

The exhibition was spread out through a series of dimly light rooms, where show cases displayed bones and stones. The walls were covered with maps, graphs and tables that explained man's evolutionary path to the present. Here and there were the photographs of anthropologists and their finds.

It was a Tuesday morning, it was quiet, he imagined that it was like that on working days, it was also possible that the exhibition had run out of steam, it was already well into its second month. The dimly lit rooms designed to create a dramatic effect gave to the contrary a dreary impression.

Only a gaggle of school children much too young to understand or appreciate the exhibition disturbed the silence. The two teachers in charge of them struggled to make their voices heard, pointing out the skeletons in a reconstituted cave setting, wasting their breath with words like Palaeolithic and Neanderthal.

The exhibition was small and he quickly located the section dedicated to Homo erectus, where authentic looking plaster casts of skulls were displayed. Java Man's skull stood in a plexiglass case, lit

by a single spot. He took the skull cap from his brief case and unwrapped the tissue towelling and aligned it as best he could.

A shiver ran down his spine, apart from the colour, the skull caps were not quite identical, but were nevertheless very similar in form. He turned his skull cap in all directions and at all angles, there was little doubt about the similarity to those in the plexiglass display. He sat down on a bench and tried to comprehend. How could a recent skull bone resemble that of the fossil of a million year old extinct ancestor?

After some minutes of thought he turned to the French West Indian museum security attendant sitting in a dimly lit corner and who wore an expression of infinite boredom on his face. He asked where he could find the scientific staff and was pointed to a pair of doors where a lift could take him to the third floor.

Behind the fine sober Neoclassical facade of the museum, situated in the Palais de Chaillot, built in 1937, for the Paris Universal Exhibition, he found the kind of dreary old fashioned offices where the museum staff went about their daily work. The corridor was lined with old grey coloured metal filing cabinets, which seemed to date back to the fifties and bookshelves filled with dusty superannuated volumes of reference works and bound scientific papers.

He ventured down the corridor glancing into an offices where he saw two or three grey haired, bespectacled, women. It was almost a caricature of a museum's offices, there was little apparent activity, a nice place to hide for the bored academic waiting for retirement.

He then spied a much younger woman, he knocked gently on the door and entered as she looked up from her desk in surprise.

‘I wonder if somebody can help me?’

‘Yes,’ she replied with an air of bored indifference as she looked at the intruder.

‘Well I’d like to speak to an anthropologist.’

‘Yes,’ she said a little taken by the question.

‘Are you one?’

‘Yes,’ she replied now sitting upright and looking authoritative.

‘Well are you specialised in physical anthropology.’

‘I am!’

Fitznorman sighed and held out his hand, ‘My name is Scott Fitznorman.’

‘How can I help you then,’ she said inspecting his hand for a moment before shaking it limply.

‘I have something that might be interesting.’

He unwrapped the skull cap and placed it on her desk.

‘What do you think it is?’

She carefully took the skull cap, removed her glasses and placed them on the desk, then slowly turned the fragment between her two slim hands in a careful professional manner. She then opened the top left hand drawer of the desk and took out a large magnifying glass, then closely examined the surface of the bone.

‘May I ask you where you found this?’

‘Yes, but unfortunately I will not reply for the moment.’

‘I see,’ she said dryly continuing her examination.

After a long moment Fitznorman asked, ‘What do you think.’

‘Well I’ll need another opinion, but I can say it’s very strange indeed.’

There was a silence.

‘It’s not that old, maybe a few hundred years or more, it’s difficult to be precise without tests. But it doesn’t appear to be a specimen of Homo sapiens and it’s not one of the great apes.’

She closely scrutinised the sutures, where the segments of the skull cap bones were joined together, with the magnifying glass.

‘It’s very very strange....’

She stood up, ‘I’m Carol Lundy, my father is the Professor Henri Lundy.’

‘Lundy?’ Fitznorman said taken back, ‘are you related to Kate Lundy at the Musée Guimet?’

‘She’s a cousin, do you know her?’

‘Very well, she’s a very good friend of mine,’ Fitznorman said wondering why Kate had never mentioned her family connections, maybe she had, there were a lot of academics in her large family, in any case it had never registered. Prehistory and bones were not usually his thing.

He had of course heard of Professor Henri Lundy, a palaeoanthropologist, one of those lesser known public figure, who was from time to time called upon for television news commentaries on fossil finds in Africa, and science programmes on human evolution. Lundy was in fact the very respected director of the Musée de l’Homme, a renowned palaeoanthropologist, and who had been responsible for directing work on many prehistoric sites in France, and leading expeditions to Africa and the Middle East. Fitznorman vaguely remembered having read in the past one of his popular works aimed at a broad public and found in the better bookshops.

‘It’s a pleasure to meet you.’

This time Carol Lundy smiled looking much more friendly and less bookish.

‘Well can you tell me what you think?’

‘Not exactly because this does not correspond to anything that I know, that is to say of this age. At a glance there is some strange resemblance to Homo erectus, or Archaic Homo sapiens, but that’s impossible.’

Fitznorman felt a peculiar surge of emotion, he knew he had found something that was unique. What it was remained to be seen.

‘I very sorry I didn’t catch your name?’ she asked now a little embarrassed.

‘Scott Fitznorman.’

‘Well Monsieur Fitznorman, could you leave this with me?’

‘No,’ he said leaving no room for doubt.

‘I see, the problem is that my father is not here today. He’s in Spain, at Atapuerca, near Burgos. Could you possibly come back on Thursday?’

‘Yes I think I can do that.’

‘Do you have a card?’

Fitznorman gave her a card with his name from the Gallery adding stiffly, ‘Like Kate I’m a specialist in Asian art.’

‘Okay, let me call you on the phone then.’

The next morning Carol Lundy called Fitznorman to confirm the meeting for the following Thursday morning, asking him to remember to bring along the skull cap. Fitznorman had not stopped thinking about it since he had left the museum. He had the instinctive feeling of a collector that he had discovered something exceptional and could not get the idea out of his mind of quickly returning to the site to gather more information. How he could do that without attracting attention was another matter.

He arrived at the museum as agreed and went directly to the third floor where he found Carol Lundy speaking on the phone. She made him a sign to enter and take a seat. He looked at her desk, which was not unlike that of any office desk, papers, letters, reports and files. The only exception being what appeared to be a resin cast of a primitive skull that acted like a paper weight in a plastic filing tray.

On the shelves behind her were books intermingled with various stone hand axes and what looked like a human tibia. The walls were hung with photos that appeared to be of various archaeological expeditions.

After a few moments she replaced the phone, ‘Hello, so nice of you to come. Let’s go to my father’s office.’

They took the lift to the fifth floor and then a corridor that led to Professor Lundy’s office. It was in quite another style in comparison to the rest of the museum’s offices, it was broad, the full width of the building that lay parallel to the Seine, a panoramic window looking out at the river and the Eiffel tower, without doubt the one of the finest views of all Paris with the Esplanade of the Trocadero and its fountains and gardens directly below. The walls were lined with stylish bookcases in dark polished wood. The furniture was of the Louis Philippe period, to one end was a splendid bureau and to the

other a large table surrounded by comfortable chairs. In the middle facing the view were a set of four leather armchairs and a low table.

Lundy was sitting at his desk as they entered. He promptly stood up, smiled, and beckoned them in, pointing to the armchairs. He was a man in his early sixties of medium height and silver grey hair.

‘Do come in, how are you my dear,’ he said kissing his daughter lightly on the cheek and then turning to Fitznorman. ‘Mr Fitznorman, I know your gallery, I’ve passed it many times, a splendid collection. Please sit down.’

They settled down in the armchairs.

‘Coffee?’

He asked his secretary to bring in three coffees whilst they made small talk.

‘So Mr Fitznorman, Carol tells me that you have something unusual?’

‘Well I’m not the expert,’ Fitznorman said smiling. He took out the skull cap, unwrapped it and handed it to Lundy.

He took it and handled it with great respect, turning it carefully in all directions.

‘An extraordinary calvarium, quite extraordinary,” he said placing it with great care and attention on the table.

‘A calvarium?’

‘Yes, a calvarium, that’s a skull without the bones of the face or lower jaw. A calotte is just the top of the skull. It’s quite astonishing, where did you find it?’

‘I’m really sorry Professor, I cannot disclose its origin for the moment. Can you tell me what your impression is?’

‘It’s really quite extraordinary, I mean the state of preservation, I can sincerely tell you I’m a little staggered. There is little doubt, from a simple visual inspection, this calvarium is from a member of the species *Homo erectus*, or a something between *Homo erectus* and *Archaic Homo sapiens*, but what is most extraordinary is its condition, I mean it’s not in the least fossilised.’

‘Not fossilised?’

‘No, it’s from a member of a species that disappeared from the face of the earth almost one hundred or more thousand years ago and it’s not fossilised. Perhaps just a patina of calcium carbonate, it looks as though it’s no more than a couple or so thousand years old....,’ he paused, then added softly, ‘which is quite absurd.’

‘How can that be?’

‘Normally fossilisation takes several thousand of years, but I suppose it could have been preserved under some very unusual conditions, but I wonder....’

‘Conditions such as...?’

‘I honestly don’t know,’ he paused, ‘if I knew the site?’

‘As I said I really can’t divulge that for the moment.’

‘Yes, Carol mentioned that,’ he hesitated then continued, ‘Look Mr Fitznorman, if you are concerned about confidentiality we can arrange that, you are no doubt familiar with archaeological and prehistoric sites, and I, as the director of Musée de l’Homme, a venerable state institution, can sign a confidentiality agreement with you.’ He said smiling as he gently explained the obligations of his scientific and professional discretion to Fitznorman.

Fitznorman knew only too well the kind of jealousy and secrecy that surrounded major finds. He also knew of the professional rivalry that reigned between scientists. Lundy looked a kind and sincere, and Fitznorman had admired the style of his books leading the reader through the scientific complexities of anthropology and its related disciplines.

‘Fine, let us sign a document,’ Fitznorman said taking a decision, ‘I’ll get my lawyer to look at a model if you have one available and then we can get down to serious discussions.’

Lundy’s secretary was instructed to mail a draft to Fitznorman and his lawyer that morning and he agreed to meet Lundy the next day for lunch.

Back in his office Fitznorman realised that the presence of a renowned scientist would be essential if tests were to be carried out and if he was to return to the site for more investigations.

Early the next morning he called his agent in Singapore, pretexting the need for a meeting on the shipping arrangement and customs formalities for the first consignment of Martabans, earthen ware jars and other Chinese items, which were soon to be shipped from Kwok's Kuching godown, announcing that he would arrive the following week to check on the progress of work at Kuching.

Lunch was in a Chinese restaurant on rue de Longchamp, ten minutes by foot from the museum. It was in a district of the 16th arrondissement, one of the most exclusive and expensive residential areas of Paris, and also the home to a number of foreign embassies. That morning his lawyer had approved the 'Confidentiality Agreement' with a couple of minor modifications. It stated that the skull cap was the property of Scott Fitznorman and was on loan to the Musée de l'Homme for a period of two months for scientific tests, notably carbon dating and a search for DNA, all rights for publication would be shared by the two parties subject to approbation by Scott Fitznorman, with a secrecy clause forbidding the release of any information relating to the skull cap and the site of its discovery without his prior written approval.

The restaurant was discrete, laid out with booths and lacquered screens, which hid its patrons from prying eyes, as many well-known politicians and celebrities lunched or dined there.

Without more ado they signed the papers between bowls of rice and chopsticks and exchanged copies.

'A mere formality Scott, may I call you Scott?'

Fitznorman nodded.

'You know we scientists like informality.'

Fitznorman knew that first names would be a one way arrangement, the Professor would always be addressed as Professor – it was okay by him.

‘Have you thought any more about our specimen?’

‘A great deal, it’s a real puzzle and only tests will tell what its connections and history are, it will take time.’

They paused whilst the waiter filled their glasses.

‘So let us drink to our association,’ Lundy said lifting his glass.

It was evident to Fitznorman that Lundy’s interest was very great, after all he figured a scientist of his standing did not go overboard after a simple glance at a piece of bone unless there was some real and deep interest.

‘Well Scott, where did you find it?’ Lundy asked as he fiddled a little impatiently with his chopsticks.

Fitznorman paused, in spite of the agreement that he had just signed, he knew that once he divulged the location of the site he was committed and there was no turning back. Doubts still lingered, he knew only too well the perfidy that existed when interests went beyond those of simple individuals, after all the agreement was effectively with a French institution. The only way forward was to place his trust in the agreement he had just signed and above all Lundy.

‘Sarawak, on the border between Malaysia and Indonesia.’

Lundy’s mouth fell open, one or two grains of rice fell onto his napkin, he turned and looked at his daughter who was lost for words.

‘In a cave that I discovered quite by accident.’

Lundy gulped down a glass of rosé. His eyes watered and it took him a few moments to recover his faculty of speech.

‘Java Man, well I’ll be dammed!’

‘But Papa, how is that possible?’ asked Carol.

‘God knows!’

‘Are you sure Professor about your identification?’

‘As sure as I will ever be Scott. It is of the *Homo erectus* species, what we could call a gracile type, that is to say one of the most evolved in the line. That is unless it’s an extraordinarily elaborate hoax.’

‘I can be sure that it is not Professor.’

‘You know contrary to popular belief it is not often that bones are found in caves, old bones that is. Old fossils are more often found under the ground around us.’

‘What about the press?’

‘We have to respect the greatest secrecy, if news of this leaked out it would cause all kinds of problems for us in our narrow world of palaeoanthropology, and especially with the media...not to speak of local political problems. Any news concerning the origins of man has become sensational press over the last few years.’

They returned to the museum and Fitznorman formally handed over the skull cap to Lundy against an official receipt from the museum. Lundy would personally supervise, in the utmost confidentiality, all tests that were to be carried out. It would take them at least two weeks even with top priority in the national laboratories of the CNRS, at the Institute of Physico-Chemical Biology in the 5th District of Paris, on the opposite bank of the Seine, a couple of kilometres to the east.

Chapter 6

A GOOD FRIEND IN JAKARTA

Fitznorman, whilst impatiently awaiting the results of the scientific analysis, turned his attention to other aspects of his find. One of the most pressing points was to determine with precision the geographical location of the cave. It was near the border between Malaysian Sarawak and Indonesian Kalimantan, very near the border, in fact it was not clear whether the cave was in Indonesia or Malaysia, even worse it could straddle the border.

The only way he could be sure was to locate the exact point with a GPS fix, then consult maps showing the exact border location between the two countries. But try as he may he could not find any precise data on the border line, not to speak of detailed maps, he was

not even sure whether the treaties between the two countries defined the border with any precision.

Winston Marshall had informed him that the borders dated back to treaties made in the nineteenth century between the British and Dutch colonial administrations, when methods were summary and it was not even physically possible to mark the border given the almost impenetrable mountainous jungle coverer terrain and the dangers it presented.

For decades, the government of Malaysia had tried to control access to Sarawak's geographical information. As a result, all detailed maps were classified, and the law made surveying without a permit a jailable offence. However with satellite imagery and the use of handheld GPS units it was possible to position longhouse, specific sites and rivers, and draw-up detailed maps.

Using GPS coordinates presented no problem nor did obtaining satellite imagery, but interpreting it with the precision needed was outside of his skills. After careful consideration he decided to contact an old and reliable friend in Jakarta, a rich collector of antique Chinese porcelain, Aris Adhianto, an industrialist who had built-up over thirty years an empire and a vast fortune in the Indonesian forestry industries, with logging, saw mills, tree plantations and paper pulp mills. Aris had often talked to Fitznorman about one of his companies, his pride, a highly specialised firm called PT Indosatmap, which had been originally set up to map the extensive forestry concessions operated by his group of companies using satellite imagery.

PT Indosatmap had extended its business to a broad range of other activities that included environmental and conservation projects, infrastructure development for town and road planning, tracking forest fires, and the Ministry of Defence. Over a decade and a half Aris's company had become the Indonesian leader in cartography, using sophisticated computer techniques and satellite links with a staff of young highly trained engineers and specialists.

Precision mapping of his forestry concessions had been instrumental in the decisions that had accelerated his climb to wealth,

building an empire by the careful selection of government forestry concessions, which had enabled him to negotiate logging rights for those richest in valuable timber and having the best terrain for access and exploitation.

Aris Adhianto was an astute Indonesian-Chinese who had built close relations with successive government ministers under the Suharto regime, its successors and permanent government departments, especially the officials of the Ministry of Forestry and its many sub-divisions, cultivating key persons to advance the interests of his business empire with the kind of favours appreciated in Asia.

Aris was not only a valued client, but also a very old friend, and under the pretext of organising a new expedition to isolated longhouses in his hunt for heirlooms, Fitznorman asked him to supply detailed satellite maps of the border areas near Batang Ai, together with high definition satellite photographs, which he hoped would help him to locate the precise point where the cave had been found.

Precision would nevertheless be limited since he lacked an on-site GPS reading. With a handheld GPS device the entrance to the cave could be fixed to within a couple of metres. Then he would have to figure out a means of mapping the tunnels, since the GPS transmitter would not work inside the cave, which would need an experienced caver or potholer to map the tunnels and galleries.

The position of the border was a major question, there were three different possibilities, the first was that the cave and the gallery where he made the find lay on the Malaysian side of the border, the second was they were both on the Indonesian side, and the third only the gallery lay on the Indonesia side whilst the entrance lay on the Malaysian side. The last possibility would seriously complicate any research work.

In the past a scientific expedition would have been relatively easy to organise from abroad, when the bureaucratic requirements were much simpler. In the case of Malaysia it had become necessary to find a local partner who would act as the local counterpart and who

would submit official applications to conduct research activities in the country. The National Economic Planning Unit would then vet the application for approval. Then work permits would have to be applied for, through the Immigration Department, a long process that could take months to complete with risk that the government, sensing the importance of the discovery, could decide, for reasons of national preference, to exclude all foreign intervention, to the detriment of scientific research, which was however, perfectly normal for a sovereign nation.

A few days later Fitznorman received a file containing maps and photos of the border area near Batang Ai. The images did not help because of the dense forest cover, though the river was visible. The maps were better and by selecting the coordinates that he figured were near to the site he asked Aris to send high definition satellite photos by express courier.

Several days passed before the photos were delivered which enabled him to pin point the spot with an accuracy of approximately fifty metres. However, was difficult to say with certainty if the entrance to the cave was on Malaysian territory since the precise border line was virtual and consequently open to dispute. The gallery was an even more open question, which confirmed that only an on the spot survey could resolve the problem.

The same day Professor Lundy called to say that he had received preliminary data from the CNRS, asking Fitznorman to come over to the museum as quickly as possible.

‘We have the results and they are very confusing,’ Lundy announced without formality as Fitznorman entered his office.

‘We are running check tests in another laboratory, it will take another two or three days. But if the results we have here are exact, then they are truly astounding...sensational!’

Professor Lundy was an enthusiastic and forward going individual, but he weighed his words when his scientific opinion was being exercised.

‘The preliminary radiocarbon dating tests indicate the calvarium is just under three thousand years old.’

Fitznorman felt a wave of disappointment, it had been too exciting to be true. A three thousand year old skull, be it human or animal, was of little interest except to local archaeologists. Lundy noted his reaction.

‘I am not finished! We have also extracted samples of DNA,’ he made a long and serious pause, then with dramatic effect he added, ‘The skull belongs neither to an animal,’ he paused again weighing his words, ‘nor Homo sapiens!’

‘What is it then?’

‘We don’t have a comparable DNA, I have to say that we suspect that this confirms my initial idea that it’s possibly a specimen of Homo erectus.’

‘But that’s impossible,’ blurted Fitznorman.

‘I agree with you, but those are the facts as we have them today, truly sensational.’

‘There must be an explanation.’

‘There surely is. I don’t think it means hairy ancestors running around the jungle, but it is possibly a vestige population had survived until historic times. It will mean that many of us have to revise our finely thought out theories.’

‘What is our next move then?’

‘Go to the site at once.’

‘Agreed, what do you think, is Sunday to soon?’

‘No, it’s fine, Carol will join us if you agree.’

‘Fine, I will make bookings to Singapore for Sunday, three seats, first class on Air France, arriving early Monday afternoon local time.’

‘Good, for the moment I have kept this all strictly confidential. The labs have only received samples prepared by Carol. The DNA of a Homo erectus is unknown to science, so that results are not significant to the lab staff.’

Chapter 7

INDONESIA

The islands of Indonesia have been inhabited by man and his ancestors for almost two million years according to the fossil evidence found over the last century. When precisely man arrived is part of a long scientific investigation, which will probably never be determined with any certitude.

The islands of Sumatra, Java and Borneo lie on the Sunda Shelf, which is around two hundred metres beneath the surface of the sea at its deepest point. As sea levels rose and fell over the last few million years, climates changed and all, or part of, the Sunda Shelf became dry land, allowing animals and later man to move from the South East Asian mainland onto the emerged land mass known to geologists as Sundaland.

Man's ancestor, *Homo erectus*, followed the same route to the region that is now Java, where they established their home under the shadows of the volcanic chain that runs along the southern edge of the present day archipelago. Dense jungles covered a fertile land renewed by volcanic ash that was scattered across the region by the frequent and often violent eruptions from the Ring of Fire.

Erectus colonised river banks on the edge of the dense jungle, here rivers and their banks formed paths that allowed him to move freely over his territory, which supplied his food – mainly fruit and roots, fish and small animals, as well as birds and insects. He was an omnivore, competing with the other large animals such as the orangutan for fruit and nuts.

As the climate changed again, the sea level rose and covered the coastal regions, leaving men and animals stranded on islands, where they continued to evolve in isolated communities, cut off from the other members of their species by the sea.

Throughout this vast period of time the tropical forests of Indonesia remained remarkably stable, in what is called 'a climax

equilibrium', where plants and creatures continued their never ending cycle of life and death in their forest home.

Over the last two million years, whenever the sea fell and land bridges emerged, new populations arrived, including new forms of men who competed with the existing inhabitants.

These early human populations were however very, very, small compared with those in recent historic times. Family groups of twenty to thirty persons lived in territories of not more than one hundred square kilometres, leading the life of hunter-gatherers, constantly on the move in search of food, not unlike the nomadic Punans of Borneo who still pursue their age old nomadic existence.

At present the island of Java covers a surface of 125,000 square kilometres with a large part of the island uninhabitable due to the chain of high volcanic mountains that runs along its southern edge from east to west. In distant prehistoric times, the total population of early men would not have been more than a mere 25,000 souls, whilst Borneo, without volcanic activity and its 740,000 square kilometres, could have been the home to proportionally more.

In a more recent times, it is thought that Marco Polo may have been the first European to set foot in Indonesia. He is said to have visited North Sumatra and Java in 1292, which at that time were part of a Hindu kingdom ruled by a powerful Raja. However, many of the islands of Indonesia, including Borneo, were surrounded by belts of dense and impenetrable mangrove swamps and wet forests, fifty, one hundred or more kilometres inland. Apart from towns and settlements on the mouths of some of the larger rivers that drained the interior, the heart of the island was inaccessible.

As a consequence, with the exception of Java and parts of Sumatra, which offered more accessible coast lines, much of the Raja's kingdom consisted of coastal towns. Nevertheless the Hindu kingdom's rulers managed to establish control in the region of Kutai, on the Eastern part of Borneo, a region that had been visited for centuries by Chinese and Persian traders.

After Marco Polo, the Portuguese and Spanish arrived, followed by the British and Dutch. The Dutch established their East India

Company in Indonesia in 1662, and later proclaimed their sovereignty with Indonesia becoming a colonial possession of the Dutch crown.

At the end of the eighteenth century the population of Java was three-and-a-half million. Today, just two hundred years later, the island reached more than one hundred and forty million, over forty times more. If we compared it to the days of *Homo erectus*, the population had been multiplied several thousand times.

As to Borneo, the story has been very different with a present day population of around six million, that is twelve persons per square kilometre, in prehistoric times the population was as thinly spread as that of the orangutans of today, vast regions of the interior were totally unknown to man until very recent times, never explored. The jungle covered mountains form a crescent of over one thousand kilometres long, the easterly most point of which commences in the north with the 4,101 metres high Mount Kinabulu, Gunung Longnawan, 2,988 metres high lying in the centre, and at the westerly extremity is the 1,701 metres high Mount Niyut. This chain of mountains formed a natural barrier separating Sarawak and Sabah, two states of the Malaysian Federation, from the Indonesian Provinces of Kalimantan.

The southern watershed of the mountains was drained by the powerful River Mahakam and River Kapuas, whose sources remained unexplored by outsiders until the twentieth century. They were only known to those who inhabited the distant interior, that is small isolated tribes dwelling on the river banks of the dark forests.

Its dense primary forests were also inhabited by wild animals, orangutans, tigers, wild buffalo, elephants and even rhinoceros. In these conditions it was just possible that primitive human beings such as *Homo erectus* could have survived until recent times. They and their like had survived their wanderings over hundreds of thousands of years, crossing mountain ranges, deserts and continents to arrive in Sundaland, where they lived in the jungle with all its dangers for over one and a half million years.

When the land bridge that joined Borneo to the continent disappeared under the rising sea, *Homo erectus* was separated from the road that had led them out of Africa and all contact with later waves of more evolved men, that is until the seas withdrew once again, and *Homo sapiens* arrived. Many more millennium followed before others arrived, bringing with them new inventions, boats and open sea navigation.

Homo erectus lived in isolation, his only very distant biological relatives present were the orangutans, that was until the arrival of *Homo sapiens*, who drove him deep into the forest, perhaps even hunting their cousins and eating them, forcing them to retreat to relative safety, deeper and deeper into the mountainous jungles.

Chapter 8

PALAEOANTHROPOLOGY IN BRNO

For those who were nostalgic for the Cold War era a few souvenirs lingered on at the International Hotel in the city of Brno, the capital of Moravia, in the Czech Republic, which was not unlike many other hotels in the other former East Block countries.

Fitznorman had been attending an Antiquities Fair in Vienna after which he made a detour to Brno. He had two objects in mind, firstly, after learning that an excellent example of an early eighteenth *Biblica Hebraica* was available at a specialist bookseller in Brno, he had emailed a purchase option subject to viewing the antique bible on his visit. Secondly was a visit Zybnek Jaros, the director of the Department of Paeloarchaeology at the Czech National Museum.

Jaros was a specialist in deep time archaeology, known for his work in Palaeolithic archaeology, excavations at Palaeolithic settlements in karstic areas, interpreting topographic, stratigraphic and chronological data. He had been invited to join the team being put together for the expedition – organised by the Department of Human Origins in Paris, for the exploration of the limestone caves in

the Lanjak area of West Kalimantan, where Fitznorman had discovered the calvarium.

Some years earlier, Jaros had worked in France under Pierre Rossard, head of research at the Department of Human Origins, and they had continued to cooperate for excavation work on a number of Neolithic and late Palaeolithic sites. His experience had been developed in the sandstone regions of Moravia, where he was still exploring and excavating the numerous ancient rock shelters that had been inhabited by man. He would form part of the team put together by Rossard that included specialists in geology, sedimentology, physical anthropology, radiometric dating, archaeology and other specialised fields of research.

Brno was just a two hour drive from Vienna and his visit stemmed from his curiosity to learn why Pierre Rossard had engaged Jaros, a Czech, for the expedition.

Pierre had explained that as the conditions of the Kalimantan site were very unusual, closer to that of a Neolithic site than a very ancient habitat, the Czech's knowledge and experience of rock shelters and stone tools would be invaluable in trying to determine the origin of borneensis, as they now called the owner of the calvarium, and how he had lived.

At the hotel reception there was the mandatory passport check, a reflex from the past. The reception was overstaffed, as were the dining rooms and bars compared to the regretful standards now prevalent in Western countries. Glancing around the lobby it was woefully evident to Fitznorman that it had been designed by one of the 1980 Czechoslovak style modern architects, however he remarked and made a mental note of the poster for one of the ubiquitous casinos now found in Eastern Europe, with a photo of a group of beckoning well formed blonde spectators at the Blackjack tables, an explicit indication that gambling was not the only attraction.

His room was small and only just comfortable, much too spartan to his taste, it reminded him of the kind of tourist or commercial travellers' hotel rooms common in Scandinavian countries.

He left the hotel after a late breakfast, taking the rear exit which led to the town centre, descended a flight of marble stairs and crossed the square. On the roof of a nearby building a faded green sign announced 'Sputnik' in contrast with a garish MacDonald's hoarding. The town had potential, but it was not yet ready for the tourist trade and would probably not be for a long time. Many of the buildings, which were in the course of being renovated, showed the impact of bullets or shells on their facades that dated from WWII. Repairs had evidently been put off for some future moveable date.

The bookshop was in an arcade that had been indicated to him on a map the owners had mailed him. He found it without too much difficulty and introduced himself to an intellectual looking blonde engrossed in a card index.

'My name is Fitznorman, we exchanged mails concerning a book I would like to buy.'

'Mr Fitznorman? Ah yes, let me see now...if I remember rightly it is a Biblica Hebraica'

'That's right'

'Quite a nice example. Let me show it to you.'

Fitznorman inspected the bible, the binding was fine and the general condition excellent. It had been printed in 1723.

Just the thing for Abe Avner. The text was black and printed in Hebrew filling the centre area of the pages, whilst explanations in Latin were printed in red on both left and right sides and on the bottom of the pages. Avner would appreciate the present Fitznorman said to himself, though it was not a Jewish Bible, it was used by Christians for a better understanding of the Holy Book.

'Excellent, you can accept my credit cards?'

'No problem Mr Fitznorman,' the blonde said with a serious smile.

He returned to the hotel and called Jaros at his office to inform him that he had arrived and fix a time for their meeting.

The Brno branch of the Institute of Science and Culture was situated in a government building that housed various other organisations, including offices of the National Museum. It was situated on the ninth floor – budgets for science had virtually evaporated after the Communist period and the Institute was struggling to make ends meet.

It was an old fashioned ‘modern’ high rise building, the façade already in a dilapidated state, due without doubt to the poor quality of the materials used in those times. Fitznorman took the aluminium lift, in the same style, joined by a couple of over made-up secretaries loaded with sandwiches from in-house canteen.

Previously, several hundred persons worked in the state owned building, but since the changes many state controlled institutions had undergone a serious diet of down-sizing, which had resulted in a reduction of about fifty percent of the personnel, those remaining were very soon due for some more of the same medicine according to Jaros.

‘Did you have a good trip?’

‘Yes, thanks everything was fine, perfect.’

‘As its lunch time I suggest we eat first then we’ll visit the Mendel Museum at the Saint Thomas Abbey, that’s where Gregor Mendel the father of genetics worked.’

‘Excellent.’

‘Pierre’s told me all about you.’

‘Nothing bad I hope?’

‘No, but he told me a visit to the Mendel Museum would be good for you’re education,’ Jaros replied with a friendly laugh. ‘I’ve reserved a table at a typical Moravian restaurant nearby. It’s very good and convenient.’

They started with a good whole bodied local white wine and Jaros ordered *hlavní chod* and a side dish, *příloha*, for them both.

After they had tasted the wine Fitznorman opened the subject.

‘Well is everything ready for Kalimantan?’

‘Everything is fine, I’ve put together a lot of reference material and discussed all the details with Pierre.’

‘I’d like to insist on the extreme confidentiality of our work, followed by our safety, things are getting hot down there at the moment, a lot of rioting and general unrest.’

‘That’s no problem to me, I’ve also been doing work at a site near Tbilisi in Georgia and there’s been a lot of trouble over there with the Russians!’

‘Good.’

‘I’ll show you the photos we took in Georgia?’

After lunch they made their way back to Jaros’s offices where his smiling secretary brought them coffee. She wore a very short skirt, Fitznorman noting that her legs were not too bad, whilst thinking, and without being unkind, she was past the very short skirt age for a secretary in a staid government institute.

Fitznorman noted that Jaros was also a keen amateur pilot and owned a ULM, a luxury for a Czech, which could be a useful skill during the weeks ahead, listening with attention whilst Jaros showed him a site for flyers with satellite images of the nearby region and a local forecast with the weekend’s weather conditions for amateur flyers.

After a quick check at his mail, Jaros announced they could leave for the Mendel Museum, which was situated in an Augustinian Abbey where Gregor Johann Mendel was a friar, an abbot and a scientist.

Today, Gregor Mendel is recognised as the founder of the modern science of genetics. Born in 1822, in Silesia, Mendel entered the Faculty of Philosophy, the Department of Natural History and Agriculture, which was headed by Johann Karl Nestler, who carried out research into the hereditary traits of plants and animals, more especially sheep.

Mendel presented his paper, Experiments on Plant Hybridization, at the Natural History Society of Brno in Moravia in 1865, which was ignored by the scientific community. It was then published in

1866 in a scientific review, but had little impact, and was forgotten for decades.

Today, his research is considered a seminal work.

Mendel began his studies on heredity using mice, but his bishop did not like one of his friars studying animal sex, so he turned his attention to plants. However, few understood his work, until 1900, when his experimental results were replicated, with genetic lineage and Mendelian heredity was established as a biological process.

Chapter 9

RETURN TO BATANG AI

Fitznorman called Aris Adhianto, informing him of his imminent arrival in Singapore and asked for his urgent help on a matter that he could not discuss over the phone. Aris accepted without question, he was an Indonesian, to be precise an ethnic Chinese, whose ingrained concept of mutual assistance had helped him and his community to survive the waves of violence and discrimination that swept over them each time their country was confronted with a crisis.

Fitznorman briefly informed him he needed equipment for precision mapping using highly specialised GPS techniques for his expedition. Aris asked no further questions and proposed meeting him in Singapore at the Mandarin Hotel on Orchard Road, where they could discuss the details before Fitznorman left for Kuching.

Aris booked two rooms at the Mandarin, one for the Professor and the other for Carol. Fitznorman and Kate would stay in the immense presidential suite Aris regularly used in the hotel.

A rich industrialist, Aris lavishly spent his money on creature comforts, enjoying service and good food. He had worked hard over many difficult years to build his business empire, twenty hour days were not unusual, building relations, creating bonds with businessmen, government officials, politicians, no person was too small to ignore. He distributed envelopes for services rendered, paid

for children's schooling, holidays for key contacts, medical care and the many other things necessary to facilitate the growth of his business empire in Indonesia.

What Aris valued most after his business was a collection of rare Chinese ceramics and Asian art, a sign not only of success – that was evident – but a manifestation of his culture, which like for many self-made men had been acquired later in life, when he could relax and enjoy the fruits of his long years of hard work.

He had become a well-known art collector, but Scott Fitznorman had known him when they were both much younger. He had introduced Aris to the esoteric world of antique Chinese ceramics, examples of which had abounded at that time before becoming precious collectors items.

Together they had travelled together to distant villages, buying heirlooms from tribal peoples in Borneo and Sumatra. Their friendship was founded not only on their common passion for art, but also a deep bond of mutual understanding, the serious side of work was mostly avoided, although business was often present when Aris invited him to join his overseas business friends and acquaintances for long dinners and carousing in the restaurants and nightclubs of Asia. Managing his business empire left him with little time that could be exclusively consecrated to pleasure.

‘So what is all the excitement,’ said Aris with one of his inscrutable grins, blinking through his gold rimmed glasses as he did when presented with an unusual situation.

Lundy and his daughter had checked in and followed the hotel's executive hostess to their rooms, leaving Fitznorman alone with Aris in the hotel lobby. Kate had taken off for the hotel's shopping arcade leaving the two men with the VIP guest manager, who accompanied them to the express lift and the twenty eighth floor.

‘Well it's something quite extraordinary and very confidential,’ said Fitznorman in a low voice and making a discrete sign in the direction of the manager who stood politely to one side.

In the suite they waited while the manager went about his task, an act of seeing that all was well. Aris blinked and smiled patiently, and Fitznorman looked out at the view over the city through the vast panoramic windows.

They then settled themselves into the plush armchairs in the main reception room of the suite, where a television was on and the leader of a religious group with almost thirty million followers, compared Indonesia to the ocean liner Titanic, sinking under the weight of the turmoil and debt crisis, he told viewers that Indonesia's elite was 'still drinking, playing cards and gambling while the ship went down.'

The anchor man announced that four student protesters had been shot dead at Jakarta's prestigious Trisakti University. In the last twenty-four hours the killings by security forces had sparked savage riots and an anti-Chinese pogrom that was turning the centre of Jakarta into a war zone.

Fitznorman turned his attention away from the TV and spoke to Aris, 'Have you heard of Java man?'

Aris looked uncomprehendingly for a moment.

'You know the fossils.'

'Oh! You mean the fossils – at Solo?'

'Yes.'

'Of course, we went there together once, you remember?'

'Yeah, well a similar skull has been found in Sarawak.'

'Found by who?' Aris said with a vague though polite interest.

'Me!'

Aris sat up and looked at him as if he was pulling his leg.

'I'm serious.'

'Okay, it's a fossil then, what about it?'

'It's an incredible discovery.'

Fitznorman quickly explained the significance to the scientific world of such a discovery and the impact it would have on the news media.

‘The most puzzling point is that it does not appear to be a fossil. That’s why Professor Lundy is here, he’s one of the world’s leading palaeoanthropologist.’

‘Oh! I thought he was from the ceramics museum, what’s it called?’ Aris tittered.

‘No, I’m serious,’ said Fitznorman ignoring his question.

‘Sorry, start from the beginning, tell me your story.’

Fitznorman described the whole sequence of events to him and the problems as they had appeared. He told him it was necessary to collect more evidence to determine the exact nature of the creature. Lundy would be the laughing stock of the scientific world if it turned out to be some kind of rare great ape, or some other unknown animal.

‘I see, the Professor wouldn’t be here if it was something ordinary,’ Aris conceded.

‘Right!’

‘Okay, so how can I help?’

‘Well we need high precision GPS equipment to pinpoint the exact location on the map relative to the international border between Sarawak and Kalimantan.’

‘That’s done, everything is ready.’

‘Good, we also need a speleologist, to help us explore and map the cave.’

‘Okay, that’ll take a couple days, but I can arrange that. The only thing is how we can do it and remain discrete?’

‘We’ll have to think about that.’

‘You know if what you say is true, you will have to inform the authorities sooner or later. I can help you in Indonesia, but you know the Malaysians are very touchy.’

‘Yes, you’re right. But first we have to get some facts straight before we go talking to authorities, or we’ll be shut out in the blink of an eye. Once the politicians get involved it could take years’

‘Sure, you could even create a diplomatic crisis and get thrown out of the country – or land up in jail.’

‘Let’s discuss it with Lundy, I suggest we have dinner in the suite...what do you think?’ Fitznorman said nodding to the dinning room through a door behind, there was a table that could seat at least ten people.

‘No problem.’

‘Okay, I’ll call Lundy.’

‘Where’s Kate?’

‘Shopping.’

‘She’s quite nice,’ said Aris with a broad grin, ‘looks innocent.’

‘Who?’

Carol.’

Fitznorman gave him a look as if to say be serious.

‘Oh, one other thing, do you mind if I come with you...I mean to Sarawak?’

‘Of course, you can help us with the translations.’

‘Good I’ll call our agent in Kuching to lay on the transport. I’ll tell him you’re studying the Ibans,’ he said laughing.

An excellent Chinese dinner was served in the suite accompanied by an Australian Chablis and a Cabernet chosen by Aris from the wine list. He knew his wines even though he wasn’t a connoisseur, simply partaking in a modest glass of each, but encouraging the others to help themselves and enjoy the wine.

Kate and Carol changed news, cousins, they had plenty to talk about.

Lundy appeared a little jet lagged, even first class was not enough to overcome the fatigue of the long flight, though it had guaranteed fatigue in comfort. At first he was a little subdued, but after a glass or two of wine he perked up and launched into an enthusiastic summary of the history of Homo erectus and Java Man before coming back to the borneensis.

‘The problem is that there is so much that we don’t know, every new find reminds us of that. At this point our mystery man is yet

another problem, because we are not even sure who, or what he is, we need to examine the cave, and ground in which the skull cap was buried, there are probably more bones and clues waiting to be discovered.'

'Tell me a little about your work professor, palaeo...sorry, normally it's not in my line of business', Aris said making a funny kind of sniffing noise, which may have been an embarrassed giggle.

'What is Palaeoanthropology?' he said taking on a professorial air. 'It's the science of studying our ancestors, to be precise prehistoric ancestors.'

'And archaeology?'

'Palaeoarchaeology, that's the science that studies the artefacts made by prehistoric man,' he paused looking at Aris for a reaction. 'These artefacts are not the same as those we know in historic times, like in Egypt where there are monuments, you know temples like Borobudur, or pyramids,' he smiled a little condescendingly as Aris looked at him imperturbable, 'or pottery, like your ceramics.'

'I see,' said Aris, getting a reference point with the mention of Borobudur and ceramics. 'By the way I remember now, our Indonesian specialist in prehistoric man is Professor Murtopo, I know him, not too well, I met him a couple of times at Archaeological Association meetings, he's not a specialist in ceramics.'

'Professor Murtopo is no lightweight in physical anthropology,' said Lundy. 'He's getting on now, a few years older than me, seventy-five, I think. He's the Professor Emeritus of Anthropology and Chief Palaeontologist at Gadjah Mada University in Jakarta.'

'The best university in Indonesia,' said Aris proudly as he had studied business there many years before. 'If I remember rightly the Professor studied in the US.'

'This is highly confidential and we shouldn't talk to anyone for the moment.' Fitznorman quickly interjected.

'Absolutely,' said Lundy then going back to his subject. 'Our ancient prehistoric ancestors left quite a lot of things behind them, if

you know where and how to look for them, evidence that requires a serious scientific approach.'

'You mean stone axes for example?'

'Ah, I see you have been studying the question.'

'Not exactly, but I've been to Irian Jaya many times, there are many tribes that still live in the Stone Age.'

'That's next to Papua New Guinea,' he said for Lundy's benefit.

'Of course, but as you've probably seen most of their tools are from wood and other vegetable or animal materials, which is a problem for us in these hot humid climates as they perish very quickly or are lost in the forest. On the other hand the hard non-organic objects have survived the test of time, such as those made of stone. It's very rare that wooden tools survive, though there are very unusual cases of such objects coming down to us, in Germany for example, a couple of throwing spears turned up, in a mine and were dated to being around 400,000 years old!'

'That's pretty old, everything found in Java has been in stone up to now.'

'Yes, what's important about stone tools is their so called 'modes'.

'Modes!'

'Yes, palaeoarchaeologists have classified stone tools into five modes, each of which is comprised of set of tools in an industry that corresponded to a specific level of technological and cultural development, and in a given time period, on a given site. This enables us to determine how industrial technology migrated from its point of origin to another.'

'That's a little complicated.'

'Never mind, what's interesting is that these modes show how early humans and even relatively recent populations migrated across the planet. Technology advanced very, very, slowly, if we look at Pebble Culture for example...'

'Pebble Culture?'

‘Yes, this the most basic of the modes, when tools were literally pebbles, or pebbles deliberately broken by very early man to be used as rudimentary tools, which remained virtually unchanged for a million years, as did bifacial tools, another mode, which however progressed in style and according to some specialists was even a primitive art form.’

‘What about Sarawak then?’

‘When we examine your site, Scott, there’s a good chance there won’t be any tools! You may ask why? There’s several explanations, the first and most obvious is that the skull was found in a place that was not the home of its owner, that’s to say his usual dwelling place. Like all humans and their early ancestors, *Homo erectus* was a social animal, which means they lived in family groups. Our specimen was probably out foraging, or had had an accident, or died and his body abandoned by his clan, there are endless possibilities.’

‘So there must be more of them?’

‘Without doubt.’

‘Why haven’t we found any of their remains?’

‘Why haven’t we found any other fossils, for the simple reason we haven’t looked! Nobody had even suspected that such men existed in Borneo! Another problem we will face is the tendency to brush off such discoveries, as happened in the past, when certain scientists and specialists were quick to say that strange newly discovered bones belonged to some poor deformed individual – perhaps it is the case – I don’t know.

‘What I do know is that first this skull cap is almost a perfect twin of Trinil Man in Java and secondly it neither belongs, genetically speaking, to *Homo sapiens*, nor a known ape...that is those we know at present. It does of course have similarities, just as we have similarities, with the great apes.’

‘So Professor, are we cousins of the orangutans?’

‘Yes, in a manner of speaking, you could say we are very distant cousins. However, we are much closer to the African great apes than to their Asian cousin. And we should not forget that we share 99% of our genes with certain of the great apes.’

‘So this could be an ape, or some kind of a Bigfoot?’

‘Perhaps, I doubt it, in any case it’s not one that we have ever encountered up to this point in time. You should know that there’s a wealth of stories about strange manlike creatures in the forests.’

‘Bigfoot!’ laughed Fitznorman.

‘Well, strange manlike creatures have been regularly reported from this region, since 1855, by travellers and adventurers.’

‘What do you think?’

‘Me? Well it’s necessary to have an open mind, to a certain degree that is. For example there’s the Orang Pendek, which has been described as a powerful bipedal ape-like creature, seen in Sumatra recently by a photographer called Debbie Martyr.’

‘So there’s a photo?’

‘I’m not sure, from what I’ve read it’s supposed to be something like an orangutan. Similar stories abound in the area we are heading to the mountains, between Sarawak and Kalimantan, it has even been observed to break river snails using a rock to eat them.’

‘So it’s an intelligent ape.’

‘In any case it’s supposed to be very fast on its feet.’

‘The significant point is not whether such a creature is linked to *Homo erectus*, who is very very similar to ourselves, but that unknown animals have remained undetected by men for a very long time, surviving in the deep forest. Which raises the question, is it unreasonable to think that *Homo erectus*, a very intelligent early human, had survived until historic times?’ said Lundy.

‘The survival of different species in isolated habitats is easily demonstrated,’ Carol added, ‘if for example you take orangutans, there are two types, one in Borneo and the other in Sumatra. These are so similar in appearance and behaviour that only experts can tell them apart. But their DNA variation shows that these types diverged nearly three million years ago.’

‘Why?’

‘The orangutan races are similar physically and behaviourally for the simple reason the rainforests of Sumatra and Borneo are so alike

they select for the same traits. Thus natural selection is stabilizing, rejecting deviations.'

'I suppose it's because we have become used to the idea that the first men lived tens, or hundreds of thousand years ago,' said Fitznorman. 'There's plenty of legends on the islands here, reports of small hairy people often seen on the Sunda Islands until Dutch settlers arrived. They could have been a form of archaic human, *Homo erectus*.'

'They could have survived for much longer until recent times.'"

'Yes, they could have, as Aris said, they could have still been living until the Dutch arrived.'

'In some places the story goes that villagers left gourds of food for them to eat, they were said to be guests, from hell, and they'd eat everything, even the gourds.'

'Were they cannibals?'

'Why not, perhaps it was they who were eaten by modern humans,' said Carol.

'So maybe we'll find bones from a cannibal feast.'

'Well let's keep to the bones of our man for the moment.'

'How can we find out then?'

'As I said the first thing we should look for are other bones, a lower jaw bone, or some facial bones, even a tibia or a femur, that would be wonderful. We should also look for animal bones.'

'Animal bones? Why?' asked Aris.

'This would enable us to identify the kind of environment our friend's lived in and his habits. Maybe there are some stones, pebbles, that is to say tools.'

'What about his age Professor.'

'I take that to mean the age of the fossil? How long ago he died?'

'Yes.'

'That's the mystery, if it was an ordinary, straight forward, fossil, like those found in Java we could announce another Java Man and then try to date it with more precision. But unfortunately there is

something we don't understand, a mystery. That means we have to look very carefully at the conditions in the cave, perhaps there is something that we have never encountered before, though personally I would be surprised.'

Aris pushed him to go further and announce his ideas.

'Let me see, if we proceed by elimination, we could possibly arrive at some kind of hypothesis. It's not a man, it's not an ape or monkey, and it's not a fossil. The radiocarbon dating tests show it's only a couple or more thousand years old...'

There was a silence, nobody dared to speak, the Professor took advantage of the pause to take a piece of crispy pork with his chopsticks, from the back of a roast suckling pig. He crunched it noisily and smacked his lips.

'Delicious Monsieur Aris.'

He let them come to their own conclusion.

'Then he was alive a couple of thousand years ago?' Aris asked.

'Who knows, I certainly don't,' said the Professor.

'But it looks like that?' said Fitznorman.

The Professor looked at his daughter, 'What do you think my dear?'

'You're the expert Papa,' Carol replied, ducking the question.

'So I am. But it looks like it, doesn't it?'

Aris became very serious, 'If you're right Professor then I imagine the news would have a huge effect on the scientific world.'

'Yes! An earthquake of great proportions.'

'And create a diplomatic crisis between Malaysia and Indonesia, not to speak of France!'

Chapter 10

THE CAVE

They passed the night in a small but comfortable house rented by Winston Marshall near the main road from Kuching and not far from the lake. They had decided to avoid the Hilton Jungle Resort Hotel where they could draw unnecessary attention to themselves. The following day they left for the longhouse, a long day's travel ahead of them, up the rivers through the jungle to the border area, where the mountains drained down to the many rivers that flowed to the South China Sea.

In appearance it looked like a typical tourist jungle adventure-trek. Fitznorman had explained to Winston that his guests were interested in ethnology and wanted investigate the cave discovered during his last trip, which could be ancient burial site of interest. Aris was introduced as an ethnologist, he was accompanied by Agus Hendarin, a speleologist, who would assist them in exploring the cave.

Winston was used to such expeditions, but had nevertheless been surprised when Fitznorman asked him to organise another one so soon, and with four other people, including two Indonesians. However, even if he suspected something other than a simple interest in ancient burial sites and caves, the honour code of an ex-Gurkha officer did not permit him pose awkward questions to serious clients. As well as his long standing business relationship with Fitznorman, the collector was also a respected friend, and besides, Winston's own long experience had taught him time and patience would reveal all.

They arrived at the Ruma Nyaving longhouse in the early afternoon where they were welcomed by the Tuay, who had been informed of their arrival by a neighbouring longhouse, an hour downriver, equipped with a radio telephone. The young Tuay was happy to see Winston so soon, whose first visit had been good with many fine gifts, maybe it was a sign that their life would take a turn for the better and they would have some of the things he had seen in other longhouses downriver.

As the boatmen unloaded their luggage, the visitors were settled into the longhouse biliks the Tuay had prepared for them. Fitznorman with Kate, and Professor Lundy with his daughter in an adjoining bilik. Aris and his men a little further down the ruai.

The conditions were rudimentary, but clean and posed no problem as the visitors were used to field trips far from the comforts of their homes.

Fitznorman had warned his group not to be impatient, leaving Winston to the organisation, whilst Aris talked to the Tuay in Malaysian. Aris had a long experience with the tribespeople of the Indonesian forests, he had spent his life in the forestry business and knew what mattered to them.

Though all Dayaks valued their traditional and independent way of life, they also coveted many of the things of civilisation, tools, radios, motors, objects that made their life easier. Aris presented the Tuay with a radio, flashlights and hunting knives, and best of all he promised a small bore hunting rifle at the end of their trip.

That evening sitting around the Tuay, he told them of his people and the forest, as they drank the tuak he offered them.

‘In our longhouse amongst the trees of the forest my people live in the land of our forefathers, obeying the laws and traditions handed down to us, true to our beliefs. This is our land, our home,’ he told them. ‘In our forest we find shelter, game, fruit, vegetables, medicine and every material we need. The history of our people is here, the spirits of our fathers, the stories of the exploits our great warriors.

‘On our forest trails, every tree has a message, where we have hunted, where we have found a sago palm, everything. There is a tree marked by my father, who is now dead. The lives of our people are interwoven with the forest.

‘We know every individual tree and every bend of the river, in our forest we are never lost. We have our names for all the streams and rivers, even the smallest trickle of water, we have names for every tree, plant, animal and insect.’

The Tuay talked late into the night, as they drank tuak, recounting the legends of his people, and only after they emptied the jar did they turn in for the night.

The next morning, still fuzzy from the strong drink, they took the boats upstream to the point where Fitznorman recognised the broad gravel strewn river bend leading to the cave. The Ibans hauled the

boats onto the bank where they unloaded their packs. Aris paused and noted a couple of readings with his handheld GPS, marking the coordinates in his notebook.

They followed the path, which was not a path, rather a series of rocks that led up through the thick undergrowth. It was damp and very slippery. The effort in the humid jungle soon had them panting. Initially Fitznorman was worried for the Professor, but soon saw that he was in good condition, as excited as a fourteen year old on his first camping expedition. It was Aris the least agile, more used to being chauffeur driven in a Landcruiser over the almost flat terrain of his tree plantations.

Fitznorman remembered the spot and after carefully scrambling over the rock slabs by the pool side, they reached the thick curtain of creepers that had grown back into place as though it had never been disturbed. Winston once again hacked his way forward and once the entrance was clear they cautiously peered into the cave.

Winston returned to the river bank with Agus, the speleologist, collected the packs and cords that the Ibans had unloaded from the boats. Aris made more GPS readings, jotting them into his notebook, before apprehensively following them into the cave. He carefully returned his GPS into a pocket on his backpack and took out a handheld laser apparatus used for measuring distances.

Holding his flashlight Fitznorman pointed the way ahead to Agus. It was not difficult, they followed the same natural direction through the largest tunnels as he had done some weeks earlier. Soon they arrived in the first gallery where Agus inspected the walls and ceiling with his powerful lamp noting the formation of the cave.

It was exactly as Fitznorman had left it, undisturbed, evidently the Ibans took their legends of the spirits that dwelt there seriously. They continued following Agus pointing the beams of their lamps on the ground until they reached the discovery gallery and the stream, it was further than Fitznorman remembered.

Lundy told them excitedly to be extremely careful, to avoid inadvertently disturbing vital evidence, as he and Carol started to

unload their photographic material and Agus set up the carbide lamps.

Once the lighting was in place Agus proceeded to draw a plan of the cave on squared paper, using measurements made with his laser device. At the same time, Carol Lundy, following the instructions of her father, carefully photographed the discovery spot and its surroundings from different angles.

Agus was certain that there was an entrance to the cave from the south-side of the hill and left them continuing his exploration deeper into the cave.

Once their equipment was set up, Lundy proceeded to carefully probe the spot where Fitznorman had extracted the skull cap, scraping at the breccia with a small trowel. Then, after what seemed like an eternity of painfully tedious work, filmed by his daughter, Lundy excitedly extracted what he mumbled were pieces of facial bone, and what looked like a small fragment of a lower jaw bone and two loose teeth. He carefully placed them in plastic envelopes and then into bubble bags.

He decided to leave the rest untouched for later more scientifically precise excavations and turned his attention to the surroundings, examining and photographing the rest of the gallery.

It looked as if the gulley, cut into the cave floor, had been gouged by the tumbling effect of water-borne rubble carried along by the stream after a collapse further back in the gallery, and certainly at some relatively recent point in time. The watercourse was almost dry, possibly due to the flow being dammed by rubble, deviated at some further point upstream.

Agus explained the rock was a typical karstic form of limestone, in which flooding, caused by heavy tropical rain, cut and frequently changed paths in the soft rock.

Fitznorman left them to clean up and followed the gulley through the gallery into the narrow tunnel that Agus had taken. He continued for some distance before the tunnel broadened again, where there was a deposit of mixed debris that had been left by the stream where it lost its force in the second gallery. He was about turn back when he

saw a light approaching, it was Agus, who confirmed the existence of a large entrance some three hundred metres to the south.

When they returned they were surprised to see Lundy and his daughter were again on their knees, carefully trowelling at something that had their full attention a little further along the course of the stream. Fitznorman stood watching them absorbed in their task. Then Lundy stood up slowly holding a thick stick like a valuable offering to some strange god.

‘Extraordinary!’ he said softly, ‘a femur.’

It was the upper part of a thigh bone.

They were back in the longhouse just before nightfall weary from the heat and humidity after the afternoon’s work. Lundy was glowing with enthusiasm.

‘Well I think we have found what we came for,’ he said speaking in French, which only Fitznorman and the two girls understood. ‘Tomorrow we shall leave. We cannot disturb such a valuable site. We have to organise a full scale dig with the approval of the authorities. For the moment though we shall keep it quiet.’

Aris waited patiently realising that he should not interject. As soon as Winston left to attend to the preparations for their departure the next morning, Aris turning to Professor Lundy asked, ‘What does the femur tell you?’

‘Well if my guess is right it belongs to our man.’

‘Is it fossilised?’

‘No, otherwise it would not be his.’

‘Is there anything special about the cave, I mean did it help to preserve the bones.’

‘In my opinion no, the cave has nothing special about it, it’s typical of this region,’ said Agus.

‘So what does that mean?’

‘That is the question,’ said Lundy.

They flew back to Singapore with Aris, leaving Agus Hendarin at the airport in transit for his flight back to Jakarta, where he had the task of preparing a detailed map of the cave and fixing its position relative to the territorial limit of the adjoining two countries.

Carol and Kate took the connecting flight to Paris, in Carol's hand baggage were the precious bones, the facial fragments, teeth and the femur. Samples of the sand and breccia from the cave were with her check-in luggage.

Fitznorman and Lundy were booked on the Air France flight the following day, staying over to discuss plans for the next move with Aris. The following afternoon Aris informed them that his office had communicated the preliminary assessment made by Agus Hendarin. After his calculations, based on the on-site GPS readings, the entrance to the cave was indeed on the Indonesia side of the border, as well its adjoining galleries.

That was the Indonesian interpretation, which could be open to dispute.

According to Aris, the precise position of the border, on the ground, had been designated by marker stones every five hundred metres, but these had not been inspected for years, decades, and were lost in the dense forest. As a result the exact position of the border line separating the two countries was an open question, it had never been precisely mapped using modern methods, and all related data was classified under the heading of national defence and security, by both Malaysia and Indonesia.

Late the same afternoon Fitznorman, together with Professor Lundy, bid Aris goodbye, promising to keep him informed of every new development. Their flight to Paris was scheduled at eleven-thirty that evening. Arriving at Changi International Airport they checked-in and proceeded through passport control presenting their departure cards. As they continued to the first class lounge a uniformed man appeared and invited them to return to customs control point.

They were a little amused and bewildered as they were neither drug runners nor smugglers. They were politely shown into a small room where they were presented with their baggage.

‘Is this your baggage sir?’ a customs officer asked Lundy, high ranking judging from the bars on his shoulder.

‘Yes,’ Lundy replied surprised to see his baggage so soon again.

The officer addressed the same question to Fitznorman pointing to the other two suite cases.

‘Yes.’

‘Would you kindly open them?’

‘Is there some problem?’

‘Just routine,’ the officer replied with a stiff face.

The contents were inspected carefully and then re-inspected. Could you please open your hand baggage?

The opened their hand baggage, which was examined with equal thoroughness.

‘Could you please step over here Sir,’ the officer said pointing to a space between the counter and the wall.

‘Please empty your pockets.’

They obeyed and were searched by a uniformed assistant wearing white gloves.

‘You have no other baggage.’

‘No.’

‘What is your business?’ he asked inspecting their passport control and departure cards, which he had placed to one side on the counter.

Lundy replied that he was a scientist, in a government organisation. Fitznorman replied he was an art dealer.

‘Have you bought any items of art in Singapore or Malaysia?’

‘No,’ they truthfully replied.

‘Thank you gentleman, you may continue to the departure lounge.’

They left a little shaken by the experience. On arrival in the first class lounge the hostess invited them to help themselves at the bar. They poured a couple of good shots of whisky and sat down.

‘What was all that about?’ asked Fitznorman.

‘Let’s go to the toilets.’

They entered into the toilets and Fitznorman went to a wash basin and turned on the taps. Lundy looked around and followed suit.

‘You can guess what’s going on as well as I,’ Lundy said in a low voice. ‘The sooner we’re on the plane the better. I think it’s better if we keep quiet until we’re on board, we don’t know if we’re being watched or eavesdropped.’

They boarded the Air France Airbus and settled into the broad comfortable seats of the First Class cabin. The hostess offered them a glass of Champagne, which they readily accepted and anxiously waited as the doors of the aircraft were closed and the Airbus commenced its taxi towards the runway.

The flight took off as scheduled and very soon they were airborne over the Straits of Malacca for the twelve hour flight to Paris. As the aircraft climbed into the night sky they finally relaxed and started to speak with ease for the first time since they had left the customs office.

‘Thank God we’re on our way.’

‘What was that all about with the customs?’

‘I think it’s evident somebody suspects we have found something, but they don’t know what, they probably think that we have some valuable objects, I don’t know, valuable artefacts or things like that.’

‘When they know who you are maybe they’ll put two and two together. There’s no record of treasure being found in the caves of that region and there’s no reason to suspect an anthropological find where none have previously existed.’

‘You wouldn’t remember the skull called SM-3?’

‘No...,’ he said hesitating, ‘Ah yes, I vaguely remember that now.’

‘It was originally found in Indonesia in 1977, near the towns of Poloya and Sambungmacan, in central Java, by dredgers on the Solo River.’

‘The famous Solo River.’

‘Well it disappeared more than twenty years ago, illegally exported from Indonesia after appearing on the antiquities market.’

‘What happened to it?’

‘Nobody knows!’

‘Lucky we didn’t get caught.’

‘Yes, you are guilty on two counts of illegally exporting antiquities, and dissimulating an important archaeological discovery, we could end up in prison, that would look good for me, Head of Palaeoanthropology at the Museum of Natural History in Paris! We were dam lucky that Carol left yesterday with the bones.’

‘You’re damn right.’

‘It was probably one of the Iban boatmen who spoke with the antique dealers in Kuching, or something like that.’

‘I’ll call Aris when we get back, warn him.’

That ate their dinner and then settled down to sleep for the rest of the flight.

The facial bones fragments belonged to the skull cap and the femur corresponded with the estimated age of the same individual. It was clear to Lundy that they had a single specimen and that the specimen had been alive less than three thousand years before.

It was a stunning discovery that would turn the whole science of anthropology and the theories of human evolution upside down. There were many things to verify and tests to be carried out on the rock and soil samples taken from the site.

It was impossible with the little information they possessed of the site to deduct any further conclusions. Perhaps there were other remains, or other individuals, buried in the cave, perhaps it had been a primitive camp of some kind.

Borneensis appeared to be an incredible Dodo, who had existed in isolation, in the vast mountain range that ran from east to west across the island of Borneo.

Lundy knew little of the history of that part of the world. He knew that the Chinese had traded along the coast of the huge island for more than a thousand years, exchanging their wares against exotic woods, spices, animals and bird feathers. Huge junks laden with many thousands of pieces of porcelain and earthen ware jars had visited the coast, as the wreckage of ancient trading junks witnessed.

Few outsiders had ever penetrated very far into the interior until the end of the nineteenth century. The local tribe's peoples had lived on the coast and on the banks of rivers not far from the coastal regions. Who had lived in the interior, in the dense jungle covered mountains, only the nomadic Punans could say.

As a scientist Lundy knew it was time to set up a research team with specialists in all the fields of anthropology and archaeology, but also he also needed specialists in Late Neolithic history, an uncommon need for a branch science, which studied fossilised bones, the most recent of which were older than the history of civilisation itself.

Chapter 11

STRASBOURG

The scientific conference was held at the Palais des Expositions in Strasbourg, the seat of the European Parliament, in the east of France facing Germany on the opposite side of the Rhine. Fitznorman was conveniently lodged in the Strasbourg Hilton, just a short walk across the park from the conference centre. He had checked in for the second day of the conference, but before confronting the esoteric presentations he decided a stroll in the old city centre would do him well.

The cold December fog eerily draped the historic cathedral that rose out of the gaily decorated Marché de Noel, the spire disappearing into a strange phosphorescent shroud. He wandered through the crowd inspecting the rows of small wooden kiosks,

brightly illuminated with their coloured lights reflecting on the displays of Christmas decorations and goods.

Amongst the crowd of well wrapped up Christmas shoppers, he spied Paul Cathary joking with a vendor at one of the kiosks, he was holding a small glass lamp in the form of a Christmas tree that had attracted his attention. Fitznorman approached, standing a few paces behind him and out of his angle of view, for once it was he who would surprise him ducking out of a conference. Paul was a friend of Kate, she had introduced him at to Fitznorman at a conference in Paris on dating methods for antique ceramics, it was Anne-Marie's speciality, his wife, as for Paul he was head of genetic research at Institute of Physico-Chemical Biology in Paris.

Fitznorman had always enjoyed the company of the bad boys of the class, and Paul, in spite of his academic achievements, was just that, always agitated, looking for something to amuse him, he was one of the most extrovert persons Fitznorman had ever met, unable to exist without being surrounded by noisy talkative friends and who loved the kind of jocular exchange that he was engaged in at that very moment with a total stranger.

Cathary was internationally renowned for his research in the field of human evolution. He had spent his life searching for a hidden message in the genes of man and his ancestors, a subject of little other than general interest to Fitznorman, until his discovery in Sarawak.

‘So this is where French research finds the answers?’

Paul turned around and presented the sparkling lamp as though Fitznorman had been at his side all of the time.

‘What do you think? *Jolie non!*’

‘How are you Paul? Dodging off the conference!’

‘*Ça me fais chier!* It's more interesting here.’

‘Let's go and get a glass of glühwein, look there's a bar over there.’

They paid for two glasses of hot spiced wine from an open air bar and watched the Christmas crowd milling amongst the rows of small kiosks.

‘So Scott, how’s Indonesia,’ he said knowingly, ‘you’ve really put the cat among the pigeons.’

‘Don’t forget it’s extremely confidential,’ said Fitznorman in a worried tone.

‘Don’t worry about me, don’t forget it was us who dug out the DNA from your specimen, remember I’m also a government employee – bound by secrecy!’ he said laughing at Fitznorman’s discomfort.

‘I’ll be going back to Malaysia with Lundy, we’re planning to put together a team to carry out the archaeological exploration work on the site.’

‘Great, you can always come to me directly if you want any help,’ he said slipping his arm around his friend’s shoulder as if to console him.

‘I will, if we could learn more from the DNA then it would be fantastic. Is that possible?’

‘Well if our analysis is exact and the bones are really only three thousand years old it could be possible.’

‘That’s what the Carbon 14 tests say.’

They drank their wine, then took a taxi to the conference centre.

‘I’ve read in the programme that you’re giving a paper on human genetics in evolution.’

‘That’s right, are you familiar with the subject.’

‘No, you know my business is antiques, the only scientific things I know a little about are dating methods...for inorganics!’

‘Of course.’

‘That’s what I’m here for, to learn a little more. I’m on my way to Zurich, so I thought I’d stop by. Lundy had told me about the conference, he sent me the programme, that’s when I saw your name. If you’ve got time you can educate me a little on genetics and evolution.’

‘Of course,’ he said putting his arm around his friend’s shoulder, ‘it’s complicated, but I’ll give you some general background stuff.’

At the Palais des Expositions, the conference delegates were returning to the auditorium. The atmosphere was serious, bearded men holding sheaves of papers, talking in low voices, moving slowly.

‘Let’s sit over there,’ said Paul pointing to the coffee shop.

‘So tell me something about genetics then.’

‘Well, as you probably know there’s a lot of scientific discussion on the forces driving mutation, what we know, in simple terms, is that nature provides survival opportunities to life in response to a specific need, or even the absence of that need.’

‘The survival of the fittest!’

‘If you like, in any case Darwin and all evolutionists based their theories on the idea that haphazard mutations are the cause of the changes in species. That means random mutations are propitious at a given moment for the survival of a species, allowing it to procreate and perpetuate its genes and in doing so carrying the mutation onto the next generation. So in two million years, that’s about one hundred thousand generations, genes have been modified randomly to transform Lucy into men like us.’

‘So in simple terms does that mean that animals, or their genes, can take into account changes in their habitat?’

‘Yes, basically speaking, when this occurs in populations that are totally isolated in space and time. There’s the classical case that Darwin observed on the Galapagos Islands.’

‘Bird’s beaks and all that.’

‘Yes, another example can be seen in the need to adapt teeth, from eating a diet of soft leaves to a diet of hard leaves, as climate changes and new types of vegetation moves in. Then the modification of the genes in one individual could survive in small isolated populations of say twenty or thirty individuals, that is if the modification is favourable to survival in new conditions.’

‘So that means evolutionary changes are the result of changes in the habitat due to variations in the climate, or for example competition in a niche. So what happens if the habitat remains unchanged?’

‘That’s a good question, over the almost two million years in the existence of *Homo erectus* there were few changes, what I mean are significant changes, on the other hand there were many swings in the climate. But even in stable conditions random mutations still occur, these are errors in the transmission of genes, which we know occur at a constant rate. A few of those mutations, those that were favourable, would have been retained, as I said in small isolated populations for example.’

‘And the bad ones?’

‘They’re rejected, as well as most of the favourable ones, it’s like a lottery, there’s only a few winners!’

‘If I’ve got it right then, changes particular to one individual could be transmitted to a family, or a group, providing them with a chance to survive changes in their habitat.’

‘That’s about it.’

‘So you could say that we evolved in response to slow changes in our habitat.’

‘Yes, as I mentioned the last two million years represents about one hundred thousand generations, in this period of time perhaps a total of one billion individuals had lived, that gives considerable possibilities for the survival of random mutations.’

‘So what exactly is the mechanism of this process?’

‘That’s where DNA comes in, deoxyribonucleic acid, it’s the code that programmes every living organism on this earth. Every single cell in our body contains a string of DNA. Imagine this string about one metre long coiled into a ball of about five microns in diameter in the nucleus of our cells. A double strand that forms the famous double helix.’

‘And what’s DNA made of?’

‘Very simple, carbon compounds that form proteins.’

‘Proteins, like in cornflakes,’ Fitznorman commented dryly.

Paul ignored the pleasantry, genetics was the only thing he took seriously in life.

‘This code controls the growth and multiplication of every cell, from conception to the adult form in every single living creature during its whole existence. It’s been transmitted from generation to generation ever since life appeared on our planet, mutating from single cells to complex animals, such as ourselves. Some of us have difficulty in believing we descended from some kind of prehistoric ape, well try this on for size, each and every one of us is the descendant of some primeval form of life, a blob that existed in the slime formed at the dawn of time. Stop for a moment! Try to imagine that!’

Fitznorman looked blank for an instant. ‘Can DNA be extracted from very old fossils?’

‘Yes, we are working on that at the moment. The oldest DNA ever found comes from Siberia, fragments from plants, fungi, and animals, found in 350,000 year old permafrost soil cores.

‘Personally I think that under very special circumstances it might be possible to get small fragments of DNA in human and animal bones that are up to a million years old. This could be used to solve the family connections of our extinct relatives, something that paleoanthropologists are always arguing about. However, there is not much hope for the fossils found in Java, as DNA degrades rapidly in hot climates.

‘We’ve been working on fossilized human dejections, that’s shit to you Scott,’ they both laughed, ‘seriously if you could find some erectus faeces – coprolites, on your site that might provide some answers about their language capacity. As a matter of fact some of us hope to use fossil coprolites from Israel.’

‘Israel?’

‘Yes, in the caves of Mount Carmel, near Haifa, where several Neanderthal fossils have been found. Certain genes could indicate speech development and we think this was present in men about 50,000 years ago.’

‘So DNA from Israel might prove whether Neanderthals could speak?’

‘Might prove!’

I see.’

‘Anyway, DNA code is transmitted to our children and to all future generations and will continue to be as long as man continues and evolves into some future being.’

‘If we don’t destroy ourselves in the meantime.’

The next morning Fitznorman picked-up a rental car and drove to Zurich where he’d fixed a meeting with a certain Jimmy Fogg to settle another business.

He dropped the car off at Kloten Airport and took a taxi to the Central Bahnhof. There he found Jimmy looking a little lost, standing outside of the left luggage office in the basement level of the railway station. It was too early for lunch and they decided to take a walk and have a beer in one of the bars by the river. They made their way out of the station sliding between the construction works that seem to have surrounded the station for an eternity.

The traffic was dense and slow moving and in spite of strict emission controls Zurich seemed to be just as polluted as London or Paris. They crossed the bridge and strolled along the northern bank of the river until reaching the head of the lake, then crossed back to the south side where they stopped at a biergarten overlooking the river.

They ordered two beers and relaxed to watch Zurich life through the biergarten window struggling in a traffic snarl on the bridge, a mixture of trams, cars and two wheelers. Jimmy, who never felt at ease surrounded by people speaking foreign languages, seemed to be happier now that he had found a friend.

‘Listen Jimmy I want you to do something for me,’ Fitznorman said, ‘very discretely.’

‘I’m all ears,’ Jimmy replied perking up.

‘Some friends of mine have lost something and they need it back.’

‘You know I’m into anything funny,’ he said looking at Fitznorman with a disappointed expression.

‘No, of course not Jimmy, it’s nothing to do with you, I need you to do me this favour.’

Jimmy was an Eastender and a well known London antique dealer...reputed for his links to the shadier side of the business.

‘Okay then, I’m listening,’ he said his ruffled feathers settling down.

‘It’s a skull...’

‘A skull, I hope the poor bastard wasn’t murdered!’

‘No, it’s a very old skull that was illegally exported from Indonesia a few years ago. They want it back and there’s rumours that it’s resurfaced again.’

‘Okay, give me the details and I’ll see what I can do.’

A couple of hours later Fitznorman, in the company of Jimmy Fogg, was back at Kloten Airport, where Swiss efficiency still seemed to be present, and quickly checked-in. In the departure lounge he idly watched from his seat in the bar as the Jimmy made the ritual purchase of duty frees. It was not as if he was short of money, but he told Fitznorman that only in Zurich could such good cigars be found.

The airport was not busy, it was the nearing the year end holiday, still another couple of weeks before the rush started. The odd assorted group of Japanese or British bankers exchanged their usual stories with fellow travellers, boasting of everlasting lunches and dinners with the top people.

Fitznorman boarded the Swissair flight and took his seat in business class. He was pleasing to see it was more than half empty and he settled back to a smooth flight and a light meal as the plane headed east towards Vienna in clear weather.

Chapter 12

A SCIENTIFIC EXPEDITION

‘Good!’ exclaimed Lundy, ‘We have to figure just how we are going to handle this. I can’t just put a team together like that and disappear off to the jungles of Malaysia or Indonesia. I have a board of directors and trustees with no budget for such an expedition. We’ll have to inform the Ministry of Culture and Science. They will want me to inform Foreign Affairs. We have to fix it up with the governments of both countries.’

‘Both countries!’

‘I mean France and Indonesia. What about Aris by the way?’

‘I’ve spoken with him. We’re practically one hundred percent certain the site is on the Indonesian side of the border and he’s willing to back the local part of the expedition in Indonesia and to arrange things with their authorities.’

‘Excellent.’

‘What about the reaction of the Malaysians.’

‘That I don’t know. I have some good contacts in Kuala Lumpur, but they’re strange sods, you never know how to take them. They’re not at ease with themselves, you know Mahatir, their prime minister and all that.’

‘What do you mean?’

‘Well the Indonesians are uncomplicated, they fought for their independence, plus the fact they don’t have any difficulties with a large ethnic Chinese population as Malaysia does, they’re easy about their religion, Islam. What I mean is that they are more mature, colonisation is very far behind them.’

‘What about the Chinese in Indonesia?’

‘They don’t even represent five percent of the population, though they count from the economical point of view, but otherwise have no weight. Indonesia is a large potentially powerful country in the

region with a population of well over two hundred million and they're practically all Muslims. On the other hand the Malaysians are a tenth of that, and the so called Bumiputras, sons of the soil, are barely a majority in their own country, on top of that not all Malaysians are Muslims by a long way. There are Chinese, Indians and all the non-Malay peoples of Malaysian Borneo, some of whom are Christians, who all in all make up not far off fifty percent of the country's population.'

'How does that affect us?'

'Unfortunately, the Malaysian government and administration are control freaks, they think anything they don't control is against them, and if they don't control something then the last thing they want is foreigners doing it for them.'

'I see,' he said pensively.

'Let's hope Aris is right and the site is in Indonesia.'

'He said he's sure about the entrance to the cave.'

'Well we can always dig a hole from the other side.'

'What! And meet the Malaysian border patrol halfway down the tunnel.'

'Look, I think Aris can handle the Indonesian part, but we don't have to get mired down in that now. How will you handle your side?'

'First I'll call a meeting of the board and trustees, and ask you to make a presentation.'

That Friday afternoon the board of the Musée de l'Homme was convened in Lundy's offices. It consisted of a small group of venerable scientists, trustees and administrators. They were from the CNRS (The National Centre for Scientific Research), The Institute of Human Palaeontology, The Museum of Natural History and the representative of the Ministry.

They were seated around the large conference table, whispering, curious to learn the reasons why Lundy had called an urgent meeting and the air of mystery surrounding it.

‘Gentlemen, I have called this board meeting today on a matter of great scientific importance. A discovery has been made that could possibly revolutionise our ideas about human evolution.’

There was a moment of barely hidden agitation and excitement as the board members seated around the table looked at each other and at Lundy.

‘Please,’ he said smiling and lifting his hands for calm.

‘The discovery has been made by a certain Scott Fitznorman, a renowned Parisian collector of Asian art and artefacts. He is waiting outside and with your permission I will call him in to present his discovery.’

They nodded in agreement, eager to get to the essential, although it was not exactly usual to invite a stranger, a foreigner at that, to one of their board meetings.

Fitznorman took a place at the end of the table and introduced himself and then placed a resin mould of the calvarium before him.

There was a silence.

‘Gentlemen, this calvarium was found in a cave in the Indonesian province of Kalimantan Barat, near to the border of Malaysian Sarawak, both of which are on the island of Borneo, for those of you who may not be too familiar with the region.’

It was true that Borneo was not exactly the centre of human palaeoanthropology. Traces of Neolithic man had been discovered in the Niah caves in the north of Sarawak, but nothing of any really great significance.

Lundy then took over.

‘You may examine this calvarium in a moment, it is a resin mould of course, the original is locked in our safe,’ he said pointing behind, ‘but first I will give you the results of some tests that we have taken the liberty to have had carried out.’

The members of the board looked with strained curiosity, trying to get a better view of the skull fragment. It was not evident from a distance of one or two metres, depending on where the observer was seated, to see the details.

‘Don’t keep us in suspense,’ said Michel Corbet with a smile, one of the scientific administrators of the museum. ‘What is it then? A cousin of Java man, a two million year old ancestor?’

‘Well you’re wrong on two counts, both of which I am certain. One it’s not Java man’s cousin...’

They all laughed.

‘...and second it’s not two million years old...it’s two thousand years old.’

‘Two thousand...’ came a puzzled echo.

‘Yes, two to three thousand years old to be more precise...and it’s of the species *Homo erectus*.’

An undignified bedlam broke out as the men rose to their feet in a single movement, leaning over the table towards the resin mould.

‘Gentlemen please, please, in a moment we’ll pass it around, but let us behave like scientists.’

There were astonished and disbelieving remarks and questions flew in all directions.

‘What do these tests show?’ asked a director of the Palaeontological Laboratory at the CNRS.

‘Radiocarbon tests shows a date of between two and three thousand years, and the DNA we have been able to extract indicates that it’s no known living man or ape.’

They sat down, the shock was clear, putting into question whole lifetimes of research and scientific theory.’

‘How could this happen?’ an elderly scientist asked.

‘That we don’t know.’

Fitznorman described the circumstances of the find and how they had returned to the site. The man from the Ministry, Philippe Poiget, an overly self-important man in his early forties, gave a slight frown of disapproval. Lundy ignored him and went on to the main questions of how they would proceed, how to handle the news and most importantly how to put together a budget for an extensive expedition.

‘Professor,’ said the Poiget putting on his authoritative voice. ‘If this bone was found in Indonesian, aren’t we in the obligation to hand it over to the Indonesians.’

‘That’s a possibility,’ Lundy said softly with a slight smile, ‘but let us remember that this ‘bone’ here is on loan to us from Mr Fitznorman. Who I would remind you is a British citizen.’

There was a moment of silence.

‘This is probably one of the most startling discoveries of the century and I think it is in the interest of French science and anthropological research to back this opportunity,’ continued Lundy, ‘we wouldn’t like to see it go across the Channel, would we?’

Lundy looked at Poiget, who was thinking of his own career and the consequences of handing an important discovery over to the British Natural History Museum.

‘No, of course not,’ he sniffed.

The other board members smiled at the discomfort of Poiget, pleased that they had won a skirmish for once.

‘I propose that we name this specimen *Homo borneensis*,’ said Lundy changing the subject. ‘For our non-specialists members,’ he said smiling in the direction of Poiget, who gave an embarrassed sniff, ‘that means *Homo borneensis* is a member of the family Hominidae, the genus *Homo* and the species *borneensis*.’

As Fitznorman looked a little puzzled, then Lundy stood up and walked to the wall board behind him and quickly wrote,

Kingdom: Animalia

Phylum: Chordata

Subphylum: Vertebrata

Class: Mammalia

Order: Primates

Family: Hominidae

Genus: *Homo*

Species: *Homo borneensis*

‘There we are Scott, according to the system developed by Carl Linnaeus, the Father of Taxonomy, for naming, ranking, and classifying all plants and creatures,’ he said smiling. ‘The exact criterion for membership in the Homininae is not clear, but usually includes the species that share more than 97% of their DNA with the modern human genome, and requires the capacity for language, and, having a simple culture beyond the family or group.’

‘So it’s a primate like a chimpanzee.’

‘No, not exactly, it’s a question of the mind, the theory of minds, the capacity to lie convincingly, and language’ he said more seriously, ‘these controversial criteria distinguish the adult human amongst other hominids. We acquire that capacity at about four and a half years of age in our cultures, whereas the bonobo, gorilla and chimpanzee never seem to develop this. However, we don’t really know whether early members of the Homininae, such as australopithecines, *Homo erectus*, or *Homo neanderthalensis*, had that kind of mind, but it’s illogical to ignore similarities seen in living cousins. So, despite an apparent lack of real culture, plus significant physiological differences, some think that the orangutan may also satisfy these criteria.’

‘I see,’ said Fitznorman, not sure that he really did.

‘Does that mean that you are announcing a new species?’ asked Corbet raising a hand, showing a gold bracelet on his wrist.

‘Not for the moment, this is strictly between ourselves to avoid confusion. Of course if there are any other suggestions....’

The members of the board gave nods of approval and Lundy started to describe the organisation for the expedition and costs.

‘We have an influential Indonesian industrialist, a close friend of Mr Fitznorman, who has already been of considerable assistance, and who is prepared to cover all local costs. What we need now is a team be put together to undertake the expedition, with a budget and obeying the utmost secrecy. However, I regret to say that whilst it is desirable that secrecy should be maintained as long as possible, it

will not last long. The more people involved, the greater the risk of a premature leak.'

'How do you propose to handle the questions of relations with the Indonesian authorities Professor? It's a matter of scientific and cultural relations if I'm not mistaken,' asked Poiget.

'You are quite right Philippe. Monsieur Aris has close contacts with the Indonesian Minister of Science and Culture and is handling the question as an official invitation for our team under our ongoing scientific cooperation program.'

'Good, and the budget? Do you have any suggestions?'

Lundy looked at Corbet who managed field work and expeditions.

'It will be quite an expedition, at least three months, depending on what we discover. We could cover part of it from our primate research project, we still have a budget for Asian primate research, which not been attributed to a specific project for the moment,' Corbet replied.

'That's fine with me,' said Poiget, pleased that he would not have to approve a budget extension.

'Good, we'll do that. Now I think we can get down to some serious questions now,' Lundy said passing the mould of the skull cap to Corbet.

Fitznorman left feeling elated, but started to worry as he returned to his offices. He had been neglecting his business and now his absence in Borneo would complicate his schedule for the coming autumn antiques fairs and auctions. The gallery was to be present at events in several European capitals, where he was counting on new business. Things were looking up in the market for fine art, prices had started to rise with a lot of new money flowing into the market, and even traditional buyers were starting to show signs of greater enthusiasm.

Whilst Marie-Helene Springer handled the day to day business at the gallery in Paris, the head office of Asia Galerie SA, of which Fitznorman was the owner-founder and president, there were also three subsidiary galleries in Biarritz, London and Düsseldorf to look

after, the latter were independent firms, wholly owned by Fitznorman, with a local manager answerable to Marie-Helene. However, he always made sure of his personal presence when dealing with certain of the more important, wealthy and established buyers, especially long standing customers who appreciated his knowledge and personal touch, who whilst respecting Marie-Helene's experience, preferred to deal directly with Fitznorman, whom many considered as a trustworthy friend.

Marie-Helene had graduated with honours after studying South East Asian History and Civilisation at the Sorbonne, she was a chic, serious, blonde just turned forty, who Fitznorman had engaged when she decided to quit the Musée Guimet in Paris, where having spent several years in research, realised she would end up a dull and dusty specialist.

She never regretted her decision to embrace the business side of the world of art. She was single, in fact she preferred female company, which did prevent her from having a good professional relationship with Fitznorman. She, together with the younger members of the team, communicated with the new generation of collectors, those who were making big money in banking and finance, who invested with the enthusiasm of a new generation of collectors.

Fitznorman could little afford to risk his personal reputation, but on the other hand, if his discovery was what Lundy promised it would be, his already well-known name in the arcane world of fine Asian antiques would hit the front pages of world media.

Once back in his office he decided to call Jakarta, where it was ten in the evening, perhaps too late to disturb Aris. He tried and was in luck, getting through to his friend, who was dining in a Jakarta restaurant.

Fitznorman quickly briefed him and set up a tentative date, two weeks hence, for the arrival of the advance team. Aris had spoken with the Minister of Science and Culture, who nominated the country's leading palaeoanthropologist, Professor Murtopo to

participate as joint leader with Lundy, a question of protocol and good diplomacy.

They would also set up the arrangements with the Governor of Kalimantan Barat, providing an army unit to take charge of security, since the frontier area was under military control, in spite of both Malaysia and Indonesia being members of ASEAN, the Alliance of South East Asian Nations.

Chapter 13

THE ACADEMY OF SCIENCE MOSCOW

Many stories recount the dangers confronting travellers in modern Russia, and most of them contain at least some truth, Fitznorman had been warned, Moscow was a dangerous city and some people seem to attract more problems than others, though if visitors avoided looking for trouble there would not be too many problems.

‘The Gais are everywhere on the road, if they have the chance they will try to racket you,’ Alexis Kutznetzov said nodding at the large American Ford station at the entrance to a tunnel. Fitznorman looked through the dirt splattered windows of the car, he deciphered the Cyrillic making out the word ‘Militia’, he wondering where all the traffic came from, police in imported American Fords and the unbelievable number of cars, buses and trucks that poured out choking pollution generated by poorly refined Russian gas. They were stuck in an endless jam of traffic that inched its way towards Tverskya. A dozen years earlier the same avenue would have been almost deserted.

Behind the glittering facade of the Kremlin or the Hermitage the country was in a phase of mutation towards a society modelled on a savage form of capitalism that was creating new classes of desperate poor alongside a growing number of nouveaux riche.

One of Moscow’s best known tourist attractions was Red Square but it is also the home to Palaeontological Institute of Russian

Academy of Sciences in Moscow at Profsoyuznaya st, 123, said to be the world's largest palaeontological institutes.

As part of the Russian Academy of Sciences, it had more palaeontologists under one roof than any other institution in the world and housed collections from all over the former Soviet Union, and the rest of the world. The Institute's researchers studied everything from the origin of life to Mongolian dinosaurs.

'Our problem has been that since the end of the Soviet Union the institute has had its budget reduced to a point that we have become totally impoverished. Fortunately we can now travel and are free to make agreements with organisations that have money like the University of California's Museum of Palaeontology.'

Fitznorman nodded he could see the walls of the Kremlin at the end of Tverskaya and they would soon be arriving at the Institute.

'We have a long term cooperation agreement with the University which means we can set up mutual visits, student exchanges and cooperate on projects.'

They left the car in an underground car park and taking a lift emerged into a smart modern shopping centre where an escalator brought them up to the exit facing Red Square.

'Here we are,' said Alexis pointing to a red brick building the seemed to be built into the Kremlin's walls. 'The Museum of Palaeontology, it's run by the Institute, you will see it has some fine public exhibits, a pity that they're barely known outside of Moscow. There's almost every type of fossil organism imaginable, especially Mongolian dinosaurs, and Precambrian fossils.'

Alexis met him at Moscow's Sheremetyevo Airport, the grey Russian style he remembered from the past was gone, it was now dressed-up with bright advertising panels and duty free shops. Alexis spoke excellent English and informed Fitznorman that he would travel with him during his stay in the Russian Federation, guiding him through the maze of institutions that made up the Russian Academy of Science.

As they had made their way into Moscow, Fitznorman witnessed the changes close-up. Alexis pointed towards a wooded

area, 'That's where the nouveaux riches live, new villas that cost more than a house in London.'

Fitznorman had observed them from the plane as it had descended towards Moscow, very large houses surrounded by trees, and what surprised him was there were not just one or two but whole swathes of them.

When they reached the suburbs Alexis stopped to fill up at a bright new service station adjoined to a restaurant and hotel, where inspecting the menu he saw that the breakfast cost fifteen dollars, probably more than the monthly salary of the waitress.

Fitznorman waited in the lobby whilst Alexis went to the men's room. He explored his surroundings glancing into the bar of the hotel and was surprised to see seated in one corner several girls who appeared to be dressed for an evening out. It took several moments to realise that they were waiting for customers, on a nearby table were their pimps in a cloud of foul smelling cigarette smoke drinking cheap cognac.

There was a grim looking open air market next to the gas station where babushkas standing on its muddy ground sold farm produce as younger people stood before dismal displays of factory products and second hand car parts.

Gas cost nothing, for those who could afford it, though the traffic had increased exponentially, slowly modern service stations were replacing the run down or makeshift filling stations he remembered with lines of cars patiently waiting their turn in a country overflowing with oil.

They arrived at the Presnja Marco Polo Hotel, situated a couple of blocks off Tverskaya, on Spiridonovsky. He googled it to avoid any unpleasant surprises and discovered that it was a first class hotel, though smaller than some of the larger and better known establishments.

As he checked in Alexis recounted a little of the Presnja's history. The hotel had been built in 1904 by a British architect, who had also designed the Metropol Hotel. It had been a residence for British expatriates working as specialists or in service. The British had often

organised parties and art exhibitions for Russian avant-garde artists who lived nearby. At the end of the 19th century, the founder of the Russian Fine Arts Museum, Ivan Tsvetaev, had lived nearby, and often visited the house with his daughter, who became a famous poet.

When the Bolsheviks evicted the British, it was transformed into a residence for Soviet scholars and scientists, then after WWII it was transformed into a VIP hotel for high ranking Communist Party members and apparatchiks. After the dissolution of the USSR it was transformed into a first class modern hotel

After the formalities were completed Alexis took his leave informing Fitznorman that he would be back pick him up at eleven thirty for lunch followed by a visit to the Ministry.

Whatever the history Fitznorman found the hotel to be very comfortable and discrete. But he was more interested by the Moscow that awaited him outside and as soon as his bags arrived in the room he headed out to explore the surroundings. On Tverskaya he discovered fast food eating houses punctuated by more expensive restaurants mixed with fashionable boutiques, their windows decorated with the latest designer clothes. The prices on the menus displayed outside the restaurants compared with those of Paris or London, the monthly salary of a Russian government employee.

He crossed the avenue by the underground passage that led to the Moscow Metro where vendors that lined the tunnels tried to supplement their miserable pensions by selling a bottle of vodka or cigarettes to those in a hurry, or too late for the shops. The rich Muscovites built extravagantly houses not only in the suburbs in wooded privacy, but also owned luxurious apartments in new blocks guarded by overfed giants in full view of the grim tenements that dated from the Soviet era.

Alexis arrived punctually at the hotel for lunch at a smart Italian restaurant that Alexis had chosen on Stari Arbat. A violinist provided exquisite background music, earning no more than a few dollars, in the past he had probably been the member of a philharmonic orchestra that had toured the world.

On Stari Arbat new hotels were springing up at every street corner quickly transforming what had been a typical tourist street market for souvenirs into what was to be an up-market shopping area. The poorer vendors would soon be ejected, making way for more attractive stalls not only for tourists but also the privileged young Russians of the new middle and consumer class seeking the latest fashions that went with their cars and mobile phones.

The poor lived in wretched autarchy planting potatoes in their small gardens raising chickens and rabbits if they were lucky. They would not die of hunger but life had been reduced to a miserable existence without hope of change. They baked their own bread and distilled samogon, a home made Vodka.

Fitznorman could not help remembering a few days before his departure from Paris the weather had been cold, very cold, outside of his local bank agency, the Credit Lyonnais, an obstreperous old man sat in a doorway and in spite of the cold was naked to the waist next to his dog. He was filthy, his beard slightly red was in contrast to his white body. It grimly reminded him that a junction had been reached between communism and capitalism.

They then took a taxi to the Ministry to complete the paperwork necessary for his visit, the Institutes were still state controlled and the formality were unavoidable.

Fitznorman announced he would walk directly to the Museum the following morning. Alexis refused, but when he explained he wanted to see Moscow a little closer, the Russian declared, 'Then I will walk with you!'

There was no way to escape Alexis.

Fitznorman agreed and was met the next morning at eight-thirty, after a quick coffee they made their way with the hurrying crowd along ulitsa Tverskaya towards the Kremlin. At the end of the avenue they took the lugubrious subway under Okhotny Ryad along with the crowds of Muscovites. Fitznorman his hands dipped deep into his pockets to avoid the gangs of pickpockets that targeted unsuspecting foreigners and tourists.

They exited into the bright sunlight, their shoes crunching over the fresh snow. Opposite was the arch that led into Red Square, to the right the equestrian statue of Marshall Zhukov, hero of WWII. The State Historical Museum stood at the northern end of Red Square, in a late nineteenth century dark redbrick building decorated with ornate turrets, pinnacles and saw-tooth cornices.

The public entrance to the museum was opposite the ornate Russian Orthodox church of Saint Basil. They a side entrance into the building, up a dismal, dusty, Russian stairway to the offices of the Department of Anthropology on the second floor.

Alexis made Fitznorman welcome with hot tea and biscuits, he was very open and sociable, obviously suited to his role not only as an anthropologist, but also the museum's head of externally relations, notably dealing with foreign institutions and visiting scientists.

'So once we have recovered from our morning sport we shall start with a short visit to our museum,' Alexis announced laughing at the discomfort of Fitznorman, who was evidently not used to walking on ice covered pavements and hardened snow. 'Then we'll go to lunch. It'll give us the time to talk about your program if that's alright with you?'

'Fine, I've never had the opportunity to visit the museum.'

'Good.'

He led Fitznorman down to a door that opened into the public area. 'Our museum was built in the last quarter of the nineteenth century as you can see the interior is decorated in the rich style of that period. There are some beautiful murals and carvings,' he pointed to the ceiling paintings, 'and there are all the Russian Czars, excluding the present one,' he said with a laugh.

'Here the visitor can see the history of Russia from its earliest Neanderthal beginnings, which is what interests you.'

'Yes, as you know from our correspondence I am interested in the Caucasus, where there has been some interesting discoveries.'

'Ah yes! The Caucasus. Today the more interesting site is on the southern side, in Georgia and Azerbaijan.'

‘Yes but Russian specialists have a lot of information on the earlier expeditions.’

‘Yes, you are referring to the time of the Soviet Union, before Georgia and Azerbaijan became independent.’

‘Yes.’

‘Are you interested in Homo erectus or the legends of wild men?’ he said laughing. ‘We are very interested by your discoveries in Borneo, but we also have our own tales of wild men, abominable snowmen and Bigfoots.’

Fitznorman remained silent.

‘I’m sorry I didn’t mean to offend your work. Of course most of our anthropologists give little credence to such stories. Then when we heard the news of your borneensis over the grape vine we were frankly very sceptical.’

‘Yes I suppose that’s normal.’

‘There’s been a lot of recent talk in the popular press of the so-called Almasti, primitive men who are said to resemble Neanderthals. I must admit we have records of sightings over the last two centuries in a region that runs from the Caucasus, through the Pamir Mountains, the Altai Mountains and into Inner Mongolia.’

‘What’s your opinion?’

‘Well there are still regular reports of sightings of these creatures. Certain scientists have reported seeing them. There is an anecdote of an incident in 1917, when the Red Army was pursuing White Russian forces through the Pamir Mountains and soldiers shot an Almasti as it was coming out of a cave.’

‘Was the body recovered?’

‘No but there was a vivid description that said it’s ‘eyes were dark and the teeth were large and even shaped like human teeth. The forehead was slanting and the eyebrows were very powerful. The protruding jawbones made the face resemble the Mongol type of face. The nose was very flat...the lower jaws were massive. Some say that the Almasti were the survivors of Neanderthals.’

‘Is it possible?’

‘Frankly, I doubt it...but you never know. There’s a report of a more recent sighting which was given to a British archaeologist Dr Myra Shackley, a professor of archaeology at Leicester University, by Dmitri Bayanov of the Darwin Museum in Moscow.’

Alexis looked at his watch and Fitznorman realising it was lunch time suggested the Metropol Hotel, a short walk from the museum, quickly adding that it was he who was inviting.

Over lunch Alexis pulled out a photocopy.

‘Look Scott, here’s an account of our Yeti.’

Fitznorman read the paper:

Continuing our chase, we caught up with what was left of the exhausted gang, who had stopped for a rest at a place where the glacier was split apart by a stone cliff. The upper tongue of the glacier hung from the cliff in which there was a crevice or cave. We surrounded the gang and took up a position above where they were resting. A machine-gun was placed in position. When we threw the first grenade, a man (a Russian officer) ran out onto the glacier and started shouting that the shooter would make the ice cave in and that everyone would be buried. When we demanded that they surrender he asked for time to talk it over with the other bandits, and went back into the cave. Soon after we heard an ominous hissing as the ice began to move. At almost the same moment we heard shots, and not knowing what they meant decided that it was the beginning of an assault.

Pieces of snow and ice started falling down from the cliff, gradually burying the entrance to the cave. When it was nearly buried three men managed to escape, and the rest were buried under the debris. Our shots killed two of the bandits and seriously wounded the third. When we reached him, he showed us the spot where the body of a Russian officer was buried and we dug it out. The

wounded man turned out to be an Uzbek tea-house owner from Samarkand.

We questioned him and he gave us the following information. While the bandits were discussing out order to surrender, some hairy man-like creatures, howling inarticulately, appeared in the cave through the crevice (which possibly led upwards from the cave). There were several of them and they had sticks in their hands. The bandits tried to shoot their way through. One of the bandits was killed by the creatures with the sticks. Our narrator received a blow from a stick on his shoulder, and rushed to the cave entrance with one of the monsters hard on his heels. It ran out of the cave after him, but he shot it and it was buried under the snow.

To check up on this strange story we made him show us the exact spot and cleared the snow away. We recovered the body all right. It had three bullet wounds. Not far off we found a stick made of very hard wood, though it cannot be stated for certain that it belonged to the creature. At first glance I thought the body was that of an ape. It was covered with hair all over. But I knew there were no apes in the Pamirs. Also, the body itself looked very much like that of a man. We tried pulling the hair, to see if it was just a hide used for disguise, but found that it was the creature's own natural hair. We turned the body over several times on its back and its front, and measured it. Our doctor made a long and thorough inspection of the body, and it was clear that it was not a human being.

The body belonged to a male creature 165-170cm tall, elderly or even old, judging by the greyish colour of the hair in several places. The chest was covered with brownish hair and the belly with greyish hair. The hair was longer but sparser on the chest and close-cropped

and thick on the belly. In general the hair was very thick, without any under fur. There was least hair on the buttocks, from which fact our doctor deduced that the creature sat like a human being. There was most hair on the hips. The knees were completely bare of hair and had callous growths on them. The whole foot including the sole was quite hairless and was covered by hard brown skin. The hair got thinner near the hand, and the palms had none at all but only callous skin.

The colour of the face was dark, and the creature had neither beard nor moustache. The temples were bald and the back of the head was covered by thick, matted hair. The dead creature lay with its eyes open and its teeth bared. The eyes were dark and the teeth were large and even and shaped like human teeth. The forehead was slanting and the eyebrows were very powerful. The protruding jawbones made the face resemble the Mongol type of face. The nose was flat, with a deeply sunk bridge. The ears were hairless and looked a little more pointed than a human being's with a longer lobe. The lower jaw was very massive.

The creature had a very powerful chest and well developed muscles. We didn't find any important anatomical difference between it and man. The genitalia were like man's. The arms were of normal length, the hands were slightly wider and the feet much wider and shorter than man's.'

'Interesting *n'est pas*?'

'Yes, evidence that strange men could have existed until recent times.'

Alexis laughed, 'So you believe it?'

'I have an open mind, I'm not at all convinced by so-called Yetis and monsters but....'

‘Drink up Scott, we should be getting, I have to organise our trip to Saint Petersburg.’

They walked back to back to the hotel along Tverskaya.

‘By the way Scott, have you ever been to the Nightflight?’

‘No?’

That evening they ate at the nearby Sheraton and after Alexis proposed a visit to show Fitznorman Moscow’s nightlife.

‘We’ll start at the Nightflight, it’s a very popular club.’

‘I’m not really into clubs.’

‘It’s reputed to have the most beautiful and available girls in Russia.’

‘Oh,’ said Fitznorman perking up interest.

‘It been opened since Gorbachev’s time.’

‘We can go there for a drink if you like.’

‘Why not!’

Alexis called his driver, instructing to wait, they would not be needing him for an hour or so. It was a short walk to the Monaco, a casino. Outside guards watched over the SUVs, Cherokees, Mercedes and even Rolls Royce’s, some double parked their drivers at the ready, standing in the snow smoking.

Champagne flowed for the nouveau riches crowded around the roulette and black jack tables, oilmen from Tartarstan, Bashkiristan or Tiouman, surrounded by extraordinarily attractive girls, throwing their chips onto the roulette table as though they were old roubles.

‘Here Scott some of them will spend up to fifty thousand dollars without batting an eyelid,’ said Alexis. ‘The Monaco like all other casinos is doing what the government cannot do, they transfer the wealth from one group of Mafiyosa to another, letting it trickle down to the poorer people, chauffeurs, body guards, restaurants, clubs, construction....’

The bouncers looked like thugs from an American TV series, checking the new arrivals through a metal detector, then frisking

them for fire arms. To one side a stout hard faced communist style matron checked the girls for knives, stun guns and mace.

On a small stage an attractive and scantily dressed blonde gyrated in an erotic dance before the indifferent gamblers and drinkers, she was not without a certain style thought Fitznorman. She seemed sad in a Slavic kind of way and very beautiful, an image of the strange attraction of the new Moscow.

Outside on the evening streets the Muscovites were not that different from those in many western cities. The younger men wore leather jackets and jeans though the girls were more feminine than their Western counterparts wearing skirts and high heel shoes that seemed seriously unadapted for the snow covered pavements and more than a trifle overdressed for everyday use. The older people tended to be shabby and old fashioned wearing belted raincoats and rubber boots.

The snow that covered streets was smutty, mixed with the dust that seemed ever present in the city. The facades of the buildings on the large avenues were presentable, but that morning as he walked from the Marco Polo he had observed the state of the inner courtyards, the pot holes in the uneven paving filled with frozen water, snow covered piles of rubble, leaking water had turned to ice leaving stalactites hanging from the walls and guttering. Electrical wires hung unevenly, making it impossible to tell to know which was in service or abandoned. Broken pipework hung menacingly from the walls. There was a general state of advanced decay, especially present in the government buildings whose maintenance budgets were non-existent. The broken yellow plaster uncovered the uneven red brickwork of the walls.

Fitznorman had observed in the corridors of the Museum the rotten window frames and the glass panes covered with decades of dust and grime, the paint flaking off the doors and the cheap wood panelling that dated back to the glorious days of central planning.

He could not help noticing lingering habits from the past, of Muscovites never without a briefcase or plastic bag as they went about their daily chores, an air of weary despondency, though some

visibly struggled to keep up a semblance of pride, the pride they once as belonging to the world's greatest modern empire.

A great many older people had given up hope, their only goal was to fulfil the daily struggle of making ends meet for the survival of their families. The Russian people had already forgotten the euphoria and promise of their leaders Gorbachev, Yeltsin and even Putin, and to the older the Brezhnev era seemed like a long lost golden age when life had been worth living.

At the Night Flight a couple of blocks further along Tverskaya they made their way past another gang of tough looking security guards into the foyer where a couple of stunning girls were leaving their heavy coats at the cloakroom. Once inside and having adjusted his vision to the low lighting Fitznorman saw that the girls outnumber the men by at least five to one.

They were immediately targeted by a dozen eyes daring them to look back. Fitznorman had never before seen such a concentration of beautiful girls in one spot. The only disappointment was that they were probably all after his wallet.

'If you don't like it here we can go to a casino, the Karusel is just down the road.'

Fitznorman decided to risk the temptation and ordered drinks, pretending to keep his eyes off the girls, who on the contrary did everything to draw his attention. The waiter placed the drinks before them and slide the bill to Fitznorman who glancing at it nearly choked.

'Christ this is expensive.'

'If it were cheap we'd have the place full of rabble.'

That was evident.

'Welcome to the New Russia,' laughed Alexis.

'Are they expensive?' asked Fitznorman.

'It depends, if there's a lot of clients it can be expensive, a thousand for the night.'

Fitznorman took a slug of his drink.

“But when the demand is weak, like tonight, a couple of hundred will do.”

‘Most of them have good education and a few have day jobs, secretaries and the like. The problem is that life is incredibly expensive and to make ends meet they end up here.’

‘You’re right on one point, it’s the right place to make ends meet.’

A girl came over and spoke to Alexis in Russian, she obviously knew him.

‘Scott this is Marina, she works in the Natural History Museum, she has a degree in anthropology.’

Fitznorman half smiled, not willing to believe that an anthropologist could be found in such a place, wondering with the noise of the music if he had heard it right.

She sat down next to him and another girl appeared sitting next to Alexis.

‘Yes what Alexis said is true. I come here from time to time, maybe I’ll find a rich husband,’ she smiled looking directly at Fitznorman and waiting for his reaction.

He took a sip of his drink as her intoxicating perfume wafted over him.

‘Why don’t we go and have a drink at the Europa. It’s quieter there,’ said Alexis.

Fitznorman nodded and Alexis pulled out his mobile calling his driver to meet them at the Nightflight exit as Fitznorman settled the bill. He then stood up and Fitznorman followed him with Marina hanging onto his arm. The driver brought the car up in an instant, obviously trained to be ready, to wait all night or a just short moment.

In the car Fitznorman found himself between the two girls, the other whose name he had not caught. Ten minutes later they pulled up at the entrance of the Hotel Metropol.

They made their way to the bar and Alexis ordered Champagne. He told him the hotel had been built at the turn of the nineteenth-twentieth century by William Walcott, who was born in Russia, his

father English and mother Russian. Alexis told him it had been the scene of many historic events, Lenin had made speeches there from a balcony overlooking the Metropol Restaurant with its extraordinarily beautiful stained glass ceiling. It had also been the venue of the 1918-19 meetings of the Central Committee of the Russian Republic.

‘So called enemies of the people were shot in the cellar here,’ he told Fitznorman. ‘Cheers!’ Alexis lifted his glass in a toast to the two girls.

‘A lot of famous people stayed here but one of the strangest was Lee Harvey Oswald.’

‘The man who assassinated Kennedy?’

‘Yes, in 1959, he wanted to become a Soviet citizen...strange no?’

Outside the luxurious splendour of the Metropol life for every day Muscovites had become a grim struggle, only the television gave them momentary relief from the endless winter. Restaurants and theatres had become exorbitantly expensive, and the cultural activities that Soviet citizens had always taken for granted became fewer as budgets evaporated as prices rose beyond the reach of the average income. They somehow survived with an unhealthy diet of bread, potatoes and sausage washed down by tea and vodka.

Chapter 14

THE SUNDA SHELF

During the Pleistocene ice age, water froze and covered a large part of the northern hemisphere's landmass with ice and glaciers on a gigantic scale, which resulted in the level of the seas and oceans falling. At one hundred and twenty metres below today's sea level, the Sunda Shelf emerged to form a continuous land mass with what is now South East Asia, called Sundaland by geologists.

During this same period *Homo erectus* left Africa, advancing slowly, kilometre by kilometre, with each successive generation,

until he finally crossed into Sundaland and spread across the region into what is now Java about 1.9 million years ago.

Who was *Homo erectus*?

Paleoanthropologists seemed to agree that he had evolved from *Homo habilis* according to the evidence of the fossils found at Lake Turkana, in Kenya, which dated back two million years, and showed transitional characteristics between the two species.

Homo erectus walked in an upright position in much the same manner as modern man. However, the skull bore many primitive features, such as heavy brow ridges and other features. The bipedal gait had in fact been inherited from his ancestor and was not a newly acquired characteristic in hominids, which according to fossil evidence found in Kenya, went back six million years.

When the Dutch military doctor, Eugene Dubois, discovered in the 1890's, a fossil skull cap and the thigh bone of a hitherto unknown type of human at the site of Trinil in Java, he called it *Pithecanthropus erectus*, which meant upright ape-man. Today these fossils are considered by paleoanthropologists as part of a species baptised *erectus* and part of the genus *Homo*. The age of the fossils were then estimated to be around 750,000 years old.

However, many years later a new dating technique, called potassium argon, was used to carry out tests on rock samples from the strata in which the *erectus* fossils had been found, to the surprise of the scientific world the new method indicated a date of around 1,9 million years old. This clearly showed that *Homo erectus* had migrated out of Africa much earlier than thought, crossing Asia to Sundaland, more than 10,000 kilometres from his place of origin.

What had astonished scientists was that *Homo erectus* had appeared in Asia so early, as prior to this new dating he was not thought to have migrated from Africa until about one million years ago. In fact the new evidence showed that at the same moment *erectus* appeared in the fossil record in Africa, he was also present in Asia.

As the climate changed once more, and as the sea levels rose, *Homo erectus* became stranded, isolated on what was to become the

Island of Java, until the late Pleistocene, when the sea level dropped once again during the last glaciation, re-establishing the land links with the Asian mainland.

Erectus lived in the rain forest as a hunter-gatherer, using caves as shelters. Such caves were formed in a certain types of rock, usually limestone, marble, or gypsum. Erectus and his kind had little more effect on the ecosystems than any other forest animal, such as orangutans, with whom they competed, and perhaps diving them from the forest floor into the trees, since fossil evidence shows that the orangutan, a member of the family of great apes, was physically larger in the Pleistocene period with characteristics that were evidence of a more terrestrial past.

When Homo sapiens arrived across the newly established land bridge, 60,000 years ago, he certainly competed with Homo erectus for food and shared the same territory. As a consequence the small Homo erectus population suffered the same fate as did the Neanderthals who were driven to extinction when newcomers arrived, equipped with a more developed technology and culture.

Culture is the knowledge each generation passes on to the next, knowledge acquired by learning, that is to say all aspects of human adaptation, including technology, traditions, language and social roles.

Culture is what is learned and transmitted from one generation to the next by non-biological means.

Some paleoanthropologists believed that Homo erectus had not an advanced language capacity and his capacity for symbolic thought and thus his tool making ability was less developed than that of early Homo sapiens.

Language and tool making were non-instinctive cultural characteristics, learnt and transmitted from generation to generation, not fixed as are genes and culture, that is to say easily be lost or changed by outside factors. Culture can thus change very rapidly and is independent of biological change and genetic transmission.

Whilst cultural factors can provide a short term solution to outside change, genetic adaptation ensures long term survival. Though the

ecological changes due to volcanic activity, such as the gigantic explosion that created Lake Toba in Sumatra, would have had catastrophic effects on local climate and food resources, it was a short term event, on the other hand the climatic conditions in the forests of Borneo were extraordinarily stable, and as a consequence the survival of random genetic changes in a small population of early humans would have borne no specific advantage.

Climatic changes, in general, brought about a combination of cultural and biological changes in hominid populations. Culture taught given populations certain types of food were edible, enabling them to survive when other kinds of food becomes rarer as a result of climatic change, such as extreme cold or drought. In this way mutations that occurred in a group would be subject to selective forces over a number of generations and their eventual assimilation into a population could effect the survival of the group.

Such climatic changes occurred in different regions of the world, but most notably in Africa, where new forms of man emerged, obeying the harsh natural law governing the survival of the fittest. Climatic conditions therefore forced groups to seek new territories, resulting in competition between existing populations and newly arrived species, which resulted in the extinction of the less adaptable populations.

This was the case when *Homo sapiens* migrated out of Africa, bringing with them a competitive advantage when they encountered existing populations in new territories. The stem population of *Homo sapiens* was certainly very small, perhaps no more than a few hundred individuals, perhaps even less, but their competitive advantage was great and within 60,000 years or so, this new species of man conquered the world, pushing all other species of man into gradual extinction.

What was extraordinary was the existing populations of *Homo erectus*, more than a million men, women and children, became extinct, completely disappeared, from every corner of the earth, as *Homo sapiens* invested their newly conquered territories.

Homo erectus, an intelligent species, who had discovered fire, manufactured tools, and had survived for two million years of climatic change and without doubt epidemics of disease and unknown catastrophic natural events, simply disappeared off the face of the earth.

Whatever the reason, the newcomers from Africa replaced not only Homo erectus, but also Neanderthals and archaic Homo sapiens. The only question that remained and troubled many scientists was whether interbreeding had occurred between the different populations.

Could such conditions have produced relic populations of Homo erectus that survived until recent times in very remote and isolated regions? It was only normal and natural that they did.

Looking around the world there were many examples of such relic populations in other animal species, the Komodo Dragons of Indonesia, and on a larger scale the marsupials of Australia, unknown to naturalists until Cook reached the continent.

At the beginning of the twentieth first century, relic populations still existed, as man continued to impose his devastating conquest, penetrating into the very last distant refuges of the planet, exterminating the last remaining populations of non-human primates, namely lemurs, orangutans, bonobos, mountain gorillas...and so many other species as the anthropocene changed the face of nature with a man-made mass extinction.

Chapter 15

THE ZOOLOGICAL INSTITUTE

The dawn sky was grey and rain slanted down the windows of his compartment in the Krasnaya Strela. As the train advanced towards St Petersburg, at a stately seventy or eighty kilometres an hour, Fitznorman made out the form of endless forests, rough fields and rundown factories.

Heavy with sleep he urinated into an empty beer bottle in the swaying train. He did not want to venture into the corridor in the depth of night. For two reasons, the first he knew the toilet would be awash in foul smelling water, probably piss mingled with the odour of stale vodka and garlic, and secondly because he did not want to meet the kind of unsavoury character that were rumoured to ride at night on Russian trains, stories that gave the expatriate population in Russia their daily dose of horrors. He placed the beer bottle carefully on the floor and rolled back onto his couchette and dropped off into his pleasant sleep in the warmth of his first class compartment.

He had boarded the train at Leningradskiy Station in Moscow at 10.45 in the evening, after a long wait in the cavernous monumental railway station. The outside temperature had been minus 18°C and he was glad to be in the warmth of the somewhat overheated train.

Cold and hungry after the long wait in the station, he perked up when a smartly uniformed hostess presented herself at the door of his compartment holding a wicker tray covered with a red serviette on which was presented miniatures and small open sandwiches of salmon eggs.

What caught his attention were the miniatures in the form of small shiny aluminium flasks of Absolut Vodka. He took two Vodkas and two sandwiches paying the exorbitant price without flinching, in Russia if you wanted foreign quality you paid the price and that was that.

A few moments later another vendor appeared, he handed Fitznorman a meal pack, it was free, he then pointed to the beer in a crate. Fitznorman took two bottles and paid. He then had all that was needed and locked his compartment door, attaching to the lock the security device which the wagon babushka had given him.

The train left exactly on time slowly and smoothly. A few minutes later it reached the speed it would maintain throughout the night to Saint Petersburg, except for the occasional halt. It swayed gently and the clickety-clack of the wheels over the uneven rails signalled it was time to inspect his meal.

The train arrived in Saint Petersburg at seven thirty the next morning. He had been awakened by the slamming of the door of the next compartment. There would be a queue before the toilet, large men and women with tousled hair, clutch small towels in their hands, there was no point to hurry. He pulled open the cheap plastic curtain, careful not to dislodge the curtain rail from its fixing, it had already fallen on him twice the previous evening. Outside the thin daylight showed the sad and dreary landscape of the outlying suburbs of St Petersburg.

Another twenty minutes and he would arrive at the Moskovskiy Station, where he hoped the driver was waiting for him. Alexis Kutnetsov had arrived the previous day and had instructed his secretary, Ina, to lay on a car.

Fitznorman remembered, she was long on her legs but short in organisation. She wasn't exactly stupid, but rather scatty, making up for all her shortcomings whenever she bent over her desk in her extra short mini-skirt.

To his relief Fitznorman spotted the driver who dropped him off at the Nevsky Palace Hotel on Nevsky Prospect, a five minute ride from the station. He checked in showered and took breakfast in the hotel restaurant. Alexis had left a message that he would pick him up at ten.

The Zoological Institute of the Russian Academy of Sciences was situated on Vasilievsky Island, in a building on the corner of the Birzhevaya Square and Universitetskaya Embankment of the Neva River.

Everybody in St Petersburg knew the building, it was the home to the city's Zoological Museum and part of the Zoological Institute, one of its oldest scientific institutions, one hundred and eighty years old, though its history began much earlier, at time of Peter the Great.

The first museum catalogue, produced in 1742, listed almost four-thousand mammals, birds, amphibians, fishes, insects and invertebrates, conserved in the collections of the Kunstkammer.

Valentina Petrova was head of Physical anthropology. She was a handsome, dark haired woman of about forty. She had worked in at prehistoric sites in Central Asia at the time of the Soviet Union.

‘One of our ex-comrades here,’ Alexis announced, ‘discovered a fossilised jawbone in 1968.’

‘It has since been dated to around 350,000 to 400,000 years old,’ said Valentina Petrova, ‘we think it was a female of about eighteen years old.’

‘This jawbone was found in the Azikh Caves in Azerbaijan. At the time your palaeontologist, Professor Lundy, said that the Azikh jawbone was the fourth oldest human relic ever to be found in history, an important event for the glory of the Soviet system, *n’est-ce pas!*’

‘At that time we had little contact with the scientific world outside of the Soviet Union, travel was almost impossible though strangely enough we had good contacts with Lundy who was a young man in those days, before my time,’ laughed Valentina.

‘Today we believed these caves were inhabited as early as one million years ago. There’s an accumulation of fourteen meters of deposits. One of our discoveries contained Pebble Culture tools, comparable that in the Olduvai Gorge in Tanzania. Mammadali Murad Oglu Huseynov, a Soviet archaeologist, discovered the fragment of a lower jaw which was identified as a female *Homo heidelbergensis* pre-Neanderthal, in the sixties, in Azerbaijan.

‘Can we visit the site?’

‘I’m sorry to say that today it’s impossible to visit the site, I’ve spoken with the Department of Archaeology at Baku State University. But the problem is the Azikh cave is located not far from the Iranian border occupied since 1993 by the Armenians.’

‘Is there anything else interesting we could visit?’

‘Maybe. As you know there is Dmanisi in Georgia and we have maintained good relations with the Georgian Academy of Sciences.’

Valentina described the site at Dmanisi, eighty odd kilometres to the southwest of the Georgian capital of Tbilisi, in the Mashavera

River Valley. Dmanisi was once an important city where the caravan routes to Byzantium from Armenia and Persia converged.

Alexis looked at his watch it was almost one, he invited Valentina to lunch at the Europa which was a couple of blocks away across the Nevsky Prospect which he had told Fitznorman had a special buffet.

‘So let us help ourselves to the caviar at the buffet, to say it’s not really good is an understatement, but what can we expect for fifty dollars,’ he said laughing. ‘It’s an historical experience!’

‘You may be interested to know a little history of this magnificent hotel.’

‘Sure,’ Fitznorman said looking at the beautiful stained glass.

‘Originally it was three buildings constructed around 1825. They were later joined together with a common façade and transformed into the Grand Hotel Europa in 1875.’

‘So it wasn’t built as a hotel from the start?’

‘No.’

‘What happened with the revolution?’

‘After the Bolshevik revolution it was transformed into an orphanage before becoming a hotel once again and in WWII it was a hospital.’

‘Strange how things change.’

‘Yes indeed, under the Soviets it was rebuilt as a hotel, that was after the war but soon became very dilapidated. Fortunately for us it was bought by the Swedes and renovated.’

‘Was it used by the revolutionaries?’

‘Lenin used the Astoria, its now owned by Rocco Forte Hotels, to my mind a dreary hotel especially its restaurant, what can you expect from the British!’ he laughed loudly.

The Sunday brunch was the culminating point of the week in the gastronomic pleasures offered by the Europa and its Austrian chef. The splendid restaurant was filled with well heeled tourists, doctors from provincial France, businessmen from Paris and prosperous

small business people from Spain and Italy. The pleasure on their self-satisfied round rosy faces, could have well figured on a Brugel, as they tucked in like gluttons, attacking the caviar, the smoke sturgeon and marinated salmon accompanied by vodka and champanski to their hearts content.

‘So tell me a little more about the history of Dmanisi,’ said Fitznorman.

‘Well it started back in 1936 when excavations first started, that of course stopped during the Patriotic War. Then in the sixties we started again.’

‘Nothing to do with anthropology, it was medieval archaeological work,’ said Alexis.

‘In the early eighties they found animal bones that were identified as the teeth of an extinct species of rhinoceros that was typical of early Early Pleistocene fauna. Then a little later the first stone tools were discovered.’

‘Then Georgia became independent,’ said Alexis throwing up his arms in a demonstration of Russia’s bad luck.

‘Yes, it was in the last year of the Soviet Union’s existence when the first bones were found. A human mandible and other bones were discovered dated to 1.7 million years ago, then in 1999 two human skulls.’

‘Extraordinary,’ said Fitznorman.

‘Yes this meant the presence of early men to the West of the Eurasian continent,’ said Valentina, ‘and their size and morphology indicated that they were close to archaic Homo erectus and Homo erectus ergaster, until now never been found outside of East Africa.’

‘The stone tools found with the two skulls are early Pebble Culture type found in Africa dating back to 2.4 million years ago, meaning that migration out of Africa was earlier than supposed.’

‘Could it be possible that erectus developed in some other region such as East Asia and then migrated back to Africa?’

‘Who knows!’

Chapter 16

SARAWAK

The Sarawak Museum had one of the finest ethnological collections in Borneo dedicated to the native ethnic groups found in Sarawak and its neighbouring regions.

The population counted a total of twenty seven ethnic groups, including the native peoples of Borneo, Malays and ethnic Chinese. The Ibans were part of a group known to anthropologists and historians as Proto-Malays, or for Malaysia, Bumiputras, ‘sons of the soil’, whose ancestors had migrated from Yunnan in China about 2500BC, they formed the largest ethnic group with about thirty percent of the state’s total population. Until the middle of the twentieth they had always led a semi-nomadic life and were famous for being former head-hunters. Many of the Ibans lived in the Batang Lupar River Basin.

Those who lived upriver, called the Orang Ulu, in reality consisted of many different tribal groups, including the Kayahs, Kenyahs, Kelabits and Penans.

The Penans lived deep in the forests of the mountainous regions that straddled the border between Sarawak and Kalimantan. Their way of life had remained unchanged for thousands of years. They hunted with blow pipes and darts, tipped with a deadly poison made from the sap of the Ipoh tree. At the end of the twentieth century very few Penans were nomadic as the grandfathers had been.

Evidence shows that modern *Homo sapiens* first entered into what is now Borneo some forty thousand years ago, during the Pleistocene era, when the level of the sea was considerably lower than today.

In the millenniums that followed, others arrived overland, whenever the conditions permitted, and by sea, island hopping, when the Borneo was again separated from the mainland. Then new peoples came from the Asian mainland about seven thousand years ago, when navigation in outrigger canoes was invented. Those

peoples came down from what is now Malaysia, they were forest dwellers, living in, or on the edge of, the tropical forests that had covered the region for millions of years.

They were territorial hunter-gatherers, whose domain was delimited by language and by ethnicity, living in family related clans in nearby and overlapping territories, who did not develop an evolved tribal structure until very much more recent times. These clans defended their territories against intruders and they themselves would have been at grave risk if they strayed into the territory of a clan not closely related to their own family.

Family clans lived off territories that could provide them with the game and edible plants needed to support their numbers. When food and game were plentiful they lived in harmony with their neighbours, but when food became scarce, competition increased leading to conflict with other groups. The nomadic hunter-gatherers limited their territory to a region they knew with its recognisable landmarks, rocks, vegetation, large trees, rivers and swamps. The knowledge of their territory ensured the success of the hunt and a regular supply of food.

As the geographical distance between clans increased, the fewer were the ties of kinship as dialects evolved, changing with the distance, until they reached a point when they became mutually incomprehensible. The natural barriers that separated related groups from other populations, such as mountains and broad rivers, led to the development of widely different languages, as can be still seen in Papua New Guinea.

The life of hunter-gatherers remained unchanged for millennium, until the arrival of early traders from China and India, who sailed along the coast of Borneo in the seventh century, seeking new sources of exotic goods. Their arrival caused little or no change to the lives of most of the tribes that lived inland from the coast.

Those who lived in deep, dark, forests that covered the entire surface of Borneo, continued their nomadic way of life amongst the many different creatures and plants, some of which were unique – orangutans, proboscis monkeys, giant monitor lizards, tiny mouse

deer, forest elephants, rhinoceros and tigers, giant trees and flowers...and another species of man.

When Europeans finally discovered Borneo, in the thirteenth century, small coastal towns were already well established, but the interior remained hidden by a heavy veil of mystery. Few outsiders dared venture into such dark and menacing forests. Exotic goods were carried down the myriads of rivers by the natives in pirogues to the coast, where they were exchanged against metals and earthenware pottery.

As the traders, Arabs, Indians and Chinese, slowly established upriver stations, tribal peoples were attracted to the settlements and built their longhouses nearby the trading posts, creating villages. Gradually exchange between the coast and the interior grew, as the people of the interior ventured beyond their traditional boundaries, discovering new routes to the coast, through the forest and along rivers.

It is just possible that when foreign traders first appeared on the shore of Borneo, the last remaining members of *Homo erectus* were pushed from their ultimate refuge, hunted and exterminated by men who saw them as little more than another kind of orangutan, forest men.

Pierre Rossard expounded his now realistic theories to the French Ambassador in Jakarta at their bunker-like Embassy on Jalan Thamrin. Dominique de Favitski, the ambassador, one of the typically arrogant cocks that seemed omnipresent in the French diplomatic corps, strutting about the local stage puffed up by his own importance, affronted by the idea that a few insignificant – in his view – scientists had stolen his prerogative concerning relations between Paris and Jakarta.

The evidence that *Homo erectus* did indeed live until relatively recent historical times would be sensational news to the scientific community was lost on the ambassador.

‘You see the age of the fossils here in Java, indicate that Homo erectus lived perhaps as little as twenty seven thousand years ago,’ Pierre explained.

‘What are you getting at?’ asked the Embassy’s scientific attaché.

‘I mean that he could have continued to survive much longer, the bones found were almost certainly not those of the last remaining representative of his species, were they now?’ Pierre said with a condescending smile.

‘You mean the creature whose bones you turned up?’

‘No, not our deceased friend. Here!’

‘In Java then?’ questioned Favitski.

‘I see,’ the attaché replied confused.

Pierre saw the scientific attaché as a career diplomat who knew nothing of anthropology and a lackey of the insufferable de Favitski.

‘Yes, those in Java. If you were to look at all the fossil humanoid bones discovered in the world to this day, those on which we expound our wonderful theories, then they are really incredibly few. I guess there are probably about a thousand at the most, which date previous to Late Palaeolithic, the older ones could be put into an average sized cardboard packing case,’ he said stretching his hands in demonstration.

‘Okay.’

‘Don’t be impatient *cher ami*, I getting there, be it slowly!’ Pierre said smiling at the attaché’s impatience.

‘Let me explain. On this earth live some seven billion human beings, and in all the history of the so-called human race about one hundred billion have existed, including the seven or eight billion that living today! Surprising *n’est pas*? At the time of the Roman Empire the population of the world has been estimated at around a couple of hundred million. If we look at the period prior to the beginning of written human history, say seven thousand years before the present, then perhaps the population of the world was no more than ten million and up to the invention of agriculture about ten thousand years ago it was as little as one million!’

‘I follow,’ said the attaché.

‘That’s dam few!’ said the ambassador surprised for once by his own ignorance.

‘Indeed, so if each generation is calculated generously at twenty years, then, from the invention of agriculture, five hundred generations existed until the beginning of human civilisation, and not more than two generations lived at any one time, barring exceptions... old people were unknown. So our one million humans represented two generations each having half a million persons. This population remained remarkably constant until the appearance of agriculture. Well fifty generations at half a million per generation, let me see, that makes twenty five million, then if we go back to two million years before the present, that makes one hundred thousand generations,’ he said, pleased with his little presentation.

‘If I get you, that means that only one hundred million hominids had lived on earth up until the beginning of civilisation,’ said the attaché. ‘That means your one thousands fossils represent only one individual for every one hundred thousand men that lived.’

‘So you see what I’m getting at?’

‘Hmm...,’ muttered de Favitski looking at his watch and a little lost. The ambassador finally realised that he had to play this game carefully, if these grubby little scientists were right, then he would have a leading role to play, presenting France as a leader in a very mediatised scientific field, with public announcements and TV presentations, especially since Indonesia had become the focus of world news with current political crisis.

It nevertheless irked him that Fitznorman, a subject of Her Britannic Majesty, an ancestral enemy, was involved, but when the new Indonesian government arrived, as it surely would, given then turn of events, whoever they were, they would certainly use any sensational scientific discovery to distract the country’s attention from the economic and political turmoil that had overtaken them, and that would be where he, the Ambassador of France, would step in, introducing his government as a valuable cultural and scientific partner.

‘What I’m saying is that our fossils cannot possibly represent the last of that race, can they now?’

‘No.’

Pierre offered himself a satisfied smile.

‘I see the point,’ said the ambassador, ‘the fossils are very, very, isolated representatives of a population that existed over a very long period of time!’

‘Exactly, one of the most important questions that we have not seriously addressed is the disappearance of our ancestors and this discovery could throw light on the subject. We talk of evolution, mutations and a multitude of other theories, but there are other vital questions.

‘After all if we consider it for a moment, relatively few populations have actually disappeared in historic times. Take the Indians of North America, the Aztecs or Mayas of Mexico, the Incas of Peru, the Aborigines of Australia, or the Inuits of the Arctic the list is long. They were murdered, their civilisations destroyed, but the peoples lived on.’

The ambassador became alert, that sounded like politics, a subject that was not to be meddled with by scientists, especially with the troubles on the streets just a few blocks from the embassy buildings.

‘So what happened to *Homo erectus*, were his genes incompatible?’

‘That’s not so sure. There were other closely related populations of man, very closely related. Their genes were perhaps not totally different, or incompatible. But the different populations could have evolved at different rates, given the isolation of individual groups. The changes would have been in isolated pockets and backwaters, leaving these groups unchanged until incompatibility developed.’

‘What happened to these isolated pockets then?’

‘Well I imagine that as new populations moved in, the older ones were assimilated into the general gene pool, or they were slowly exterminated, as probably happened in North Borneo, when a very small and long isolated population was confronted with new comers

equipped with a superior technology. Perhaps some were integrated, who knows?’

‘Do you think that there was cross-breeding between the different populations?’

‘Maybe, I don’t know, it would require long genetic investigation to find variations. That may have now changed, the information from the DNA we have extracted will tell us.’

‘But do you think they could interbreed?’

‘As I said, long isolated populations probably developed a degree of difference that made that difficult, but the fact of the matter is that we don’t know. What we do know is that in other species of large mammals there is cross-breeding between closely related members of the same species, even if the offspring is not always fertile. For example between horses and donkeys, and between lions and tigers. Why should it be different between very closely related kinds of man?’

‘So they interbreed, or were wiped out by superior beings.’

‘In short, yes.’

‘What about Sangarin man?’ asked the attaché, trying to impress with his knowledge.

‘The same thing applies. He interbred with contiguous populations, who had interbred with other such populations on the fringe of their territory and so forth. It sounds simplistic, but there you are.’

‘This all took place over an unimaginably long period of time. When you think we don’t even know with any precision what happened just a few hundred years ago, think of the Dark Ages in Europe, or the little we know of daily life at the time of the Romans, remember we discovered Pompeii by pure chance.

‘Those early people migrated slowly, they did not have boats, or horses. They moved by foot, a few kilometres each generation. After a couple of hundred generations or so – not much you may say, but in time that represents more than all civilised history, think about that for a moment – they had travelled thousands of kilometres. All that

would have been over uninhabited virgin territory, otherwise they would have been opposed by existing populations. By populations I mean groups living in regions where food was plentiful enough to support family groups.'

'Do you think they protected their territories?'

'There is no evidence from the distant past. But as I have explained man is a territorial animal and we do know from our history of the last six or seven thousand years, there is overwhelming evidence that as such, he is in the habit of rejecting strangers. Even in modern times, the confrontation of existing populations with new arrivals has always resulted in considerable bloodshed.'

'Yes, I see what you mean, even in the Neolithic societies of Irian Jaya there is undeniable evidence of warfare and territoriality,' said de Favitski standing up to indicate that the meeting was over. 'We will do everything necessary to assist the expedition with its work, do however keep us informed as your security is my responsibility.'

Chapter 17

BORNEO & HEIRLOOMS

The most agreeable aspect of Fitznorman's business was exploring the towns and villages of the countries of South East Asia, in search of tribal art and heirlooms, such as Martaban jars and ceramics, valued objects that had been passed down by families over generations, called 'pusak' in Malay. Stone ware and ceramics had been imported over the centuries from the kilns of China, Vietnam, Burma and Thailand. In later times Chinese immigrants set up their own kilns on the north coast of Borneo, producing stoneware vessels for two centuries, copies, originals and fakes, for the indifferent, inexperienced...on occasions expert...and foreign collectors, in search of antiques.

The Chinese had exported their wares in the form of ceramics and stoneware jars from the ninth century in exchange for scented woods,

bee's wax, feathers, edible bird's nests, rattan and ebony. Gold was also bartered by the natives and in 1810, a gold rush brought Chinese prospectors by their hundreds to the regions of Sambas and Montado near to Pontianak.

The jars were used by the tribal peoples to store rice, oil and almost everything else, including the bones of their dead ancestors. The jars had great value as heirlooms and were sold for high prices. Rare were the jars found outside of state museums or private collections, it required a specialised collector like Scott Fitznorman, travelling to distant villages and longhouses to hunt down those treasures that remained in the hands of the local peoples. Even when the hunt was successful a license was required to export valuable heirlooms from the country.

The population of Borneo had expanded very rapidly in modern times. In 1850, the town Bandjermasin, in South Kalimantan, one of the largest cities in Borneo, counted around 30,000 inhabitants. In the early 19th century, the present Sarawak State capital, Kuching, counted one hundred Malay and three Chinese households. At that time the population of the whole island probably did not exceed 250,000 persons, mostly living in coastal towns, or not very far up the huge rivers that drained the island of its heavy equatorial rains that could reach the equivalent of twelve metres per year in certain places, almost ten times more than that in most of Europe.

The only form of transport into the interior until the mid-twentieth century was by river, the easiest form of communication with the inland villages, roads were almost non-existent beyond the limits of the main towns.

It was the logging companies that cut the unsurfaced first roads into the interior, which were abandoned soon after felling the giant hardwoods for their valuable timber. The roads were mere logging tracks, viable in the dry season and impassable quagmires once the rains started. Within a few years the swaths cut into the rainforest forest slowly returned to nature, soon overgrown by secondary forest.

Apart from a few nineteenth century European adventurers, the interior of the country remained virtually unexplored until the

Japanese invasion in 1941, even then few people penetrated into its dense jungles. It is said that the British Army paid the local tribes people 'ten bob a nob' for Japanese heads, whilst local comics suggested that Japanese probably offered 'a Yen for ten' for Brit heads.

As a consequence of their isolation, the villagers of Borneo had little exchange with the outside world and treasured their stoneware jars, ancient arms and textiles. As the country modernised, curio and antique dealers started to barter for these heirlooms, in exchange for outboard motors, radios, chain saws and all the accoutrements of modern society. The local people parted with heirlooms that had been in their families for generations without giving them a second thought, as simple storage vessels, which could be easily replaced by oil drums, plastic buckets or jerry cans.

Fitznorman had discovered Borneo a couple of decades before recognising a profitable source of ancient heirlooms and ethnic art at remarkably low prices. At that time there was little control for the export of such items and even though there was very little collector interest in them he sensed the potential, as long distance air travel was democratised and travellers discovered those once distant and inaccessible lands.

His foresight in building up a market in Indonesian antiques coincided with the opening up of the Peoples Republic of China, and a vast new source of Chinese antiquities. His imports from those countries – up until then closed or too distant for most European dealers – at very advantageous prices had been the main contributing factor to the success of his gallery and its subsequent expansion.

As the economies of East and South East Asia prospered, their nouveaux riches discovered their own cultural heritage, and this coupled with Western business traveller's new found enthusiasm for those countries and their culture, pushed the price of Indonesian and Chinese antiques to new summits. The economic boom also brought prosperity to Fitznorman, who thanked his good fortune for having discerned early on the interest of new collectors for a broader spectrum of antique Asian art.

His business brought him into contact not only with art dealers, collectors, Museums, crooks, swindlers and smugglers of South East Asia, but also the isolated villages and longhouses of the region.

Now, the thought that strange skulls could be hanging in isolated longhouses waiting to be discovered nagged him. Pierre Rossard had told him of the skulls that had been found in other caves, such as the Niah Caves near Bintulu, in the north-east of Sarawak. There, in 1958, a skull had been found beneath charcoal deposits, which were dated to about 40,000BC. It was associated with the remains of fires and Palaeolithic stone tools. The skull was that of a *Homo sapiens*, and did not correspond with the emigration to Borneo of modern man in historic times. Perhaps its owner had been a contemporary of *Homo erectus* who had lived for hundreds of thousands of years in Asia.

‘What is interesting about the Niah Caves is the fact that the fossils there were associated with a substantial amount of archaeological evidence.’

‘Not like in the case of *borneensis*!’

‘Exactly! You know the difference between *Homo borneensis* and the Niah man?’ asked Lundy

‘No, tell me,’ Scott replied admitting his ignorance.

‘The archaeological context of our *Homo borneensis* is non-existent, at least up to this point, which makes our task very difficult. What we have to do is make some new finds.’

‘I see.’

‘It would certainly sow a lot of confusion in the world of anthropology. For one thing it would give a certain credence to the idea that one population was replaced by another.’

‘You mean the Out of Africa theory?’

‘Well if you’re saying modern man migrated from Africa slowly replacing all he found on his path, I suppose the answer is yes!’

‘Mmm....’

‘On the other hand our *Homo borneensis* could give some support to those who believe in the Polycentric origin of modern mankind, for example Pei, the renowned Chinese palaeoanthropologist, is a

strong supporter of this theory, though in my opinion for ideological reasons.'

'There sometimes seems to be as many theories as there are anthropologists!' Fitznorman laughed.

'Unfortunately. By the way I've been thinking about new finds. I know it's an out of the way suggestion, perhaps not very scientific, but heads are a thought.'

'Heads!'

'Yes, if for example our friend was still around five hundred years ago, then as history repeats itself there must have been some – how can I say it...' he struggled to get his phrase out, 'Ethnic cleansing.'

'You mean borneensis was wiped out by the Ibans, or something like that.'

'Right. Now what I'm getting to is this, our skull is, let us say, two thousand years old, it is extremely unlikely that he was the last of his race – I mean it is highly improbable that I stumbled on the very last member of the species *Homo erectus*. There were others in the forest. They probably continued to survive for quite a time. So our Iban friends must have hunted them.'

'And took their heads.'

'And ate them?'

'It's possible that borneensis was being hunted when he fell into the cave.'

'Yes. So if they took their heads as trophies, then perhaps one or two of those skulls are still decorating some longhouse, or gathering dust in the storeroom of a museum?' Fitznorman said hopefully remembering the skulls he had seen in the Sarawak Museum, suspended in rattan baskets from the rafters of the reconstructed longhouses, and then there were the photographs.

The possibility that a skull was waiting to be discovered in a museum, in a collection, or even photographed hanging from a rafter in a longhouse, unleashed a feeling urgency in his mind. He wondered whether skulls were still collected for museums, as they had been in the past. It seemed to him that whilst some museums had

tended to become more scientific and educative, others catered to visitors seeking fashionable “Jurassic Park” style exhibits, not old fashioned collections of skulls reminiscent of funfair curiosities that had fallen from fashion.

‘If you have the chance Scott, why don’t you check out with you’re friends in tribal arts. They could quickly tell if there is a business in old skulls,’ Lundy laughed, amused at the idea.

The first thought that entered his mind was to revisit the Sarawak Museum, but the idea of a meeting his old friend Nordin, or a run-in with the authorities, quickly scotched that idea. Though sooner or later they would know, a full scale expedition of nearly one hundred people appearing at an isolated frontier longhouse was not something that could be kept quiet, even if it was disguised as part of a research programme.

The search by officials at Singapore Airport was a clear indication that he was suspected of some kind of trafficking. Fitznorman decided to talk with Riki Adyatman, an Indonesian diplomat close to the presidential family, and owner of an astonishingly rich collection of Chinese ceramics and stoneware. Riki had suggested that Fitznorman should indeed call his friend Dr Nordin of the Department of Anthropological Studies at the Sarawak Museum. He told Fitznorman that he should act as if there was nothing to hide, the Asian method was to talk and compromise, negotiation could solve everything, and in as a last resort he mentioned his excellent relations with the Malaysian Minister of Information, which could be useful in the event that any serious problem arose.

The cross border traffic into Sarawak of timber from illegal logging in that precise area had increased since the beginning of the crisis with the complicity of the local Malaysian authorities. The menace of a clamp down at the border crossing by the Indonesian authorities would put a halt to the lucrative business and could be used as a bargaining card in the case of any threats to their research work. Fitznorman was not totally convinced by idea, nevertheless he decided to follow Riki’s advice.

Dr Nordin was an elderly and highly respected anthropologist, who had long specialised in the study of the indigenous populations of Borneo and their customs. He had helped Fitznorman over the years to develop his knowledge on the origins and meaning of tribal art, helping him to acquire export licenses for objects that could not be bought by the museum, in the knowledge that they would be saved for posterity, even if it was in a foreign collection. In any case it was physically impossible to house all the artefacts from the region in the national and state museums, which with their limited funding could to buy everything.

The official arrangement was that the national museums had the right of first refusal, and in the case they declined to exercise their prerogative, the items could be exported to foreign museums, or recognised collections. A system of traceability was maintained by the national museum authorities, including photographic records, catalogues and databases to keep track of all exported items. Those items of lesser quality could be sold to individual purchasers by licensed dealers though records of sales and descriptions were recorded.

Fitznorman, from in his room at the Borobudur Hotel in Jakarta, called Nordin. He proposed a meeting in Singapore, using his tight schedule as an excuse to avoid a detour to Kuching, and as an enticement dangled a fully paid official invitation to the exhibition, Asian Tribal Art, planned by the Musée Guimet in Paris, an event organised by the French Ministry of Culture.

Nordin agreed, perhaps a little too willingly, thought Fitznorman as he put the phone down. The Malaysian had business in Kuala Lumpur at the beginning of the following week and a stop over in Singapore could be fit in.

They met in the bar of the Hilton on Orchard Road in Singapore. Fitznorman booked a table at the hotel's restaurant, he knew Nordin's taste, unusually for an Asian, as he enjoyed western cuisine, and there was no point of uselessly tiring him, considering his age, by dragging him across Singapore in the heavy traffic to some

fashionable restaurant when the food at the Hilton's Harbour Grill and Oyster Bar was first class.

At once he saw the wily Nordin wanted to get down to the real object of their meeting and he quickly dispatched his affirmative reply on the question of his museum's participation at Asian Tribal Art.

'So Scott it looks like you're busy flying backwards and forwards to Asia with Professor Lundy?' he said with a twinkle in his eye.

'You're well informed Doctor.'

'I have my sources of information,' he said nonchalantly.

'Yes, it's true, Lundy has a programme with the Indonesians to study forest biology and primate habitat.'

'Rather sudden?'

'No, not really,' answered Fitznorman trying to sound casual, 'The Museum of Natural History in Paris has been studying orangutan habitat for some time now. It's true Lundy's interest is fairly recent, it's a co-operation between the two museums and the National Centre of Scientific Research, part of a programme on evolutionary primatology in Asia.'

'I meant you! What's your sudden interest in primatology and forest biology, Scott...as a fine art dealer?'

Checkmate! Fitznorman thought to himself, clever old bastard, let's test him.

'Why do you think I'm interested?'

'I don't know, but there's a rumour going around that you've found a treasure trove.'

'A pirate's treasure?' said Fitznorman raising his eyebrows.

'Really Scott, I don't know. But there are some officials who are unhappy, they've got the local politicians and police worked up.'

'So I'm a wanted man?'

'No, don't be silly. Look, why don't you tell me if you have found something?'

‘Doctor, I did find something...it’s not a treasure trove in the normal sense.’ He paused in deep reflection, ‘Look Doctor, can you give me your word that what I tell you remains between us. I need your help.’

‘Scott, I’m an old man, you’ve known me for many years. If it’s in the interest of science you can count on me. If, which I cannot believe would be the case, it’s something illegal, then I would not be part of it.’

‘Okay, it’s nothing illegal,’ Fitznorman said hesitatingly, ‘it’s something of great interest to science. What I found, is according to our information, on Indonesian territory.’

Fitznorman told him the complete story. Nordin was stunned, he had stopped eating, trying to absorb the significance.

‘This is truly astounding, if it’s true then I am happy to have lived to witness such a discovery. Is Lundy sure?’

‘Yes, he is.’

‘How can I help then?’

‘First I would like to come to Kuching, then you will have to finish with this story of treasure trove. I don’t want police on my back. Then we have to start head hunting!’

‘Excellent, I’ll attend to that as soon as I am back tomorrow. How do you suggest I explain the mystery?’

‘I don’t know, but perhaps you can tell them I found some old bones, orangutan bones, probably left by illegal poachers, that’ll keep them quiet.’

Fitznorman was right. The authorities did not want any bad press linked to illegal activities in the national park, which did indeed exist, especially with loggers who transported poached Indonesia timber across the border into Sarawak. There was also the poaching of wild life, supplying a growing demand for wild animal bones and parts for Chinese medicine, luring poachers with high prices, most of whom were Ibans and some park officials, though the risks were high with heavy fines and imprisonment.

‘So how is the antiques business Scott?’

Chapter 18

WITH THE PENANS

‘The positioning of the base camp is essential for the success of our work, but what is more important is that our project is of the utmost secrecy. Security is the key word,’ Pierre Rossard told them. ‘We mustn’t forget our mission is described as a forest ecology survey, you know botanists, biologists and all that. How long we can keep the lid on the secret with so many people involved is another matter, but once we’ve set up camp, we’ll set a tight clamp on information.’

‘That sounds fine to me as long as we are on the Indonesian side,’ said Aris.

‘That’s clear.’

They looked at the map that Aris had unfolded. ‘Look, here on the Indonesian side, to the east of the Pegunung and Kapuas Hilir watershed, there’s a village called Semitau, we can reach it by taking the road up from Sintang, that’s 450 kilometres from Pontianak with daily flight connections,’ Aris said pointing to the town on the map of Borneo.

‘Good,’ Fitznorman replied as he peered closer to the map, putting his finger on a small red symbol in the form of a plane, indicating a small airport next to Semitang.

‘But it’s still a long way from the site?’

‘Well, there’s a rough road that goes all the way to a village called Nangabadau, just near the border, a long rough ride. It’s better if we go by boat, up through the lakes to a village called Lubukkaro, about thirty kilometres, a couple of hours. We could use it as our base. My man tells me there’s a longhouse further upstream, just on our side of the border, a couple of kilometres to the south of the cave according to our GPS reading. It takes about three hours from Semitau, the other alternative is by road, unfortunately it’s very dangerous with

logging trucks, especially in the rain, almost impracticable for light vehicles in places.'

'It's not far from the Trans-Borneo railway project trace, but that's years away,' he said laughing, 'next to the Lanjak Entimau Reserve in Sarawak. There's also a huge logging industry in the region, most of it illegal.'

'Can't they stop it?'

'No, but in any case it won't continue for much longer, for the simple reason they'll run out of trees to fell!'

'What about the local people?'

'You'll see for yourself when we get there!' Aris replied. 'You'll also get a glance at how your prehistoric men lived when you meet the Penans!'

Before large scale logging began, a large part of Borneo had been the home to many Dayak tribes, who depended on the forest for their daily needs, some more than others, especially the Penan, a small family of nomadic people that lived in primitive harmony with the forest.

Ancient traditions and consensus between the different Penan tribes had fixed areas of sustainable forest over the course of countless generations, providing the forest dwellers with all their daily needs. Then when modern government set up forest concessions, selling them to the highest bidders for the extraction of tropical hardwoods. Millions of hectares of forest – much of it Penan homeland, disappeared under the chain saw and was ripped up by bulldozers.

The logging companies were not in the least bit interested in the Penan, their traditions of sustainable forest, or their ancient customs.

The Penan, hunter-gatherers, had highly developed hunting skills and a vast knowledge of medicinal and edible plants, totally unknown to so-called civilised cultures. Their every need was supplied by the forest.

The loggers drove them from their ancient territories, forcing them to live in longhouses, or worse the dismal shacks in shanty towns that had sprung up on the edges of Borneo's towns and villages.

In spite of their willingness to cooperate with the logging companies and oil palm planters, creating reserves where the natural forest would be preserved, their interests were brushed aside and their forest lands devastated for the greater good of corrupt government officials in Jakarta, and the profits of foreign logging companies, the headquarters of which were in Singapore, Taipei, Seoul or Tokyo, and whose products were sold to consumers in Europe and the US.

They sat on the rattan mat under the flicker of the oil lamps as they listened a wrinkled elder recount the tragedy of his people.

‘Before, we were like the creatures of the forest going wherever we chose. We built our home wherever we wanted, when we wanted to move we moved, it was our way and had always been. We looked for a place that pleased us, where we would be happy, where there was plenty of game and sago palms, near the river with good water.

‘My father taught me to hunt using a bamboo blowpipe. First bats, using darts without poison, just one prick of poison and you would die. Then I hunted squirrels and monkeys, high in the trees, after deer and wild pigs, some were big, so big they were impossible to carry alone. Even if a child went hunting he would come back with meat, food was everywhere. Today we live in a longhouse and have to plant food before we can eat.

‘When I was a child the sound of the hornbill and other birds filled the forest, the monkeys and insects, the rain falling on the leaves. The sound of the forest was the sound of our home where our forefathers had listened to the very same sounds,’ the guide said translating the old Tuay's words.

‘Once, long ago, when I was a boy we were happy,’ he paused to sip from his small glass of tuak rice wine. ‘Today life has changed, the sound of the forest is drowned by the noise of chainsaws and

bulldozers. We ask ourselves about our future, that of our children, where will they live? How will they live? In the dirt of the villages? For us the sound of the chainsaw is the chatter of death.'

There was a long silence and as stared into the fire and waited for the old man to continue.

'My people weep as they see our home destroyed by strangers, transforming life into dead red earth.'

Fitznorman was invaded by a deep sense of guilt as a foreigner, a European, a member of the consumer society that had closed its eyes to the fate of the peoples of the forest.

'Strangers came onto our land without even a word to us, using our forest paths, muddying our rivers and streams, devastating our home and land, stealing our rattan, destroying our fruit trees.'

It was the role of the elders to protect their family from enemies, spirits and individuals of evil intent, the old man's helplessness verged on despair.

'The forest is the home of our ancestors, our home, our longhouse. We have always lived here, we have never known anything different. My father was born here and his father and father's father before him was born in our beloved forest, where they hunted wild pig, hunted birds, and hunted deer. Our forest overflowed with food, it was our treasure house, our happiness.'

Chapter 19

PONTIANAK TO PUTISSIBAU

They left Pontianak in the early morning haze, the sun hung suspended like a white disc in the sky as they took the road to the north towards Mempawah, then Sanggau that lay a further two hundred kilometres to the east. The road to Sanggau, the first large town in the interior, was good and they arrived in the early afternoon stopping to eat a quick lunch.

Their goal was to find the best route to Lanjak, a small town that lay near the border with Sarawak, not far from the spot where the skull had been discovered.

There were three different possibilities, each depended on the season and weather conditions. They had little doubt that their final decision would be a combination of the different routes depending on the size of the expedition and the equipment that had to be transported to the site and its logistics base.

After nearly four hundred kilometres they arrived in Sintang, a town of twenty thousand, at the junction of the Kapuas and Melawi rivers, the gateway to the interior and the last big town, overshadowed by a gigantic stone outcropping, Mount Kelam, which loomed out of the forest, standing nine hundred meters high.

Up to that point the road had been fairly good presenting no particular difficulties, but the next morning the topography changed, the road undulated as they approached the foothills of the Schwaner Range with the 1,758m Mt Saran, and the Muller Range with the 1,556m Mt Beturan lying ahead and flanked by dense rainforests.

The road became progressively worse as their driver worked hard expertly avoiding the potholes and the oncoming traffic, which included overloaded buses and trucks laden with their loads of yellow gas bottles and cans of palm oil, lurching down the road, swaying menacingly as they rumbled on their way as fast as their motors allowed them.

They arrived in Putussibau as the sunset. A burgeoning town built on stilts over the banks of the Kapuas River. The town lay in a triangle surrounded by jungle covered mountains that drained into the dark waters of the Denau Sentarum swamp. It was the last town before the vast empty mountain ranges of central Borneo and an almost impenetrable rainforest.

As they stretched their legs outside of their hotel, a small losman, situated over a general store, they surveyed their surroundings, the evening air was filled with noise and the smells of durian and other over-ripe fruit, dried fish and mud. They were confronted by the

strange sight of tribal people from the interior mingling with the crowds, coming from their villages and longhouses to trade the products of the forest for kerosene and other needs, sugar, tea, and batteries. Many of them, Aris explained, were Ibans, identified by their intricate soot black tattoos and their elongated earlobes, which in certain cases hung down to their shoulders.

Unloading their baggage from the Toyotas, an old and wizened Iban covered with tattoos silently observed them from a corner in the store, where he sat crouched down amongst a pile of rice sacks. Aris explained that the tattoos on the front of his throat showed that he was a warrior. Under the weak yellow glow of a single light bulb the old man hugged his ankles, watching like a statue carved in hardwood as the Belandas – as they called Europeans, struggled with their heavy bags, his chin on his knees, and his long earlobes dangled down to his dark bony shoulders.

Fitznorman had a strange sensation when he realised that beyond Putissibau there was absolutely nothing, he was at the edge of the known world, beyond was the kingdom of the rainforest.

The next morning they set out for Lanjak. The road was not better than that of the previous day, but with many steep uphill stretches, where the slopes were covered with loose laterite gravel washed down from the hillsides by heavy rains. The rickety wooden bridges were flanked by deep potholes, and crossing them became tricky, manoeuvring the Toyotas between the missing planks.

The surrounding forest was scattered with blackened areas where tree stumps pointed to the sky, seemingly in a cry of despair, signs of shifting cultivation, or covered with bright green patches of grass and vegetation, where the land had been abandoned by the local people after one or two crops of mountain rice.

On reaching Lanjak, after two hours jolting over the treacherous mud covered trail, Aris instructed the driver to report directly to office of the local authorities, there officials from the governor's office inspected their papers. They were the first foreigners to visit Lanjak in almost six months.

Aris informed the district head, their object was to locate a campsite suitable for their research programme, the main object of which was forest biology with geological exploration and a mapping survey of the border region. There was no mention of logging, as many of the local officials were involved in illegal forestry operations in the surrounding border area between Kalimantan and Sarawak.

Over a lunch of chicken and rice they continued their journey by boat, accompanied by Bak Enjau, a wrinkled local guide who spoke the local dialects, recommended by the officials.

After a long discussion with Aris, Bak Enjau had pointed at the satellite map on which the 'discovery area' had been indicated by Aris's mapping specialists. Finally and after a confused exchange they agreed to a longhouse, which the guide assured them was situated on the Kalimantan side of the border. From the map it appeared to be near to the cave, but the only way to be absolutely certain was to push ahead with the aid of the GPS.

After over an hour on the river the waters became shallow and fast flowing and after negotiating a series of heart stopping rapids, they finally approached the GPS reference point. It was mid-afternoon when Bak Enjau, shouting over the noise of the outboard, pointed to a longhouse just visible through the trees on the bend ahead of them. They beached their boats on the river bank and Aris took a GPS reading, which indicated they were a little less than two kilometres as the crow flies from the reference point.

They were at a watershed, one side draining down to the Batang Lupar River system to the north, and the other to the Kapuas system to the south. The Sungai Lalang was one of the branches of the Batang Lupar which had its source in the nearby hills.

It seemed to be a good location for the base camp, if the Iban Tuay agreed, though two kilometres uphill to the cave and then back every day would be hard going in the humid forest.

The people of the longhouse hid their surprise as three perau arrived bearing the strange looking foreigners, few of them had ever seen a European. Bak Enjau, after exchanging greetings with the

Tuay in his dialect, was invited in the Iban tradition of hospitality with his fellow travellers to eat as soon as they had rested. A meal was prepared consisting of rice, bananas, river fish, and greens from the vegetable gardens that the women of the longhouse cultivated on the nearby river banks.

They ate silently, seated on the floor of the ruai, as Bak Enjau engaged what seemed to be a long and intense conversation with the Tuay. The headman's dead pan face did not betray his thoughts, he had met few Belandas, and it was well known that they were very strange.

Finally, turning to Aris, Bak Enjau informed him, to the relief of all concerned, that the Tuay invited them to stay overnight. He would also provide them all the help they needed to climb the hill, once they had eaten, where they could make a reconnaissance of limestone outcroppings that lay beyond the longhouse.

The path that led part of the way up the hill was barely visible with the Ibans forcing their way through the vegetation with swiping blows of their sharp pahangs. It took them more than an hour to reach the limestone outcroppings, and another hour to locate the southern entrance of the cave situated on a narrow limestone plateau.

They were deep into the heart of the forest, far away from the towns and villages, and as they made their way through the dense vegetation there was little noise apart from the occasional whoops of birds and the clicking and whirring of insects. They saw little visible signs of animals and few birds.

Their goal had been reached, after a hardy overland journey from Pontianak, which had taken them almost four days.

Back at the longhouse and after drinking a considerable quantity of tuak, Aris finalised the arrangements for the installation of the expedition's camp a short distance from the longhouse against the promise of payment and goods.

The agreement was sealed by offering gifts to the Tuay and an Iban ceremony, which consisted of offering food to the spirits of their ancestors and the sacrifice of a chicken and a small pig. The pig

was given rice and tuak, then killed it with a swift stab into its jugular vein. It was gutted and its liver was examined by the elders, who declared that the spirits were happy, the auspices were good for the cooperation with the Belandas.

Back in Pontianak they concluded that it would take a month to establish the camp at the Discovery Site and to get the team operational, the best period for the excavation was during the dry season, which meant that they should start to arrive from the beginning of June onwards, which left them two and a half months to complete the preparations.

Chapter 20

THE EXPEDITION SETS OUT

Pierre Rossard, head of Anthropological Research at the Musée de l'Homme in Paris, also managed all field work and excavations. He was short, round, red-faced and sported a small bristling moustache, he enjoyed life, and especially good food and wine. Pierre bubbled over with energy, was talkative, frequently speaking his mind before reflecting on the diplomacy or pertinence of what he was about to say. Fortunately his English was not all that the BBC would have desired, and the meanings of his words were often lost on his listeners, which left him time to backtrack with infectious joviality.

Besides those considerations he was also one of the world's greatest specialists on human evolution and his experience in field work made him an automatic choice as leader of the expedition, a French undertaking, officially conducted under the auspices of the French Ambassador in Jakarta, Dominique de Favitski.

With almost forty years experience to his credit, Pierre had participated or directed many expeditions to Africa, the Middle East, China as well as other less known hominid fossil sites around the world.

Pierre Rossard naturally adhered to the current evidence that modern humans, *Homo sapiens*, emerged in the Horn of Africa, and more precisely in the Awash region of Ethiopia, about 160,000 years ago, before appearing some 100,000 years later in large numbers. They migrated outwards to the north and south, into the territories of existing populations of *Homo erectus*, in Africa and Asia, and *Homo neanderthalis* in Europe.

However, Pierre did not entirely accept the prevailing theory of the extinction of the different hominid ancestors that had preceded modern man. He believed in the possibility of compatibility between early *Homo sapiens* and his close contemporaries, and as a consequence their long cohabitation. Moreover, Pierre Rossard believed, *Homo sapiens* may have interbred with those he met as he migrated out of Africa into Eurasia, resulting in a certain degree of assimilation. This did not mean the disappearance of existing populations, nor did it imply that all isolated groups died out at once.

One of the persistent features of the world of palaeoanthropology was that anthropologists dreamt of finding something older, more sensational, that would make headline breaking news, a discovery that would rocket the discoverer to instant fame, and with of course a coveted sinecure.

The announcement of such discoveries was fraught with dangers. A typical example was the premature announcement on the dating of a sandstone rock-shelter in northern Australia, where scientists suggested that the stone artefacts found in the shelter were situated in sediments between one hundred thousand and one hundred and eighty thousand years old. It was a startling revision of the estimated date of man's arrival in Australia. Later it seemed those artefacts were only 10,000 years old, making a lot of red faces and bitter scientists.

The fossil evidence of the confrontation between different species of early man remained very scarce. Israel, in contrast to modern times, provided an insight into the possible co-habitation of different early human populations, but there was little concrete evidence of such interbreeding.

That was the case until another discovery, at the other end of the Mediterranean, of the skeleton of a child that displayed characteristics suggesting mixed descent, in the Lapedo Valley, in Portugal.

The so-called hybrid had the facial characteristics of a modern human and the body of a Neanderthal.

To Pierre Rossard's thinking the borneensis skull appeared to show a possible, though potentially controversial, mixture of *Homo erectus* and early *Homo sapiens*, an idea that he uncharacteristically kept to himself.

Fitznorman received a copy of the Memorandum of Understanding from Lundy – an agreement between the Musée de l'Homme together with the Institute of Human Palaeontology and the Indonesian Centre for Archaeology in Jakarta. At the same time, Aris transmitted copies of the documents to Paris giving official approval for the expedition, from the BPPT, an agency belonging to the Ministry for Research and Technology in Jakarta.

A Franco-Indonesian scientific team would undertake, in the Pegunungan Hilir Hills – adjoining the frontier area north east of Pontianak in West Kalimantan, a joint research programme, the object of which was the study of forest biology, primate habitats and human interaction.

Pusat Arkeologi, the Indonesia Research Centre for Archaeology, was nominated as joint coordinator together with the French CNRS. There were also letters from the National Museum of Indonesia, the Minister of Home Affairs, and the Minister of Education and Culture, backing the work to be undertaken in the province. The project would be monitored by an office, which Aris described as a branch of the BAKIN, the National Intelligence Coordinating Body, to avoid accidental incursions over the border in one sense or another.

Pusat Arkeologi was joined by another specialist organisation, the IRD, a French public science and technology research institute, which was working with Pusat Arkeologi and the University Gadjah

Mada at a number of prehistoric archaeological sites, in the Province of Palembang in Sumatra.

Finally there was a scanned image of the official letter, signed by the Minister of Forests, addressed to Pt. Indah Hutan, a company owned by Aris, providing them with an authorisation to carry out research work relative to forestry matters in that region, with an emphasis on areas defined as special reserves for the conservation of local biodiversity.

In Pontianak, the capital of the Province of West Kalimantan, the Governor issued a memorandum instructing the District and Sub-District Heads to provide logistical assistance and labour if necessary.

Officially everything was in order, the only hitch was the deteriorating relations between Malaysia and Indonesia, which was complicated by the political situation in Jakarta, with the border crossing between Sarawak and West Kalimantan being closed several on several occasions.

The border between the two countries had been the source of problems over the years and a Malaysia-Indonesia General Border Committee had been set up under the auspices of ASEAN, the role of which was to resolve border disputes in accordance with international laws and procedures, so as to prevent encroachment into either of the two countries.

As to the Indonesians, they had set up a program to demarcate and protect border posts under the control of the Ministry of Defence and the Indonesian Armed Forces. Jakarta based its claims on a treaty of 1891, between the colonial rulers of that time, in which the Netherlands and Great Britain defined the border. However, the present day Malaysia government disputed certain points in that treaty.

Although border markers had been set up during the colonial period, there were numerous problems in the interpretations of the agreement. To complicate the situation certain of the demarcation stones had been lost and their positions could not be determined.

From the Malaysian side the Sarawak Border Scouts were responsible for border control and security over the region, the difficulty lay in the fact that the border between the two Malaysian states and Indonesia was two thousand kilometres of mountainous jungle and the inhabitants of the region could and always had crossed the border separating the two countries at will.

The Indonesian Minister of Defence, had claimed that 'rogue' elements involved in illegal logging were responsible for shifting markers between the two countries. As a consequence the government intended to take firm measures, employing army units, to prevent illegal crossing.

For security purposes, a list of foreigners participating in the field team of the expedition was to be transmitted to the office of the Governor of the Province, who would be responsible for providing the local upcountry permits, in coordination with police and military authorities.

'Do you know the leader of the Pusat Arkeologi team?' Fitznorman asked Lundy.

'Yes, Murtopo, he's getting on in years now, but very competent, not the kind of man to make problems, it's a diplomatic thing, after all it's their country,' Lundy explained.

'I've read a few articles about him, he's made quite a few discoveries in Java, Aris has talked about him too.'

'He heads the Laboratory of Bioanthropology and Palaeoanthropology at Gadjah Mada, and by the way they have got some pretty good equipment that could be useful to us.'

'Anthropology is very important to Indonesia,' Lundy told him, 'and the IRD has a long standing programme with them. When you think of it, there's not so many places in the world where so many fossils of early man have been found.'

'Of course.'

'One other thing you should know, the ambassador wants to be kept up to date on all progress.'

That was normal, but it did not please Fitznorman, he found Dominique de Favitski to be arrogant, overblown with his own self-importance, which was not an unusual trait in the French diplomatic corps. The ambassador disapproved of the agreement signed between Fitznorman and Lundy on a subject that he believed fell under his prerogative.

At their meeting at the embassy in Jakarta, Favitski had given Fitznorman an unpleasant lesson in protocol when Fitznorman had the misfortune to arrive without Lundy, who had been delayed by the demonstrations at the university where he had been meeting with Professor Murtopo.

Fitznorman couldn't help feeling Favitski would be the source of more than a few problems.

It was the last Saturday of March when Aris met him from his flight at Soekarno Hatta International Airport. Fitznorman immediately sensed the atmosphere was tense, the situation seemed to be steadily worsening, and it was clear that the regime was in deep trouble. The last weeks had been punctuated by riots and violence, on the university campus and on the streets of the capital.

As they entered into the city it was not at first obvious that there was any unrest, the crowd appeared to going about its daily business and the traffic was just as snarled up as ever. However, as they approached the centre Fitznorman saw a pall of smoke in the distance, it appeared to be hanging over the Glodok district. At every major junction armoured vehicles were present with numerous police and military personnel in riot gear.

The targets of the rioters had been the businesses and homes owned by ethnic Chinese, who though they represented only four percent of Indonesia's population were a dominant force in the country's business and industry, controlling a large part of the nation's general commerce and wealth.

Riots directed against the ethnic-Chinese minority were frequent and dated back to the colonial era with many Indonesians resenting

their wealth, and when times were hard targeted them as scapegoats on whom they could vent their ire.

Over the previous days, Chinese stores had been burnt down and many Chinese had taken refuge in the local police stations. The rioters were apparently out again, and authorities had reinforced the security measures with hundreds of additional troops to patrol the streets.

In the background the political pressure was building-up, their objective was to force the president to step down. It did not worry Fitznorman too much, he had been hearing rumours for years on predicting the end of the regime, though this time the crisis seemed grave.

The incumbent had used his leadership to build up his family business with the help of his so-called cronies, with their tentacular interests and links to the armed forces. The family's combined fortune, owned through a web of business holdings, property and bank accounts was estimated at several billions of US dollars.

The Indonesian Rupiah was in free fall against the US dollar, and the near collapse of the Jakarta stock market was threatening the country's major banks with collapse and the bankruptcy of essential businesses.

The members of the advance team led by Pierre Rossard fly directly from Singapore to Pontianak, where they were met at the airport by Aris's local office manager and the governor's representatives. They were were also greeted by a thick haze of smoke that hung over the surrounding countryside and the city itself, making their eyes water and reducing visibility to a hundred metres or so.

'This has been going on for the last few weeks,' explained the office manager waving at the sky. 'It's the dry season and farmers have started burning secondary forest to clear land for the next crops.'

It was a recurring problem, even though land clearing by fire was banned, fires got out of hand leaving the local authorities helpless, without the means of controlling their vast territory.

The political situation was tense in Pontianak, but the streets had remained relatively calm, though the city's large Chinese population watched anxiously. If the past was anything to go by, they had always been amongst the first victims during periods of crisis and dynastic change. More than five hundred thousand Chinese had perished in the mid-sixties when Sukarno – first president of Indonesia, fell.

After temporary headquarters had been set up in an office put at their disposition by Aris near the city centre, they were followed by some twenty foreign and Indonesian specialists, assisted by thirty or so archaeological students from Gadjah Mada and local workers. The senior members of the team were accommodated at the Hyatt hotel and the others in various small hotels and hostels nearby.

Once they had made the necessary arrangements the main group would move up to a field camp, which was being prepared near the village of Lanjak, about five kilometres on the Indonesian side of the border near the discovery site.

A week later the first group flew up to Putussibau, their equipment following by road. From Putussibau they travelled the remaining one hundred kilometres by boat through a landscape of rice paddies and lowland forest to Benuamartinus and finally by Landcruiser to Lanjak.

The region was a mixture of highland and lowland forests, bordering on the national parks of Lanjak-Entimau, which straddled the border between Sarawak and Kalimantan Barat.

Lanjak and Entimau were peaks in the Boven-Kapuas Mountains, Lanjak being 1,281 metres high. The parks were part of an international programme developed by Malaysia and Indonesia to preserve the biodiversity of the rainforests. On the Malaysian side the park covered 187,000 hectares, on the Indonesian side the park was much larger with 600,000 hectares.

The access to the border area was limited to river navigation by longboats, which meant that the transport of personnel and equipment was particularly delicate as almost the entire region

covered by primary rainforest, a sanctuary in which nature had remained undisturbed for millions of years.

The almost impenetrable forest, a witness to the extraordinarily diversity of life, was the home to many strange animals, including reptiles and land crabs as well as many species unknown to science and a great number of plants and insects.

Chapter 21

NIAH

‘Harrison was the first person to carry out serious anthropological work in Borneo,’ Lundy announced.

‘I’ve read about him in the guide books, a local hero!’ said Steve Smoult, the English satellite mapping expert, who had arrived that afternoon from Pontianak.

‘Yes, in Sarawak, here we’re in Indonesia!’

‘Just about!’ replied Steve sure of his knowledge as a mapping specialist.

‘Anyway, Harrison was an explorer and adventurer. He led an Oxford University expedition in Sarawak to Mount Dulit and the Tinjar River, in the thirties when he was only twenty years old.’

‘A bit of a strange fellow it seems, even extended his anthropological studies to Stepney and Bolton to study the British working classes,’ said Fitznorman, who was familiar with Sarawak history. ‘He was also a specialist in jungle survival wasn’t he?’

‘That’s right, in WWII he joined the British Army where his knowledge of Borneo caught the attention of the Special Operations Executive and he was trained in commando and survival skills, then parachuted into Sarawak to set up a guerrilla army of native irregulars to fight the Japanese. At the end of the war he decided to stay on Sarawak, and became Curator of the Sarawak Museum,

which he developed into a centre for social, archaeological, and geographical research.'

'So that's how he got to making the excavations of the burial grounds in the Great Niah Caves,' said Fitznorman.

'Exactly, and he demonstrated that the site had been occupied by humans for over 10,000 years. In 1958, he made the sensational discovery of a human skull, in the West Mouth of the caves, estimated to be over 40,000 years old. At that time he was ridiculed in scientific circles who considered the dating was complete fantasy.'

'Like us today, now everybody knows that Harrisson was right.'

'Unluckily for him he didn't live to see that, he was killed in a traffic accident in Bangkok back in 1976.'

'It's no wonder, if it's anything like driving around these places it's bloody dangerous and I know that from my experience over the last couple of days,' Steve dryly commented having opted for the overland route from Pontianak to the camp site.

'Well, he's still a local hero and remembered for his work at the Sarawak Museum, Borneo's leading museum with the most comprehensive data on the island's natural history and ethnology.'

'I suppose so, his wife was also well known for her work of reintroducing young orangutans back into the wild.'

'What interests us here is that those caves are the most important palaeoanthropological site in Borneo, for the moment that is! Quite an amount of Neolithic stone implements and pottery have been found. More recent evidence shows continued human occupation of the Niah Caves until about two thousand years BP with cave paintings showing boats and human figures.'

'BP,' asked Steve Smoult.

'Yes, it's best if we say 'BP' Steve,' said Pierre. 'That's – before present – it's less confusing than saying BC. So 2000BC is 4000BP'

'Yes I suppose that's less confusing, geology is not really my thing, seen from space that is.'

'It's alright once you get used to it and anyway BC doesn't matter when you start to talk in tens or hundreds of thousands of years ago.'

‘I suppose BP doesn’t upset the non-Christians.’

‘Don’t want to do that do we,’ said Steve. ‘What about Jurassic then, that’s millions of years?’

‘That’s a little more complicated,’ said Pierre, ‘that’s part of what we call geological time scales. Right now, and for a long while to come we are in the Cenozoic era. There’s six era’s since the beginning of the planet. Each era is divided into periods...we’re in the Quaternary or fourth period if you care to know, and one million six hundred thousand years ago was end of the period before that, the Tertiary. Eras are divided into epochs, the current one is the Holocene, which started about 10,000 BP. Before that it was the Pleistocene that started about at the beginning of the quaternary.’

‘Hang on, I’m getting confused, maybe it’s the tuak,’ said Steve refilling his glass from a bottle that appeared to have seen a good few generations of the longhouse brew.

Pierre Rossard laughed. ‘Don’t worry it’s all very arbitrary but you’ll get the hang of it.’

‘In the next era no doubt!’

‘What counts for us at this precise moment is the biologist’s and anthropologist’s time scale, the rest is much too distant and doesn’t concern man’s development, at least directly.’

‘It was the end of Miocene epoch when Hominoids appeared,’ said Fitznorman showing off his recently gained knowledge.

‘Hominoids, hominids?’ asked Steve.

‘Hominoids, that means man-like, it’s the super family that includes man and apes and from which our branch separated from a common ancestor six or seven million years ago. Hominids is the branch of the primate family to which we, present day man and our extinct predecessors, belong.’

‘Were they like us?’

‘Incredibly so and living a life not so very different to that of our fellow men in Indonesian Irian Jaya today.’

He gave a look of disbelief.

‘Yes, think about it for a moment...no think about it the next time you take a shit, then you’ll realise what kind of primeval animals we are.’

‘No need to be vulgar!’ he shrugged, ‘Anyway, your explanation is not very clear?’

Lundy frowned.

‘Don’t worry, I haven’t finished yet, now we get to the stone ages, the first one is the Pleistocene epoch, which is divided into three periods, the upper, the middle and the lower Palaeolithic or Old Stone Age. Then there’s the Holocene epoch, that’s where we are now.’

‘That’s nice to know.’

‘It includes the Neolithic, or New Stone Age, and also the Copper, Bronze and Iron Ages. It’s also when agriculture started.’

‘Hang on what differentiates the stone ages?’

‘Good question,’ intervened Lundy, ‘the Pliocene had only Oldowan stone tools or so-called Pebble Tools, the earliest known about 2 million years ago. Then came the Acheulian, which started about 1.5 million years ago when a sudden change took place with a more modern design and the appearance of bi-faced tools. After came the Clactonian and the Levalloisian.’

‘Now I’m really confused, where do all those names come from?’

‘The sites, you know...places where those tools were first found and recognised by prehistorians. For example Clacton in England.’

‘Ah! That explains a lot.’

The next morning they left for Kuching in Sarawak, where they were joined by Jean Barthomeuf, an anthropologist specialised in ancient migrations who had tracked *Homo sapiens* and their ancestors on their long journey from Africa to Australia and ultimately to the Americas.

Lundy, Fitznorman and Barthomeuf flew east to Miri, the last large town at the opposite end of Sarawak, not very far from the border with Brunei. Miri was typical of most towns in Sarawak with

its narrow, crowded, streets filled with noisy polluting motorbikes and a myriad of street vendors, selling everything from chickens to pirated CDs. It was the starting point of a brief visit to the Great Niah Caves situated about two hours by road from Miri.

On arrival in Batu Niah, the afternoon storm clouds were gathering over the limestone cliffs, which rose behind the small town, dominating the local the skyline.

A three kilometres long boardwalk led to the entrance of the Great Caves, a permanent structure that had been erected to ease the almost one hour walk through the hot and humid tropical vegetation.

‘The Great Cave of Niah has been occupied by men for about 40,000 years. It’s really quite an extraordinary site, the floor of the cave covers ten hectares and the roof goes up seventy five metres from the ground,’ Lundy informed Fitznorman.

‘It says that caves have been occupied since Palaeolithic times,’ added Fitznorman remembering the words of his guidebook.

‘That’s misleading,’ Barthomeuf corrected him. ‘Palaeolithic means the Old Stone Age, which commenced about two million years ago until 10,000 years ago. The cave dwellers at Niah only go back about 40,000 years, so you see there’s a big difference.’

‘I see, almost Neolithic.’

‘Not quite, the corresponding geological period is called the Pleistocene, which commenced about 1.8 million years ago, so the Pleistocene and the Palaeolithic run together, one being a geological measure and the other a human development measure,’ continued Barthomeuf. ‘It was during the Pleistocene that the most recent global cooling, or ice ages, took place. When a large part of the world’s temperate zone was covered by glaciers during the cool periods, then uncovered as the climate warmed up again during the so called interglacial periods when the glaciers retreating.’

‘What about here?’

‘There were no glaciers here,’ Jean said laughing at the idea.

‘So the Holocene started 10,000 years ago,’ Fitznorman replied feeling a little put out.

‘Yes, that’s the period up to the present, during the New Stone Age, when metals were discovered by man. At the time Niah was first occupied by Homo sapiens, when a huge change was taking form in human development.’

Barthomeuf went on to describe a skull called the ‘Deep Skull’, discovered deep in a trench named the ‘Hell Trench’ because of the heat and humidity in that part of the Niah Caves. It was found at a level where stone tools had been unearthed together with the charcoal remains of a fire.

Radiocarbon dating showed that it was around 40,000 years old, and was believed at that time of its discovery to be the earliest evidence of human settlement on Borneo.

The caves were the home to millions of bats and swiftlets, a source of guano, the accumulation of bird and bat faeces, used as fertilisers by the locals. It was also a source of edible birds’ nests made from the glutinous saliva of the millions of swiftlets that built their nests fifty metres up in the ceiling of the caves.

In the last decades of the twentieth century, a major debate raged in scientific circles concerning the African origin of Homo sapiens, the chronology of their migration out of Africa, their geographical distribution and the question of their interbreeding with the archaic species that preceded them. This debate attracted a considerable amount of popular attention, not only from the press and general public, but also from governments and certain xenophobic politicians.

‘As frequently happens in science,’ Lundy explained, ‘new technology opens new paths that help us to reply to old questions, and sometimes provides unexpected answers!’

The use of population genetics and molecular biology in the search for human origins had become of great importance in helping science to resolve the long-running debate on where modern humans, that is to say Homo sapiens, first evolved.

On the one hand the Multi-regional model explained that an archaic form of man left Africa between one and two million years

ago, and from these ancestors modern humans evolved independently and simultaneously in areas of Africa, Europe, and Asia.

On the other hand genetic evidence pointed to the more broadly accepted Out of Africa model, which expounded the theory that all modern humans evolved in Africa, then left in several waves of migration, ultimately replacing any earlier species.

‘This shows that Homo sapiens are of recent origin and first appeared in Horn of Africa,’ Lundy told him. ‘African populations have the greatest genetic diversity. That means they’re the oldest of Homo sapiens populations to have emerged, around 160,000 years ago, most likely from a very small population of just a few thousand individuals.

‘Up to the point in time of your discovery Scott, the Multi-regional model that preaches Homo sapiens had evolved in different regions of the world over a long time scale, was considered by most paleoanthropologists to be as good as dead. Today, no one can now say with certainty, that we are of entirely recent African origin, because we can now see there could have been interbreeding between modern and archaic species.

‘The only general agreement today is that Homo erectus, our precursor, evolved in Africa and gradually expanded to Eurasia about 1.9 million years ago. Around 100,000 years ago, several species of hominids coexisted, not necessarily side by side, including Homo sapiens in Africa, Homo erectus in South East Asia and China, and Homo neanderthalis in Europe.

‘Until you discovered Homo borneensis, it was thought that around 30,000 years ago, the only surviving hominid species was Homo sapiens.’

‘But when did we, Homo sapiens, leave Africa?’

‘Ah! That’s where opinions start to diverge. Evidence based on DNA in the Y-chromosome leads certain of us think that the exodus began between 60,000 and 50,000 years ago, however some of us think that figure is about 100,000.’

‘So how long did it take to get to Borneo?’

‘Well before Mungo Man in Australia, who dates back to around 50,000 years ago, it means that early travellers followed the southern coastline of Asia into Indonesia, over the land bridge that existed at that period, then crossed about 250 kilometres of open sea, finally colonizing Australia to become the ancestors of our present day Aborigines.’

‘That means the descendants of the first wave of Homo sapiens migrants out of Africa.’

‘Right.’

‘So let me get this right, the first Homo sapiens appeared in Ethiopia about 160,000 years ago and then migrated out of Africa, finally reaching Australia via Borneo around 50,000 years back?’

‘Exactly so, in fact many paleoanthropologists say that the fossil record shows that a first wave of migration occurred around 100,000 years ago.’

‘Is there any fossil evidence?’

‘Yes, if you recall the discoveries made in Israel over the last few decades, we can see fossil evidence that shows modern humans were in at least two places in that region about 100,000 years ago, then seem to have disappeared about 10,000 years later, but they could have survived further east in Asia.’

‘Could they have survived in Israel, I mean most of it is desert.’

‘Remember that the Levant of 100,000 to 150,000 years ago was very different from that we know it today. It was a geographical extension of north-eastern Africa with a savannah like environment, it was probably a natural extension of the original territory of early Homo sapiens. The evidence in Israel also shows that early Homo sapiens were present over a long period of time, no doubt expanding northwards to Europe.’

‘What does the mean?’

‘Well the problem is that there is a 30,000-year gap in the archaeological record of Homo sapiens outside of Africa.’

‘Why?’

‘That’s a little complicated, but some of us think that although Homo sapiens may have been anatomically modern around 150,000 years ago, they did not become behaviourally modern until about 100,000 years later, probably due to a genetic mutation related to cognition, the capacity for symbolic thought, that is making them more intelligent.’

‘Confusing.’

‘I’m afraid so.’

‘So how did this change things?’

‘These mutations enabled them to develop an advanced language ability, thus more sophisticated tools with which they could hunt more efficiently, transform the raw materials they had available, animal skins and bones, making clothing and more elaborate shelters, which led to greater geographical freedom.’

‘Could the same thing have happen to an evolved erectus?’

‘Who knows?’ What seems likely is that a second wave of hominids left Africa around 50,000 years ago, possessing this mutation for symbolic thought. Their numbers grew rapidly and they settled in the Middle East with smaller groups migrating further to East and South East Asia and eventually here in Borneo.’

‘What we should remember,’ he continued, ‘is that until your discovery, the study of DNA had been almost entirely based on modern man, there is very very little DNA from Neanderthals and none at all from erectus. Up until now we have had absolutely no genetic knowledge of Homo erectus. The DNA recovered from Homo borneensis is the equivalent to a force 7 earthquake on the Richter scale, which will effect how we see human evolution, as did the discovery of Eugene Dubois in Java one hundred years ago!’

‘Did erectus continue to evolve in Asia?’

‘Certainly.’

‘Do you think the different races are the result of that?’

‘No but that questions brings us into dangerous territory. If we admit there are different races then things become very complicated,

in many ways, especially as far as politically correct views are concerned.'

'But you, do you believe there are races?'

'Well to be precise, we are all *Homo sapiens sapiens*. But there are of course differences, ask a forensic scientist, he will explain to you how half a dozen so called varieties of humans can be identified.'

'Is it possible that some of us developed differently in isolation?'

'Naturally, if you take the Aborigines of Australia or the Bushmen of South Africa, who lived in isolation for many many thousands of years, they underwent changes even if they are superficial changes.

'Look at this way, the world is divided between politicians and specialists amongst whom are the scientific professions. The role of politicians is to tell people what they want to hear, at least some of the people – mostly those who voted for them, and some of the time, also determining what is politically correct, and what is not, to avoid civil strife for example. Specialists, at least most who are dedicated to telling the truth and finding logical explanations to things, have other considerations.'

'So what are you getting at?'

'Well I'm a scientist, today we believe that man became *Homo sapiens* when mutations occurred, as I explained, that enhanced his capacity for symbolic thought.'

'You told me this occurred about thirty or forty thousand years ago.'

'That's right, the essential thing is whatever happened, it had an extraordinary effect, man acquired an evolved language, invented art, new technology and eventually agriculture and civilisation.'

'I see.'

'The point I'm getting at is this mutation occurred in very, very, recent times, especially when you think our ancestors, who were very similar to us, had walked the earth for almost million years.'

'I get your point, but so what?'

‘What I’m saying is that mutations did not suddenly stop! They never have and they never will. This process of mutation transformed Homo erectus into successive forms such as Neanderthal in Europe and evolved versions of erectus in Asia. So why do some of us assume that similar mutations did not occur in isolated populations?’

‘I don’t know.’

‘Nor do I, the reality is that for the moment we have not found any evidence pointing to this. But our science is young and there are many corners of the world to be explored.’

‘So such mutations continued to occur in isolated erectus populations also?’

‘To my mind, yes.’

Chapter 22

THE CAMP

Pierre Rossard flew in from Pontianak after spending almost a week in Jakarta with Riki Adyatman, collecting materials and the permits necessary for the team’s stay in Kalimantan Barat, a stopover that had given him and other team members time to get over their jet lag and acclimatise themselves to the tropical weather.

The heat and humidity took a more time to get used to, especially for those not used to the equatorial climate.

They waited in the longhouse sitting on the bamboo floor talking with the chief, who welcomed his guests with a glass of tuak, an alcohol made from fermented rice. The Tuay was pleased, whatever certain of the elders had said about the strangers, their arrival and the work they brought for the people of the longhouse would bring welcome cash, enabling their children to go to school and to buy the things in the local towns, an outboard motor, or a neq generator to provide them with electricity for their fridge and TV set. It was the right decision and he planned a welcome celebration for the new arrivals.

The exact position of the base camp had been decided with the Tuay, who had gently insisted that the toing and froing to the cave, that lay further upstream of the Nanga Garing Longhouse, should not to interfere with the daily life of the longhouse.

It was set-up on the opposite bank of the river, in one of the small clearings the Ibans cultivated, on the slopes overlooking the river, where they grew rice, fruit, vegetable and also pepper, which they sold in the local markets downriver. The mountain rice had been harvested and the bare field had been offered by the Tuay to set up the base, it was ideal, just one hundred metres up river.

The longhouse was the home of a dozen or so families, a typical upriver longhouse, a long rectangular wooden structure built on stilts over the riverbank.

It was situated on the banks of one of the many branches of the upper Kapuas River, a small paradise that had probably remained unchanged for generations. Small children played in the transparent waters of the river watched over by the women going about their daily tasks.

With the help of hired labour brought up from Lanjak, all the field material was carried up to the site, including a diesel generator and fuel supplies, as well as bottled gas for the kitchen. Electricity was vital for lighting, as night fell not long after six in the evening on the equator. Light was necessary for the expedition members to continue their work in the evenings, writing up reports and analysing the day's work.

The camp consisted of tents for sleeping quarters, a kitchen – complete with a good Chinese-Malaysian cook, hired by Indra, the logistics manager, to ensure that at least he ate well. There were washing and toilet facilities, the diesel generator set, storage areas, a field laboratory equipped and satellite communication equipment. Using digital photography, laser measuring devices and results from the laboratory all data could be transferred by satellite to Jakarta or Paris.

Access to the caves was facilitated by a path that led uphill reinforced with wooden steps and hand rails by the hired labour.

The plan was, each morning, after breakfast, the team would cross the river over a makeshift bridge to make their way up hill to the cave, before the heat of the day made the going difficult. Because of its distance from the base camp, a permanent work station was set up at the discovery site, equipped with all the necessary equipment and a second, though smaller generator, providing lighting and power for work inside the cave. It also included living quarters for the guards and a mess to serve lunch and light meals.

At the end of the afternoon, an archaeologist, Collin Williams, who was to manage the excavation work, arrived. He was an old hand, whose speciality seemed to be out of the way sites.

He had arrived from Pontianak in the early afternoon at the small airport of Sintang on the Kapuas River accompanied by a younger man, the expedition's geologist. They had been driven to a longhouse, which acted as a staging post, named, 'Lower Base', located about two hours away from Putissibau, depending on the weather and the state of the road, which was peppered with huge potholes and deep ruts.

From there it was another two hours up the complex river system to the Nanga Garing Longhouse.

'A hard experience on the arse,' Colin laconically remarked drawing heavily one of the English cigarettes to which he was highly addicted.

The boats were fast and manoeuvrable, and the only means of getting team members and their personal baggage and material up and down between the bases. The main equipment and supplies had taken more than two weeks to ferry up to the base.

That evening the visitors crossed the bridge to the Iban longhouse, where they were greeted by the chief and his men, all of whom wore their traditional fineries, necklaces, armbands, bracelets with head dresses of feather and flowers. Both the men and women wore sarongs woven in the longhouse on body looms from plant fibres, spun and dyed by methods handed down over the generations,

decorated with the traditional patterns representing the important rituals of life.

Many of the Ibans were tattooed with natural dyes collected from the plants and insects of the forest. The tattoos were made with nail points hammered into their skin, it was part of Iban tradition and it was normal to suffer a little for the beauty it afforded them. Additionally, the tattoos, they explained, frightened evil spirits away, with images of birds, bows and arrows.

The chief proudly told them that they were great hunters and always brought back home freshly killed monkeys and wild pig. He then offered Pierre a local delicacy, a finger thick grilled larva presented on a palm leaf which with no more ado he popped into his mouth and washed it back with a good slug of tuak. The headman told them the larvae were grown on felled sago palms left to rot in the forest.

The old men recounted their history, passed orally from generation to generation, the story of how they had survived in adversity, overcoming sickness and disease, the legends of their great headmen and heroes, their tribal wars and their victories and calamities.

The visitors were fascinated by their history, of the countless generations of Ibans who had lived undisturbed in their forest home. Their glasses were filled and refilled with tuak by the chief who was just as fascinated by these strange men, he watched the red face of Pierre Rossard, his bristling moustache, his small red eyes hidden behind wire framed glasses, reminding the Iban of the wild pig he hunted in the forest. Pierre for his part, warmed by the strong drink started to recount to the willing listeners his theories on the survival of early men, who had lived until recent times, theories ridiculed by most of his serious scientific colleagues.

‘There’s a wealth of stories about strange men like creatures in the forests,’ he told them.

‘Bigfoot!’ laughed Williams.

‘No, I’m serious, strange manlike creatures have been regularly reported as far back as 1855 by travellers and adventurers.’

‘What do you think?’

‘Me? Well to a certain degree I have an open mind. For example there’s the Orang Pendek, a bipedal ape-like creature, spotted in Sumatra recently by a photographer, a certain Debbie Martyr.’

‘So there’s some photos?’

‘I’m not sure, from what I’ve read it’s supposed to be something like an orangutan. There’s lots of similar stories in this very area where we are at present, in the mountains, where it’s even been seen breaking river snails with a rocks to eat them.’

‘So it’s an intelligent ape.’

‘In any case it’s supposed to be very fast on its feet.’

‘The point is not whether such a creature is linked to erectus, who was very similar to us, but that unknown animals have remained undetected by men for a very long time, surviving deep in the forest.’

They nodded in agreement.

‘So why then is it unreasonable to think that Homo erectus, a very intelligent early human, had not survived until historic times? Villagers on the Island of Flores say that up until a hundred years or so ago, there were small, one metre high, hairy men who used to steal their food,’ continued Pierre.

‘The little people,’ Williams laughed.

‘Well they were known as the Ebu Gogos, that means, I’m told, grandmothers who eat anything,’ he said very seriously. ‘The legend says they were left in peace by the villagers, that is until the Ebu Gogos stole a baby and ate it.’

‘Local folklore says these creatures existed until sometime in the nineteenth century and could even talk some kind of language and copied, parrot-like, the talk of the villagers.’

‘I suppose,’ said Collin Williams, ‘it’s because we have become used to the idea that prehistoric men only lived tens or hundreds of thousand years ago.’

‘Well three thousand years, that’s not very far back into the past, and our friend Homo borneensis lived in the forests here, with his family, who were almost certainly not the last of their species,’ Pierre

webnt on. 'Meaning, they could have continued to survive until very recent historic times when Western adventurers started to explore Borneo in the mid-nineteenth century.

'In the much more recent past and especially since the seventies, oil and mineral exploration companies, and more especially the timber companies, destroyed huge swathes of the natural forest pushing the remaining tribal peoples deeper and deeper into the interior, and those same peoples still tell stories of encounters with strange men.'

Mornings, after a breakfast briefing, they fell into a routine, crossing the river, where the longhouse families were already about their daily business downstream. There they joined the trail to the site, an arduous one hour trek upstream, through the dense rainforest gradually climbing to the cave entrance, where they usually arrived drenched in transpiration and panting heavily.

The morning trek up to the discovery cave through the rainforest was an incredible spectacle to those who spent a good part of their life sitting behind desks, whether in Paris or Jakarta. The forest was eerily quiet, the silence broken by the occasional sound of monkeys whooping in the canopy high above them.

There, huge trees, dominants, towered above the forest, caught in a never ending fight for light, with creepers and stranglers grasping at their huge trunks in an eternal struggle for survival. The floor of the forest covered with a dense carpet of vegetation of every imaginable shape and form, an infinite variety of shades of green, a violent contrast with the black and brown of dead and dying plants.

The walk also offered daily exercise, since most of the team spent the day on their knees scraping the floor in search of evidence, or seated at field tables examining and comparing their finds under magnifying glasses or microscopes.

The new comers on their first trek to the cave collapsed under the awnings that had been set up around the entrance, feigning sudden interest in their notebooks and the contents of their back packs as they sought to recover their breath.

At the entrance to the cave three guards who had been positioned to protect it from unwelcome intruders stood drinking tea from plastic mugs. The surroundings had been cleared of vegetation and the secondary camp had been installed for the guards accompanied by an observer appointed by the governor's office.

The overhanging rock shelter was broad and high, it had been draped by thick vegetation which had been cut back for ease of access and light. The broad natural platform at the entrance had been reinforced with hardwood planks brought up river, supplied by a Korean sawmill at Lanjak. At the end of each day as night fell the rain arrived like clockwork, making the going slippery and almost impracticable, the heavy downpour quickly turned the site into a mud bath. As a result the rule was all shoes be removed before entering the excavation area to keep it clean and to avoid unwanted pollution by foreign matter.

Inside the cave, walkways and footbridges had been built to protect the floor and a lighting system had been rigged-up, which made little impression on the gloom above where the contours of the dome were lost in the darkness high above their heads, though there was a constant sound of movement with the darting of tiny swiftlets which gave way at night fall to the fluttering of bats.

The access on the Indonesian side was broad, but a large part of the floor was covered with pungent deposits of guano built up over thousands of years by the birds and bats that had made the cave their home.

A boardwalk led into the galleries where test holes had been made in preparation for the main excavation near to the spot where Fitznorman had discovered the calvarium.

The caves that lay under the limestone cliffs were part of an underground drainage system that had been formed by the erosion of the limestone over hundreds of thousands of years, what geologist described as tropical karst or limestone rock that could be dissolved by water.

Most cave floors consist of deposits that have accumulated over thousands of years, composed of dust and the remains of vegetable

matter blown in by the wind and carried by air currents, mixed with rock and debris fallen from the roofs and walls. The streams that drained the rain water that infiltrated into the system also carried in sand and pebbles.

Many different animals lived or ventured into such caves, birds, bats and small mammals that left their droppings and on occasions their bones, whilst carnivores often used the caves for shelters leaving behind the bones of their prey.

The accumulated deposits in caves could be anything from a few centimetres to several metres thick. In the Zhoukoudian caves in China, or Atapuerca in Spain, there were dozens of metres of thick breccia, cemented together by the mineralised water that permeated through the accumulated debris, drying and hardening over hundreds and thousands of years.

The action of the stream, which flowed through the discovery cave had cut into the breccia, taking the path of least resistance through a more friable agglomerate, leaving a passage with large stones and rocks jutting out of the uneven sides.

The island of Borneo itself was an ancient seabed, which had risen out of the water some fifteen million years ago, it was composed of sandstone, mudstone and limestone. Some three million years later tectonic forces deformed the earth's crust and what had been the seabed was transformed into hills and mountains. In places the bedrock folded and broke, forming craggy limestone cliffs and outcroppings on which trees and plants grew, pushing their roots down, opening deep crevices in the rocky surface, into which rain water drained over countless millennia, cutting new channels into the caves, carrying in nature's debris.

In the mountains of equatorial Kalimantan the karst landscape was formed by the dissolution of the underlying sedimentary limestone rock, and the constant tropical rains and the streams that drained the mountains and valleys. Rain water becomes weakly acidic as it reacts with the carbon dioxide in the atmosphere and the soil, forming carbonic acid, which then seeps downward through the soil and through cracks and fractures in the rock, dissolving the limestone

which is composed of calcium carbonate, forming caves and passages over hundreds of thousands of years.

In tropical regions like Kalimantan with its massive limestone bedrock, a remarkably distinctive landscape was formed by nature, punctuated by jagged hills with isolated spires and pinnacles, pointing towards the sky, towering over the endless forests.

Certain of these caves became the dwelling places of *Homo erectus* when he reached Borneo, one million or more years ago, where he lived in the rain forest as a hunter-gatherer. He was another animal in the forest and had no more effect on the ecosystems than any other of the forest dwellers. Perhaps it was he who drove the orangutan from the forest floor into the trees to become the largest truly arboreal animal on earth, though fossils have shown that this great ape was larger in the Pleistocene period and had other physical characteristics, witness to its more terrestrial past.

As the scientists trekked up the hillside towards the cave the dark grey weathered pinnacles of limestone seemed to reach out of the dark forest like a living force. The only noise besides the tramp of their feet and the pumping of breath was the noise of insects and birds, from time to time hoots of a monkey echoed through the forest, or a cloud of butterflies fluttered like a spray of brightly coloured confetti through the kaleidoscope of leaves and branches .

The zone they had selected for the archaeological dig lay off to the right of the gallery where Fitznorman had discovered the skull. The daily work included sieving the deposits in search of evidence and clues linked to the cave's past inhabitants and their activities, which would be confided to different specialists for analysis, on the spot for visual analysis.

A sample cut had been made into the floor of the cave to explore the stratigraphic structure of the deposits, which revealed the base rock was less than two metres beneath the cave floor. The deposits did not appear to be very deep from the trial bore holes that had been drilled.

The dig was a meticulous, tedious business, and with the slightest lack of concentration, vital clues could disappear for ever. More

complex analysis would be undertaken in Jakarta and Paris depending on the availability of the scientific equipment needed.

Compared to many other digs, in Spain for example, deposits were measured in tens of metres, this was shallow. The galleries and tunnels had been created by the action of nature over hundreds of thousands of years, but the various stratas had been formed by the accumulation of flood debris in much more recent times.

The difficulty was to determine the stratigraphic boundaries and their limits to avoid errors in the interpretation of data. Without an understanding of the precise location of a piece of evidence and its context, an artefact, for example, would become a mere museum piece without any historical context.

A strict and meticulous organisation was therefore imposed to ensure that each bucket that arrived at the sieves was associated with its precise point of excavation, so that the results of the sieve could be analysed with scientific exactitude.

The visual examination of the cave floor and the exposed sediments had produced no evidence of human activities. There were no tools of any nature and the other bones were those of small animals of a relatively recent period.

Further exploration of the various tunnels and galleries indicated the cave had been subject to flash floods with debris being transported by the waters, indicating the frequent collapse of the cave roof. This debris had formed the deposits that covered the bones.

Lundy postulated that borneensis had been an isolated individual, killed in an unlucky accident, a member of a vestige population which had survived long after modern man had established himself throughout Australasia.

They explored the hill side as best they could in the dense undergrowth of the rainforest, it was possible that Borneensis could have fallen into a crevice and been killed by the fall. His remains were scattered by flood waters with skull parts being deposited at the spot where Fitznorman had found them, covered by rubble as the flood subsided, subsequent floods had continued the burial process. The crevice into which he had fallen had with the passage of time

become overgrown by vegetation and gradually filled by earth and rubble washed in rains until it was fully sealed.

To Pierre Rossard's mind, it was impossible that borneensis had been alone, he could, by an infinitesimally small chance, have been the very last of his species, but his mother had lived at the latest until he had reached puberty and his father to the moment of his conception. Given the early child bearing age and the relatively short lives of primitive forest dwellers, it was just possible that his grandparents may have been alive at his birth.

It was more logical that family groups had existed and no doubt a small population, living in a territory of a hundred or so, square kilometres, dwelling nearby riverbanks, as do present populations. Individuals did not stray far from their families indicating that other bones could have survived the centuries be found in the area.

Dating estimates of the cores taken at different points on the site were flown to Jakarta and Paris and tests using different dating methods, on organic and inorganic samples, including radiocarbon, optically stimulated luminescence, uranium series and electron spin resonance confirmed initial estimates.

'Ah! Carbon 14,' said Pierre as they speculated over dating of what appeared to be fragments of charcoal, perhaps the remains of what could have been a camp fire. 'To be more precise it's called Radiocarbon C14, now that's an interesting tool for us engaged in natural sciences. It works like a stop-watch, and it starts with death!'

'Well I hope mine doesn't start too soon!' sniggered Aris.

Pierre smilingly benignly and continued.

'When a living being dies the stop-watch starts ticking and it's good for up to about seventy thousand years.'

'What happens after that?'

'Unfortunately the quantities of Carbon 14 become too small and immeasurable.'

'A pity.'

‘Nevertheless it’s fine for dating relatively recent organic material such as bones, there are plenty of other methods for older bones and non-organics.’

‘So how exactly does carbon dating work?’

‘Well without going into a long lecture, it’s like this, radioactive material is by definition unstable, so over time it decays down to what we call a daughter product. In the case of C-14 about fifty percent of the original material decays within 5,715 years. We call this the half-life. If you know how much C-14 was present when the animal died and measure how much there is now, you can calculate how long ago the animal died. This is valid for all organic material, both plants and animals.’

However, the problem was as Pierre explained, it was limited to organic materials less than about 70,000 old.

The mechanics were based on the fact that living organisms, such as plants for example, absorb radioactive C-14 from the atmosphere as they grow, absorbing by photosynthesis carbon dioxide.

Three isotopes are produced from carbon, two of which are stable C-12 and C-13, on other hand the third, C-14, is unstable and decays.

As a result all living organisms absorb carbon-14, accumulating the isotope in their tissues during the course of their brief lives. When they die the absorption of C-14 instantly ceases, however, the decay of C-14 continues at a precise rate, this enables scientists to determine the age of organic remains such as bone, hair, skins, or wood.

The science of dating had always been at the core of geology and palaeontology. Fossil sequences were recognized in the early nineteenth century, when the first geologists observed that they were always found in sequences, or stratigraphic layers, meaning that certain groups of fossils were always found below others.

At that time, a fellow called William Smith, who was a canal surveyor, discovered that rocks could be mapped on the basis of the fossils he found in them. Smith remarked that the sequences in one part of the country could be matched with those in another. So this became the first principle of stratigraphy, older rocks lie beneath

younger rocks and the fossils found in the rocks occurred in a predictable order.

This observation formed the basis on which the divisions of geological time were established. Every school boy knows these, though more likely from films such as 'Jurassic Park' than his class work. Divisions such as Jurassic, Cretaceous, Tertiary and others were defined by specific groups of fossils and what was more interesting was the system was valid for the entire planet.

As scientific knowledge progressed geologists remarked that fossils became more complex through time. The oldest rocks contained no fossils, then simple sea creatures appeared, followed by more complex life forms, such as fish, then life appeared on land with reptiles, dinosaurs, mammals, until finally in the last seconds of geological time man made his entrance.

By the time Charles Darwin published his work, 'The Origin of the Species', it was recognised that fossils were evidence of evolution, a continuous process all through the existence of life. Today, palaeontologists have explored every corner of the globe in their search for fossils and have found nothing to contradict the law of evolution.

Botanists and biologists have established phylogenetic, or family trees, for every group of plants and animals, showing how all the different species are related to each other on the basis of their morphological or genetic characteristics. This shows that the fossil record tells the same story as do the genetic characteristics of all living organisms.

Until about a century ago relative dating was the only method available. Then, after the discovery of radioactivity, at the beginning of the 20th century, it was observed that predictable decay takes place in naturally occurring radioactive isotopes, this meant that many organic and inorganic materials could be dated with precision.

These isotopes were radioactive elements that decay, or break down, at precise and predictable rates. The unit of measure is the half-life of such elements, meaning the time taken for half of a

radioactive element to break down into a stable non-radioactive element.

Therefore, by comparing the proportion of an element in a sample of organic matter, its age can be calculated. Carbon-14 dating is used for dating organic materials and is the most common of these techniques. C-14 is an isotope that is continuously produced in the upper atmosphere of the earth and starts to decay immediately. The presence of a few milligrams of organic material enables laboratories to produce accurate results.

C-14 was part of a broader technology called radiometric dating, which uses several other isotopes that have longer half-lives, ranging from 0.7 to 48.6 billion years. Thus small differences in the relative proportions of two isotopes can provide dates for rocks of almost any age within a one percent error. Amongst the radiometric dating techniques for rocks was the potassium-argon method which could be used for rocks older than 100,000 years.

Another method consisted of comparing fossils to fossils, that is of the same species on different sites already dated by absolute methods. In the case of a hominid skull with a certain cranial capacity, it could be compared to the cranial capacity of another fossil hominid skull found at another site that had been accurately dated. However, this method was not entirely unreliable, since in two geographical areas, such as Java and Borneo, the species could have evolved at different rates.

The most conventional method, superposition and stratigraphy, simply indicated a particular fossil was younger or older than another fossil. However, if the position of the fossil had moved, as the result of tectonic change, or in much more recent times floods and landslides, or the collapse of caves, the conclusions drawn could be very misleading.

Chapter 23

DENTITION

The work became tedious as no other significant finds were made, life in the camp fell into a routine with little distraction apart for the same troop of monkeys that were getting used to the intrusion into their territory, watching from behind a curtain of leaves and branches, and from time to time daring to descend to the ground waving their small fists and shrieking in derision at workers comings and goings.

As they waited for news on the datation results, Williams confirmed the spot where Fitznorman had discovered the skull, was in a what was a recent slippage. Sediment had been carried down towards the cave mouth when the underground stream that drained the water seeping in from higher levels had suddenly changed course.

A heavy atmosphere of drawn out expectancy slowly invaded the camp, it was not one of resignation, but after discovery of the premolar, to the general disappointment of the team, nothing else turned up. In addition the total silence from Jakarta dampened the enthusiasm of many of the younger team members.

‘Get me some better light,’ shouted Tegu.

Pierre Rossard walked over with a powerful hand lamp.

‘There!’ Tegu said pointing carefully with the tip of his trowel. Sticking up from the sediments was something about the size of a thumb nail, it glistened from the thin film of condensation that built up on the small stones as they were uncovered.

‘What’s this?’

‘Another tooth by the looks of it.’

‘That’s what I thought, a molar.’

‘Call Kate, get a camera here.’

It was vital to record anything that could be of importance in a precise in situ location with its stratigraphic sequence. Kate arrived

with the photographic material followed by Fitznorman carrying a hand lamp.

‘Let’s get some better lighting in over here!’

‘Be careful, don’t rush.’

There was a sudden surge of enthusiasm as word of the find reached those outside. A wave of excitement flowed over the camp spreading out to all hands including the guards, cooks and Iban porters.

‘What shall we do?’

‘Shall we wait for Aris and the others?’

‘No,’ said Fitznorman, ‘maybe it’s nothing. Don’t move it, try to uncover it, the stuff around it looks fairly soft.’

Tegu left his place to Pierre Rossard who got down onto his knees, inspecting the tooth carefully. He then carefully started to uncover it with a small spatula. The surface of the tooth lay at a shallow angle, he worked slowly around it with a fine brush, then downwards uncovering the edge of what appeared to be a second molar.

‘Looks like part of a lower jaw,’ he said calmly lifting himself up with an effort. ‘What next?’

‘I’ve got that on the camera,’ Kate said as she turned to Williams. ‘What about you Collin?’

‘Yeh, I’ve got it too.’

‘Let’s get it onto a laptop and have a look at it before we go any further.’

They cleared the cave of personnel and Lundy instructed the guards not to let no one into the cave until they returned. They then made their way down to the stepped path to the base camp. For once there were no complaints about the heat or distance. Shafts of sunlight seemed to brighten not only the forest, but also their hopes, as the sun replaced the rain and dense low cloud that had set in over the last days. Once in the main tent, which served as the office and meeting room, Williams quickly downloaded the images onto one of the laptops and opened them.

They zoomed in on the images taken from different angles showing what was clearly a molar.

‘Right, enlarge that one,’ said Fitznorman.

He zoomed in.

‘What do you think?’ he asked Lundy. ‘Is it the same as the first one?’

‘I’m not sure about that, but it’s definitely the tooth of a hominid,’ he said slowly, ‘though a strange one at that. It’s a molar, a little big, bulbous at the crown, you see these cusps here,’ he went on pointing at the screen image with his ballpoint. ‘Very strange.’

‘Okay, so it looks like it’s hominid, we’ll need to uncover more for confirmation,’ said Fitznorman business like, wanting to get back to the cave.

‘Is it erectus?’

‘That I don’t know, it’s like the other, no mineralisation!’

‘What do you mean?’

‘It’s not that old.’

Once they returned to the cave, Rossard continued, meticulously, to remove the earth away from the teeth with a fine dental pick as the others tensely waited to see what would be uncovered.

The gangue removed was and was sealed in plastic bags for laboratory analysis. The larger particles appeared to be minute fragments of bone or organic material.

The rest of the day was needed to extract what was clearly a fragment of a lower jaw bone, with most of the time being taken up by long discussions on how it could be freed from the deposits that had held it prisoner for so long.

Once freed and placed in a box and was carefully back to the camp. There the fragment was placed on a table and a sheet of filter paper, beneath the yellow light of a bare bulb. They stared in wonder, for many of them it was the first time they had been present at the excavation of what was such an important find. The only sound came from the heavy drops of rain that started to fall.

The atmosphere was stifling as the usual late afternoon storm gathered, it was oppressive and the sweat trickled down their arms as they waited for Pierre Rossard to utter the kind of phrase that would be recorded for posterity.

‘It appears to be erectus,’ observed Pierre noting the receding chin, whilst exercising uncustomary scientific reserve. He was cautious about launching an opinion about the fragment, he would need the opinion of Murtopo, who would not be back for another three days.

‘There’s little doubt that this did indeed belong to some kind of erectus, though we’ll have to wait for a definite prognostic.’

‘Is it from borneensis?’ asked Fitznorman.

‘Difficult to say....’

‘In any case the tooth is massive, compared to sapiens that is, big,’ said Soemarsono, Tegu’s colleague, an experienced palaeoanthropologist who had considerable experience with hominid fossils in East Java. ‘Look, here, you can see if they were modern human teeth they would be finer. These are significantly larger than ours.’

The next afternoon two more teeth and several small bone fragments emerged from the soil. Lundy kneeling on the boardwalk and the rough planks inspected the excavation work, allowed himself a broad smile of satisfaction. His experience in North Africa and now with Borneo was the culmination of his life’s work, few anthropologists were blessed with such two such discoveries in lands and times so far apart.

The atmosphere in the camp became electric as the news spread, they now knew their efforts would not be in vain. They had now several robust teeth, no doubt those missing from the upper jaw and more smaller facial and cranial fragments.

The lower jaw parts and the teeth with the post cranial bone fragments found confirmed that borneensis was a member of the species *Homo erectus*, with a cranial capacity of around 1,300 cubic centimetres, very close to that of modern man, placing him in a

parallel position on the evolutionary tree. Borneesis was probably a male, whose age at death was estimated at being about twenty.

In another gallery of the cave several animal bones were uncovered and identified as wild pig and deer by Soemarsono, which seemed to confirm that the cave had probably been occasionally used as a hunting shelter by borneensis in his day to day search for food and a convenient place to sleep at nights sheltered from predators. All signs seemed to indicate he was killed by a rock fall probably caused by torrential rains and flash flooding, never to return to his small family.

Chapter 24

THE DIG

‘Remember Scott we’re not looking at a very ancient site,’ Williams told Fitznorman, ‘here, it’s equivalent to looking at a late Neolithic, or early Gallo Roman site. It also means exploring all the surrounding caves as well.’

‘What do you mean?’

‘We’re tracking a recently extinct creature and not a million year old fossil.’

‘Of course.’

‘What the site could eventually show us is how erectus lived, if he had evolved culturally and technologically.’

‘Sure.’

‘We also have to find his friends.’

‘Friends!’

‘Well let me explain. As Pierre said there was not just one of them, there were more, certainly a group, that is relatively speaking.’

‘Okay, you mean his family!’

‘That’s right,’ Pierre said joining in with a kindly laugh. ‘Our friend did not live alone, at least his parents didn’t.’

‘Sure.’

‘Let me enlarge on that,’ Pierre said taking on his professorial tone, ‘As I explained, populations of animals, whatever kind of species they belong to, human or otherwise, don’t exist in single numbers, unless they are the very last surviving member, immediately before them were their parents and grandparents, great grandparents and so on as long as the species existed.

‘Look at orangutans, they are the very proof that small populations of large anthropoids could survive in Borneo, in the same way the total population of early humans, which may have always been relatively small, but not smaller than is necessary for a population to be viable, that is to reproduce itself. Any self respecting anthropologist knows that!’

Fitznorman scratched his head trying to extract a meaning.

‘Look at it this way, when news is out, our self respecting anthropologists will come to the same conclusion as we have just done.’

‘And?’

‘They’ll be on a plane and here before you can say Borneo looking for a skull like yours!’

‘Mine!’

‘It’ll take years to explore all the caves in and around the site,’ said Pierre ignoring him. ‘Investigating their stratigraphic levels, excavating deposits, centimetre by centimetre. Our only hope is to find some rapid indications in other caves, where the deposits are intact, you know, neither carried there nor disturbed by water.’

‘Did other people like Dubois look in caves?’

‘Dubois started exploring caves when he was in Sumatra, but without any luck. It was only when he went to Java that he noticed fossils in river banks where the land was flat. As you know the terrain is very different in Java compared to Borneo, over there volcanic mountains rise very steeply from the plains and any caves

would be highly unstable and uninhabitable. It was why men lived on river banks.

That helped Dubious, because there river banks are constantly eroded by the current and during the dry season, especially when the water level was low, with underlying sediments of sandstone and volcanic tuff exposed for fossil hunters. River bends were of particular interest as gravel and debris accumulated and numerous fossils were carried there by the stream.'

Most of the specialists assembled by Pierre Rossard were at work on the site, they included physical anthropologists, paleoanthropologists, ethnoarchaeologists, archaeologists, specialists in environmental sciences and many other experts in tropical forests, management and logistics.

Amongst the many techniques employed by the different team members were stratigraphic excavation and sediment analysis, the study of lithics, organic remains, archaeozoology, archaeobotany, human osteology and the study of ancient diet and pollen, both within and outside the cave.

The trek to and from the camp through the rainforest with its unbearable humidity was the hardest task of the daily routine. Much of the valuable and fragile equipment had to be carried to the cave from the riverside camp every day, then carried back in the evening, together with bags full of samples taken from the flotation and wet sieving stations. Along the path through the hostile, but extraordinarily beautiful rainforest, they were constantly worried by an incredible variety of winged and other insects, amongst which were huge poisonous black millipedes.

In spite of the numerous small difficulties, the atmosphere in the camp was of enthusiastic cooperation. The dig had barely settled into the daily routine, typical of scientific expeditions, when André Etxeberry, an eminent but controversial French anthropologist, arrived unannounced in the camp.

It was not only his sudden appearance, but his manner, that ruffled feathers amongst the senior members of the expedition, Etxeberry had

been used to being treated as a star on TV shows and documentaries and expected to be treated with the same deference. Who exactly had invited him was not clear. Fitznorman suspected it was Favitski, the French Ambassador in Jakarta, who clearly resented his own presence in what he considered was a French show.

Etxeberri had spent most of his life working in parched deserts and though he had made very significant discoveries of man's ancestors in Africa, he knew little of the working conditions in an equatorial forest, where he now spent much time pontificating and recalling his own work to the team members.

What was however more troubling was his insistence in exploring the tunnels of the cave, it was not that they were afraid he would get lost, rather he would end up by crossing the border into the Sarawak.

Professor Nordin had discreetly informed Fitznorman that Malaysian forest rangers had been posted on their side of the border, and though they had no orders to interfere with the expedition's work, they would deal strictly with any persons making an unauthorised entry, or evening straying, into Malaysia, which would be embarrassing for Indonesia and the French Ambassador.

They could not avoid the risk of an incident caused by one of the team's members accidentally crossing the border, and had issued instructions to all personnel to stick strictly to work within the boundaries they had marked out on the Indonesian side.

The GPS readings had been clear enough, though they could be contested as the border was vague, a dozen metres to one side or the other in the jungle covered hills would have, under normal circumstances, been of little consequence, given the border survey markers were far and few between. The maps were out of date and satellites photos did not come marked with borders.

The lesson learn from the Singapore airport incident was clear, working with the Malaysians would be fraught with complications, since their government would never accept a foreign team playing a key role in the investigations of what could be seen as a sensational scientific discovery, the ownership of which would complicate

relations with Indonesian, already in the throes of a deep political crisis.

When Aris and the governor's representative from Pontianak examined the satellite maps of the border area between Sarawak and West Kalimantan, Fitznorman had imagined that they would be familiar with the region, but he quickly discovered that their knowledge was scant to say the least. The maps showed almost nothing but mountains, forests, rivers, lakes and sparsely spaced dots that indicated longhouses.

They marked the GPS reading of the discovery site with a red marker by a cross, the thickness of which was the equivalent to a distance of five or ten kilometres.

On the Sarawak side it was just two hundred kilometres as the crow flies from the capital Kuching, and not that much less from Sibu, the second or third largest town of the state, in fact the only other large town was Bintulu, which lay four hundred kilometres to the north. The State of Sarawak was an almost empty mountainous jungle covered land, the size of England, and a population less than two million.

To the south of the border was West Kalimantan, almost one hundred and fifty thousand square kilometres and a population of four million, the vast majority of whom lived on the coastal region adjacent to Pontianak. The other half of the province, in the Upper Kapuas basin, was the home to barely ten percent of the total population, one person per square kilometre, compared thirty in western half of the province, and one thousand in Java. The Upper Kapuas outside of the small towns and villages was a vast empty space, at least as far as humans were concerned.

The nearest towns of relative importance to the discovery site were Sintang or Putissibau, towns with populations of 20,000 and 10,000 respectively.

It gradually became evident that the discovery cave had no significant sequence of human occupation and it would be necessary to extend the exploration to the surrounding area. It was logical since

the presence of *Homo erectus* had spanned a great period of time, between some hundreds of thousands of years ago until historic times, there was therefore the possibility that evidence of *borneensis* and his contemporaries could be found in the surrounding hills.

Like at Niah, any human presence in the caves would have been that of Stone Age hunter-gatherers, but until that point the expedition had turned up no further evidence of a sequence of prehistoric occupation. The paradox was that the *borneensis* skull was considerably younger than the Deep Skull that Harrison had discovered at Niah.

Ettxeberri had started to speculate the skull had been a plant and a wave of suspicion and discouragement started to make its rounds. Pierre Rossard voiced his discontent to Fitznorman and they were on the verge of confronting Ettxeberri, when, in one of the adjoining caves, the archaeologists identified a complex stratigraphy of dark brown soils made up of numerous sediments.

The deposits corresponded to the Neolithic and Holocene period, the latter commencing around 10,000 years ago, and continuing to the present day.

At the outset the work consisted of excavation in areas of potential interest, preparing sections, and plotting and identifying the stratigraphy of the caves. The work was difficult as the identification of the different sediments was hampered by the poor lighting.

Under the supervision of senior archaeologists, assistants, mostly archaeology students from Gadjah Mada University, worked slowly with trowels, scraping at the surface of the deposits centimetre by centimetre, millimetre by millimetre, brushing carefully around any unusual hard objects, such as the tiny bones or teeth of small animals regurgitated by birds. At the same time others were at work preparing plans of the section, or with the help of a laser camera mapping the entire structure of the cave.

In the gloom the dim lamps cast long shadows across the gallery, the silence was broken only by the scratching and scraping of trowels and the grunts of the archaeologists, in the back ground was the echo of the small diesel generator. The only other activity was the

creaking of the boards as assistants carried away buckets of carefully removed debris to the sieving area outside.

Over time, the floor of the cave had changed, complicating their analysis of the deposits. They were looking for bones, charcoal and tools. Anything that looked like charcoal was given special attention so as to avoid accidental contamination that could influence the carbon dating.

The sedimentary layers near the surface were a deep brown colour, those beneath changed colour, ranging from light-grey to dark yellow, intermixed with ancient guano.

With the lack of results Pierre Rossard decided to accelerate things, and taking a calculated risk he instructed his men to make a deeper exploratory cut.

Then, as they carefully cleared away the loose earth, several small stone flakes appeared, evidence of knapping by a Stone Age tool maker. A significant find, made even more important by the presence of charcoal traces.

At a rough guess, based on the stratigraphic level, they estimated the date at about 3,000 years BP. But the find was of great importance and Pierre Rossard decreed that an absolute date was needed and Professor Murtopo left the next morning with samples for Gadjah Mada University in Jakarta.

It was not the only good news, that evening Etxeberri, peeved by a kind of professional jealousy, the discoverer of fossils of great scientific value in Africa, announced his departure for Jakarta the next day.

Once Etxeberri left, work settled back into an easy going routine as they waited news from Jakarta.

A troop of monkeys had become regular spectators at the dig, watching attentively through the dense foliage of the forest that ran right up to the karst on the edge of the platform. As the team arrived each morning the monkeys treated them to loud hoots, throwing fruit and twigs at them as they made their way to over the board walk to the cave.

Work on the latest find was put on hold as they awaited news from Jakarta and they turned their efforts to work in the next cave. There they uncovered more signs of human inhabitation with stone artefacts and charcoal.

It was there another non-mineralised premolar was discovered. To Pierre Rossard and all other palaeontologists, teeth were the most important remains of any animal, whatever its species.

‘Give me a tooth and I will describe the creature that owned it to you, what it looked like, how it lived and what it ate,’ he had told them.

The tooth was unusually robust and the question arose, did it belong to the skull Fitznorman had found, or did it belong to one of his contemporaries? Judging from the depth in the cave floor it was within the time frame that corresponded with the datings established in Paris.

They were now certain that *Homo borneensis* would not be surrounded by the kind of controversy that the Niah skull had known. At the time of Harrison’s work, the science had been less exact and to complicate matters, Harrison was not a trained scientist, leading to doubts as to the exact position of the skull in the ground and the surrounding material, which had been used to corroborate the date attributed to it.

Pierre explained to Fitznorman that sediments, which show signs of human presence, were often darker, composed of decayed organic matter mixed with the charcoal from the remains of their fires.

A second diesel generator was brought up to the caves providing lighting for the other caves now being explored by two of the team’s potholers.

Collin Williams assisted in the interpretation of the stratigraphic layers together with a specialist in geomorphology, who deciphered the sequence and accumulation of material that formed the sediments, helping them understand when and in which conditions the caves had been inhabited.

The earth brought from the cave was dry sieved with bone, stones and organic material being sifted out, the remainder was carried to

the wet sieving station. It was there they discovered more tiny pieces of stone flake, confirming that stone artefacts had been made or honed, evidence of Palaeolithic technology, or what palaeoarchaeologists call debitage.

It was exciting because there had been little evidence of stone tools at Niah. Certain archaeologists had suggested that this had been due to the lack of flint and hard stone, assuming the use tools made from wood, or perishable materials, or the perhaps the caves had been simply used as shelters by hunters at night or during storms.

They sat drinking beer as darkness fell in the relative cool of the evening. Cigarette smoke mingled with that of the anti-mosquito coils, which seemed to work for once as there were fewer insects than usual. They were beginning to feel the effect of several weeks in the jungle, looking a little worse for wear.

It was a good team backed with solid experience, they understood the kinds of difficulties associated with excavating caves, the problems of access, safety hazards and lighting problems linked to confined working conditions. They took special care to avoid destroying evidence that could throw reveal on vital evidence in their search for minute clues to the distant past.

It was rare to work on an undisturbed site, since in many other regions of the world caves had been frequented by men in modern times.

That assumption was turned upside down when late the following morning, Pierre Rossard was called to an adjoining gallery. One of the students, an attractive girl named Mila, had uncovered what at first looked to be small flat stones. Taking a piece in his hand he turned it over examining it under the beam of a small but powerful flashlight.

‘It’s a shard. Probably an earthen ware jar,’ announced Mila.

‘Impossible erectus didn’t have jars!’

They passed the small fragments around.

‘The erectus known to anthropologists, up until now, did not have jars,’ said Pierre, ‘it’s ridiculous to even think of it, but our friend borneensis was much much younger. A contemporary of those who lived in the Niah caves and they had clay jars.’

‘You mean those people knew each other?’

‘It’s a possibility, and if it was the case maybe there were exchanges.’

‘Is that possible, could they communicate?’

‘Don’t forget the adaptability, intelligence, and ability of erectus to use tools. Yes, he had the capacity to communicate and although he did not invent jars, his neighbours certainly did.’

Chapter 25

OUT OF AFRICA

There was an ongoing debate between scientists advocating different theories on the origin of modern man, often motivated by individual ambition and glory. Many paleoanthropologists in their quest to unravel human origins would seize at the least information, to prove or disprove a point, disputing dates, levels, bones and stones.

Whilst in all professions there exists the usual mix of human weaknesses, pride, arrogance and jealousy, it is curious to find this in the world of science dedicated to the search of truth, where many celebrated academics are known for their temperamental fits, eccentricity and a general disdain for the discovery of others.

Such debate left a trail of confusion with anthropologists proposing different hypothesis as to the geographical origins of modern man, that is *Homo sapiens*.

There were those who advocated of the Out of Africa hypothesis and others who supported the concept of Multiregional evolution. And others supported a Polycentric vision of *Homo sapiens* with the clade evolving and living throughout Africa.

A clade was a group that consisted of a common ancestor and all its lineal descendants. The common ancestor was an individual, a clan, a population, or a species.

This Multiregional theory was based on the idea that man evolved in Africa some two million years ago, then spread out into Europe and Asia, where he evolved, forming today's different populations which were linked by interbreeding. Considerable support existed in Asia for the Multiregional theory, especially in China, where national pride and politics coveted the claim that their nation was the birthplace of modern man, that is the Chinese race.

The Out of Africa theory was based on a much more recent African origin for modern humans, demonstrating that *Homo sapiens* evolved as a new species, distinctly different from those that pre-existed it, Neanderthals and *Homo erectus*, and gradually replacing them.

However, the Out of Africa theory was seriously questioned by its critics after molecular biologists had given credence to the theory with their analysis of mitochondrial DNA, which they declared, demonstrated that all present living persons could all be traced back to an African Eve, who had lived in Africa 200,000 years ago. The critics on the other hand pointed to recently discovered early human fossils found in regions of the world far from Africa, the Denisovans in Siberia, for example, who predated Eve and contradicted the theory.

Since genetic mutations occur randomly and accumulate at a constant rate, this molecular clock enables scientists to calculate the time back to a common ancestor of those humans living today and shows that a common mitochondrial DNA ancestor lived about 200,000 years ago in Africa.

The Out of Africa population was initially a population of just a few thousand individuals that grew and around 100,000 years ago started to migrate out of Africa, spreading to all continents gradually replacing all other existing species of man. The question remained as to whether this small number of individuals could have replaced the

entire population of the world, composed of one or two million beings without interbreeding.

In Australia a series of fossilised skeletons were discovered at a place called Mungo, which were calculated to be about 60,000 years old, when erectus was still very much alive in Java and other places in a more evolved form, sharing a number of common features with Mungo Man.

Certain scientists suggested that two different populations arrived in Australia, one from China and the other from Indonesia, and these mixed to produce the ancestors of the aboriginal populations of present day Australia. The first arrival was erectus followed by Homo sapiens. Discoveries made in the south eastern region of Australia appeared to confirm the coexistence of two such distinct populations in prehistoric times. One having a gracile, or modern type of morphology, whilst the other was of a more robust or archaic form with cranial features similar to those of erectus.

Lundy had recognised that borneensis could provide convincing evidence, proving, or disproving, those theories. To do so, further DNA samples were needed, from scientifically excavated bones, so as to avoid the kind of controversy that could arise over suggestions of contamination of the DNA initially extracted from the calvarium, when Fitznorman had presented it to him in Paris.

For Lundy, Borneo was a remarkable laboratory since it had been protected until very recently times from the intrusion of modern man, the vast part of the island being in effect pure virgin territory.

In the less recent past, the early part of the nineteenth century, the population of the island had been not much greater than a million. The main reason lay in the island's geography. At that time the interior was covered by dense inaccessible rainforests and high mountain ranges whilst the coast region was protected by impenetrable mangroves. The forest dwellers had not the means to cut down two hundred year old hardwood trees, up to sixty metres high and two and a half metres in diameter, which explained to a

certain degree why Borneo remained so underpopulated compared to its neighbouring islands such as Java, or the Malaysian Peninsula.

This remained unchanged for tens of thousands of years and over the countless generations men inhabited the island, living their nomadic, or semi-nomadic, lives in harmony with the never changing forest. Numerous cave and rock paintings in Niah and other caves across the island bore witness to their presence.

‘So what about about Mungo Man, is there a link to the discoveries here?’ Steve asked.

‘Well the theory is that both sapiens and erectus crossed to Australia within the same time frame, between 100,000 and 30,000 years ago,’ Pierre Rossard replied.

‘Is it not logical,’ Fitznorman said, ‘to think that if they had lived side by side for about a hundred thousand years, sapiens and erectus would have interbred?’

‘Well,’ Pierre said carefully, ‘they are considered to be distinct species, and there is little doubt that sapiens succeeded erectus. Whether they interbred is another question.’

‘How did they get to Australia? Was there a land bridge?’

‘No, there was never a land bridge from Indonesia during the Quaternary, that is over the course of the last 2.6 million years. On the other hand, New Guinea was joined to Australia by an overland route. The Wallace Line prevented man crossing to New Guinea or Australia by dry land, so they must have crossed by some kind of boat or raft!

‘You see two stretches of deep sea separate the Island of Flores from the rest of Indonesia. The first, between Bali and Lombok, is about twenty-five kilometres wide, and the second, from Sumbawa to Flores, is nine kilometres wide. That means only animals that could swim, or men with rafts or boats, could have reached the remote island of Flores on the other side of the Wallace Line.’

‘How deep are the waters surrounding Flores?’

‘Deep...more than one hundred metres. The lowest level of the sea in this zone was somewhere between eighty and one hundred metres

below the present day sea level, though some of the channels are much deeper.’

The Wallace Line, named after Alfred Russell Wallace, was the most important biogeographical frontier in South East Asia. The islands to the west were joined to the Asian mainland by land bridges when the sea level fell, and were populated by the complete family of Asian land animals. On the other hand, the islands to the east, such as Flores and Timor, were separated by a deep sea barrier from the Asian continent and had few large land animals before the arrival of man.

There were other examples of sea crossing elsewhere on the planet that seem to confirm the migration of early humans by some kind of raft or boat. For example the Straits of Gibraltar, which today are thirteen kilometres wide, but when the sea levels were lower it was only five kilometres across, with some small islands in between and therefore much easier to cross.

Early man had lived in both Spain and North Africa, so he could have taken the long route through the Levant, or crossed by sea, whether he swam or floated across will probably never be known, but he could have used some kind of a boat, or navigable raft, as he seems to have done in Flores here in Indonesia.

The Flores evidence indicates that erectus seems to have been a toolmaker and a boatmaker, and evidence discovered in China indicates he was also able to make fire. So it seems reasonable to imagine that he could have used materials such as wood and animal skins to have made some kind of simple craft.

Three 400,000-year-old wooden spears found in a mine in Germany, were perfectly shaped for throwing and balanced like a modern javelin. Such materials would have not survived in most places, either because they were organic, or they were not as common as stone tools.

‘So the big question is when exactly did Homo erectus become extinct? What’s certain is once our borneensis find is published it will start a real brawl,’ said Fitznorman.

‘Well up until the discovery of borneensis, the site of Ngandong in Central Java has been the best clue, the dates there have supposed that his extinction took place between 53,000 to 27,000 BP. That means sapiens had already appeared on the scene.’

‘Was he responsible for the disappearance of erectus?’ asked Steve.

‘Probably, but that’s difficult to prove.’

‘What’s Lombok got to do with erectus?’

‘Well some recent discoveries show the presence of erectus on the island of Flores, that’s to the east of Lombok by the way,’ said Pierre.

‘Lombok?’ asked Steve.

‘In the Lesser Sunda island chain, off Java, only a few hundred kilometres from the sites in Java, where erectus fossils have been found since the end of the nineteenth century.’

‘So he could have been capable of building a boat to get there!’

‘So it seems.’

‘Was Flores an island at that time?’

‘No, Flores was part of the prehistoric land mass of Sahul on the eastern side of the Wallace Line, which as I mentioned was separated by twenty five kilometres of deep and dangerous sea from Sundaland.’

‘Were the two landmasses ever joined?’

‘No, not at any time during the existence of man or his bipedal ancestors.’

There was a silence as they tried to absorb Pierre’s explanations.

‘So with some kind of primitive boat, they navigated across the open sea, very much earlier than we thought, using mountains and volcanoes as land marks, island-hopping from Java to Flores.’

‘Then overland to Australia?’

‘The fact that man was present on Flores means that he could have migrated into what is now Australia by foot when the land bridge was emerged, or by sea when it was not. This of course conflicts with

the idea that the first settlement of man in Australia dates back to 50,000 to 60,000 years, however, the stone artefacts discovered in deep and easily datable volcanic ash deposits on Flores suggests it was much earlier.'

'Is there any fossil evidence of that?'

'No...but it does not mean that it does not exist, it simply hasn't been found yet,' he said with a mischievous smile. 'You know people are very strange, they accept an idea until something turns up to contradict it, like a discovery, then everybody starts looking where they hadn't thought to look before.'

'Like here.'

'Exactly, and it shows that erectus was capable of advanced communication and had developed skills that enabled him to build some kind of craft capable of navigating on the open sea.

'The evidence is there. In 1968 another Dutchman, a missionary and amateur archaeologist, who was living on Flores, found some stone tools deeply embedded in deposits of volcanic ash. Then more recently excavations in a limestone cave at a place called Liang Bua, in West Flores uncovered more evidence, stone tools to be exact, confirming that hominids had arrived on the island some 840,000 years ago.'

'Confirming?'

'That's right, they used a technique called a fission-track on samples of volcanic tuff from the strata where the tools were embedded,' explained Pierre.

'That's some kind of lava?'

'If you like, it's another name for rock that was once loose pyroclastic material, in other words any ash, rock or cinders ejected into the atmosphere by volcanic eruption. Once it's exposed to the elements it cements together forming a solid mass of rock that we call tuff.'

'So how does this fission-track dating work?'

'In very simple terms the volcanic ash contains different minerals including zircon, which is a perfect element for fission-track dating.

Atoms of uranium-238 are found naturally in the zircon and with time they undergo spontaneous fission, meaning they break apart or explode, you know nuclear fission! This results in fragments streaking across the crystal lattice, a little like a meteorite in the night sky, leaving tiny tracks behind them. These tracks are counted and the more there are, the greater the time since the rock crystallized.'

'Incredible!'

'Wonderful what science can do for us,' said Pierre looking very pleased with the effects of his explanation.

'Maybe we could go to Liang Bua with Alfonso Ribeiro, he's promised to take me to Komodo on his boat.'

'The Brazilian guy? Ecologist?'

'That's right. A forestry consultant.'

'Why not, though we'd need more time,' Aris warned them. 'It's a journey over fairly awful roads to the town of Ruteng, then a rough ride over a forest track to the cave.'

'We're used to that aren't we?' replied Pierre smiling.

Chapter 26

A CAMDEN PASSAGE DEALER

Jimmy Fogg was known in the business for his connections with the murkier side of the antiques and curios world and he was precisely the person that Fitznorman needed in his search for the missing skull.

Fogg liked to present himself as a fine arts broker, though some spitefully called him second hand dealer at best whilst others treated him as a cheerful crook, and those he had crossed at some time did not hesitate to describe him as a cheap fence.

The Fogg's owned two handsome antique shops, one in Camden Passage, and the other on the Fulham Road. It was a family business, his great grandfather, a Jew, had arrived in a hurry from Czarist

Russia, fleeing the wrath of some very unhappy customers some time before the Revolution, setting up shop in East London.

Over the years the family dealt mostly in second hand furniture and run-of-the mill antiques, then in the late fifties they moved on, to more up-market antiques and art, and as the prosperity of the consumer society grew they catered to the pockets and tastes of the post-war nouveaux riches.

Jimmy had learnt the trade from his father, a character with a strange reputation, whom Fitznorman had never met and who for some reason was kept in the background. Jimmy was known in the business from London to Tokyo and from St Petersburg to Sydney, he would buy and sell almost anything that was remotely collected with art and arcane collections as long as there was a profit in it.

In spite of his somewhat doubtful reputation he knew his business. A collector could locate and buy the strangest things through Jimmy, then have them transported from one end of the world to the other in a couple of days, cutting through all kinds of red tape.

Fitznorman had confided to Jimmy the job of tracking down the lost skull, which had been illegally exported from Indonesia. The government wanted it back and in particular the Minister of Culture, who had accorded Aris his support and the permit for the exploration in Kalimantan, in exchange was a promise to track down the missing fossils, believed to be in the hands of a private collector, and if possible return them to Indonesia.

Fitznorman received a mail from Fogg with several attachments, photos of a brown skull. After carefully examining the photos, comparing them to those Tegu had given him in Jakarta, then he called Jimmy.

‘So Scott, no doubt you want to know where I am with your business?’

‘That’s right Jimmy, I see you’ve been able to locate something interesting?’

‘Yes we’re in luck, if we can move quickly. I’ve checked things out with one of my American contacts who knows a very private collector. Whether they’re ready to play ball with us or not, I don’t

know, there's a helluva lot of politics involved especially with the troubles out there in Jakarta at the moment. It would have been the best for your friend to do it through official channels, but unfortunately that's out.'

From the photos the skull appeared to be one of *Homo erectus*, but Fitznorman was not entirely sure, and although he had compared it with the photos given to him in Jakarta, he was not sufficiently knowledgeable to come to any definite conclusion, especially since the photos could be misleading, or even photo-shopped.

All he knew was that Tegu Murtopo, the director of palaeoanthropology at Gadjah Mada University in Jakarta, had told him the cranium came from the Solo River area in East Java, and was estimated at anywhere between 100,000 to 1.5 million years ago. The photographs Tegu had given to Fitznorman clearly showed the sutures in the skull cap. The fact it had probably to a young adult male was purely academic.

Fogg went on to explain that it had been tracked down to a private collection of Asian curios belonging to a Los Angeles antique dealer. The question was, how had it arrived in Los Angeles?

Jimmy learnt it had been bought as part of a complete collection from the widow of a wealthy American businessman who had spent part of his life living and travelling in South East Asia, a keen collector of tribal art and curios.

The second question appeared not to be one of ownership, but how much?

The precise origin of the skull was unknown to the antique dealer, though he had shown it to a friend, an anthropologist at the American Museum of Natural History, who suggested it may have been part of the Peking Man fossils collection from Zhoukoudian in China, lost at the beginning of World War II during the Japanese invasion.

In fact, the lost skull had been found in a sand bank on Solo River, in the Sambungmachan District of East Java, and had been bought from a workman for a few dollars by a local small time fossil dealer, who then sold it to the American businessman in the antique market on Jalan Surabaya in Jakarta, who illegally brought it out of the

country. It had been one of three fossil skulls found at the site and had been stolen before the University could involve the police.

What was scientifically interesting was the cranium resembled the Ngandong skulls. It had certain Homo erectus characteristics, a thick cranial bone and a pronounced browridge, but a high forehead and rounded braincase, which were more common with archaic Homo sapiens. However, the cranial capacity was low, around 1000cc compared to 1200cc in archaic Homo sapiens. Even more interesting the brain imprint showed evidence of Broca's Cap, a sign of language capability. From the little evidence available Tegu had estimated it to be around 40 or 50,000 years old.

'This could be it, what now, can I send these photos to Jakarta?'

'Yes, send them to Jakarta,' replied Jimmy, 'as for the rest I'm working on that right now.'

'Working on what?' Fitznorman wished he would be more precise.

'Be patient, you remember the fellow in Zurich?'

'Which fellow?'

'You know the Russian.'

'Okay, I remember, the Georgian.'

'That's him. He's the collector, you know, in New York, but right now the skull is too hot and he'd like to get rid of it if the price is right.'

'How much?'

'I reckon after my first feelers, we could get the whole thing for about a million.'

'A million! A million what?'

'Dollars.'

'You're joking?'

'A little bit outside of your budget. I see, well, if you're friends are really serious I think we can make an effort, but I'm not sure.'

'Listen Jimmy we've got to get together quickly so we can talk about this, in the meantime tell your pal he's asking too much.'

‘When?’

‘Next week.’

‘No we’ve got to move sooner, this Russian will move if I don’t give him a sign right now.’

‘What do you suggest?’

‘Listen, I’m going down to Morocco...’

‘Morocco!’

‘A few days’ golf with Lombard, you know my Swiss friend, why don’t you join us, and it won’t be a waste of time.’

‘Lombard!’

‘He’ll be looking after the details if we get a deal.’

Fitznorman knew Lombard, a sharp wheeler dealer, who often helped Jimmy with the arrangements for his business transactions in Switzerland away from the prying eyes of British tax inspectors. Lombard was flying down to Morocco, where he was planning to play golf and meet his friends from the Ministry of Mines.

‘Okay, send me a mail with the details and book a room for me.’

Fitznorman knew that Aris would play along, but at a lower price, if the skull was genuine. His new logging concessions probably depended on making the minister happy and would in any case generate some fairly extravagant profits that could support the expenses of half million dollars or so. In his mind he felt confident that they should be able to put a deal together.

Seated in the first class section of the Royal Air Maroc flight, Fitznorman relaxed as he was fussed over by the cabin attendants serving champagne and hors d’oeuvres. The captain announced that the flight time was estimated to be about two and a half hours to Rabat. Fine weather was forecast for the arrival with ground temperatures a pleasant twenty five degrees centigrade.

The flight landed at Rabat Sale Airport at just after eight in the evening where a car from the Hyatt was waiting to pick him up.

The Hyatt was a welcome change from Borneo, situated about two kilometres from the centre of Rabat, a luxurious hotel offering a mixture of modern and traditional styles.

The walls of the vast lobby were decorated with carved arabesque style stucco, the floors spread with Arabian rugs, all of which was brilliantly lit by magnificent crystal chandeliers. To add to the ambiance the doorman and baggage porters wore red fez's and traditional djellabas.

The majority of the hotel guests appeared to be European or American tourists, others looked as if they were from other African or Arab countries visiting the Cheriffian Kingdom on business, or perhaps an official visit to the court of Mohammed VI.

Fitznorman recognised Lombard, dressed in his usual laid-back English gentleman style, standing in the lobby lounge talking with Jimmy Fogg who had arrived by an earlier flight. After greetings, they agreed to meet in Lombard's suite for drinks once Fitznorman had settled into his room.

'Well here's to our success,' said Fitznorman lifting his whisky. 'So Jimmy has told you all about the objects that we are negotiating for Mr Aris?'

Lombard nodded non-committally.

'By the way Jimmy, before we go any further we'll need the skull looked over by a qualified palaeontologist.'

'Come off it old pal,' said Jimmy with a broad gesture of his hands. 'Do you think I go in for rubbish, you know me, I wouldn't be here if I wasn't sure of the goods.'

'Okay, but in any case if we come to an agreement, at the moment of exchange, a bank transfer against goods, there will have to be an expert, there's no other way. I can trust you Jimmy, but I don't know who the other party is.'

'It's an old lady, I mean it, she's the widow of the person who took it out of the country in the first place and all she wants to do is get rid of it...for a price.'

‘Hang on a minute, I thought it was a Russian?’

‘That’s right he’s handling things on her behalf.’

‘Sounds a bit dodgy.’

‘Look don’t worry about that, it’s the skull you want isn’t it?’

Fitznorman nodded a little uncertain.

‘What about the price?’

‘I put the pressure on and they’re willing to deal at six hundred,’
Fitznorman replied, then adding, ‘thousand.’

Jimmy ignored him

‘So the price is six hundred thousand dollars then, Scott tells me we can get a guaranty from Aris’s bank, his own bank!’ said Lombard.

‘Bank Surabaya Mas.... Hong Kong?’

Fogg nodded.

‘It’s not exactly a first class international bank!’ said Lombard.

‘But Aris’s group is a first class risk.’

‘With the present political chaos I wouldn’t agree one hundred percent with that statement...but don’t worry I think Aris is a good risk.’

‘Excellent,’ said Fitznorman.

‘Not so quick!’ said Lombard. ‘I must inform you that my fee will be another fifteen percent.’

‘That’s quite a bit,’ said Fitznorman, ‘Let’s say it’s not a big problem.’

‘Good, it’s agreed.’

Fitznorman nodded.

‘Don’t forget it’s all in American dollars,’ chipped in Jimmy, ‘don’t let Mr Aris get any ideas about paying us in Indonesian Rupiah.’

Fitznorman gave a weak laugh.

‘So, what’s our program then,’ said Jimmy.

‘This evening dinner and tomorrow golf.’

It was simpler than Fitznorman would have thought, short and sweet, nothing had been lost for the moment and he left Rabat feeling pleased with himself. The arrangement with Fogg and Lombard looked positive. It only remained for Aris to approve the arrangement, in principal a formality.

Chapter 27

A BRAZILIAN

Boats and ethnology, a funny mix, but that was Alfonso Ribeiro, he was a specialist in both. Boats came first and the forestry paid the bills. The boats were expensive, much more expensive than any mistress.

He had been born into a wealthy family in Buenos Aires, where he lived until the family moved to the United when he was sixteen years old. Ribeiro studied ethnology, not with the view to it being a profession, but because it was fashionable amongst students. He added tropical forest ecology because in South America the two went together, governments killed Indians and dispossessed them of their natural home. Ribeiro like many other young people of his generation had taken up the banner in defence of Brazil's Indian peoples.

After graduation at UCLA he moved to Europe to pursue his education and in doing so became fluent in French and German. He cultivated his style, though he retained a very slight South American accent, which gave him a certain charm.

A little older and more realistic Alfonso Ribeiro commenced his career with a Boston based consulting firm, advising them on forestry and conservation in the Amazon Basin. After almost five years he was appointed as a permanent adviser, based in Rio de Janeiro, when the Brazilian market promised growth and profits.

He built a solid reputation advising government policy makers concerned by the effect the treatment of the Indians had on the

country's international image. Ribeiro then moved on joining a multinational group as an internal consultant for a vast reforestation project in Amazonia.

In spite of promoting the business of his employers in Amazonia, he never ceased to be concerned by the destruction of the Indian habitat, an endless conflict between the needs of his country's burgeoning population and its original peoples. But in truth Ribeiro was not made to spend his life as a missionary, struggling to survive, defending the Indian way of life, living in some lost village deep in the heart of the Amazonian forest.

The frugal life in Amazonia, far from the comforts and distractions of civilisation finally took its toll and Ribeiro having inherited a substantial sum of money decided that a change was in order. The conflict of interest had become too much and declaring his disgust with his government's policies he simply chose the easy route out. He packed his bags and headed for San Diego in California where he had dreamt of spending his days as a kind of latter day Hemingway, boating and writing about the Indians.

It did not turn out quite as he had expected, as an adventurous South American he could not resist the infinite number of business temptations of Southern California. He became involved in a boat building company in which he invested heavily. They built boats for the very rich in the US and overseas.

His enthusiasm and ambition overtook his sense of business. Through a combination of poor judgement and bad luck he lost his shirt to a Lebanese partner, who embroiled him in a sordid affair delivering boats to rich Saudis in Marbella. Alfonso's problem was that he was too trusting with the result his partner disappeared with several million dollars and an expensive yacht, last seen heading for Suez in Eastern Mediterranean.

It was a hard experience. He fell back on forestry, setting himself up as an independent consultant, specialised in tropical forest policy. Forced to put as much space as possible between himself and California, he set up his business in Montreal, where many of the

large forest based industry companies and international consulting firms had their headquarters.

He was now wiser, and though perhaps a little over-weight, he cut a fine figure, a smart dresser, often wearing a blazer and British style regimental tie. He had the kind of qualities that inspired the confidence of his clients, a good listener with endless patience, and above all an incomparable knowledge of tropical forest systems and ecology.

Canada was not known for its tropical forests and his customers, whose business had spread into South East Asia, engaged him as a specialist for their projects, lobbying governments, where the forests of Malaysia and Indonesia were being exploited by the pulp and paper industry.

He was well introduced in Jakarta with contacts at the Ministry of Forests in Jakarta, close to the Minister Wihartjo and his Director General Rudini, whom he advised on long term planning of pulpwood plantations and conservation questions. Wihartjo had recommended him to Aris on the setting up of timber estates and plantations needed for the supply of raw materials to his mills.

Fitznorman met Ribeiro as a guest at one of the regular business dinners when Aris entertained his friends mixing business with pleasure. They became friends with a common interest in ethnology, comparing their experiences in the forests of South East Asia and Amazonia, regions which were remarkably similar in a number of ways, climates, forest peoples, rivers, jungles and the threat of loggers and monoculture.

Beyond that their business worlds were very different, but little by little they got around to mixing art and boats. Ribeiro took pleasure in introducing Fitznorman to island hopping, sailing to little known and sometimes uninhabited islands, and those much more known such as Krakatoa.

Together with Pierre Rossard, they flew to Bali to meet Alfonso who was up to his promise, a boat trip to the Island of Komodo. Fitznorman also wanted to explore Flores, 370 miles east of Bali, beyond Komodo, where he could visit the caves in which ancient

stone tools had been found and possibly other islands that lay to the east, a potential source of antiques and ethnic art. Scott figured a little time away from Jakarta would not hurt as the riots and disorder seemed to have taken hold of the city.

Ribeiro following Aris's recommendations, chartering a sixteen metre sailing boat from Jim Collins, an Australian who had opted for a wanderer's life drifting from port to port like an old seadog with short charters for well heeled tourists.

It was Saturday morning in the half light when they sailed out amongst the Bugis's sailing ships in Sape Harbour. They headed down the long narrow bay and were soon in the open sea. Ribeiro sailed east around the point pushed by a stiff breeze cutting through the low waves, the coast a grey-blue haze to the south.

At that rate Ribeiro told them they would be on Komodo before midday, a sailing time of about four or five hours. The Komodo National Park consisted of several islands, the largest of which was Komodo, lying between the islands of Sumbawa and Flores in the Lesser Sunda Islands, 200 nautical miles to the east of Bali.

With Jim Collins at the helm they relaxed, watching the coast line slip by, there was little else to do for the next few hours.

Their conversation wandered as Ribeiro described to Fitznorman his business in East Kalimantan on a project that was to transform the secondary forest areas into pulpwood plantations.

'So little by little the forest is being cut down to make for agricultural land and the tribes' people will become town dwellers.'

'I'm afraid so Scott and there's very little we can about it, the population is growing at an alarming rate and they need land and food.'

'The population of Java, not Borneo!'

'It doesn't matter where, for their government it's all Indonesia.'

Ribeiro described the secondary forest that sprung up replacing the natural forest after the valuable timber had been felled by the logging companies. Previously the loggers were only interested by

what were called dominants, the giants of the forest, which form the pillars around which nature built the forest.

Now they even wanted to clear cut the secondary forest as part of a programme to settle immigrants from densely populated Java, transforming the secondary forest into agricultural land and plantations of oil palms, rubber trees and pulpwood.

‘So this means that little by little Borneo will be deforested?’

‘That’s right, the same as in Brazil and the Philippines.’

‘Do agree with that?’ questioned Fitznorman.

‘Whether I agree or not makes little difference.’

‘Why?’

‘I’ll tell you a story,’ he said, ‘that of the Jari River project in Amazonia, a story of how men destroy nature without the slightest thought to future generations.’

‘I think I’ve heard of Jari,’ Fitznorman said vaguely. ‘It wasn’t Ludwig was it?’

‘No, it wasn’t really Ludwig who started it all, sure it had been his baby, but above all Jari was fully backed by General Golbery.’

‘Golbery?’

‘A general who controlled the Extraordinary Ministry for Regional Agencies in Brazil. Later he became the Chief of State security. It was unusual because he had some very strange ideas about geopolitics.’

‘What do you mean by strange?’ asked Fitznorman.

‘Well, he controlled and influenced Brazil’s development of its natural resources for several decades. He was a man who stuck to his policies...even when it should have been obvious that he was on the wrong track.

‘How exactly was he involved with Jari?’

‘Jari was what I suppose you could call a joint-venture between government and capitalism. One of the most well known, because it involved Daniel K.Ludwig.

‘I see,’ Fitznorman nodded, though he’d never heard of him.

‘It was initially seen as a frontier project, you know the kind that the media likes to talk about, that is before the ecologist movement even existed,’ he chuckled.

‘When did it start?’

‘On the Jari River! You know where that is?’ he said glancing at Fitznorman. ‘South from the Tuma-Humac Mountains that separate French Guiana from Brazil, the plantations were started there in 1967.’

Fitznorman was none the wiser, and furrowed his brow as if trying to visualise the geography northern Brazil. Alfonso had talked about it many times, but geographically it remained vague.

‘Who was Ludwig anyway?’ asked Fitznorman.

‘An American billionaire, enormously rich, he made his fortune in shipping.’

‘Yeah, I seem to remember that, but what was he doing in the Amazon anyway?’

‘I’m not really sure, but you know his idea to make plantations in Brazil wasn’t the first.’

‘Oh.’

‘The first, at least in modern times, was none other than Henry Ford. He tried to set-up rubber plantations, at a place he called Fordlandia, where he bought two and a half million acres, much further into the interior than Jari.’

‘Fordlandia! That goes back quite a way?’

‘Yes. It wasn’t such a big project as Ludwig’s, about seven thousand acres of rubber trees were planted, they should have been ready for tapping in 1936, but one disaster followed another. In the end, after spending over ten million dollars, Ford sold out to the Brazilian government, for a twentieth of that sum in 1945. I guess he wanted to control the source of rubber for his car tyres.

‘Anyway it was a fiasco, just as Ludwig’s was to end up forty years later. The only difference was that Ludwig’s project was on a very much bigger scale and surprisingly, looking back, most of mistakes were the same!’

Ribeiro pointed ahead, their route lay between Pulau Banta and Pulau Kelap and soon they saw Komodo rising in the distance before them.

Fitznorman looked at Ribeiro, he had stopped talking, the swell had increased and the boat was rising and falling more than earlier.

‘The weather is changing?’

‘No, it’s just the swell.’

‘So what happened with Ludwig?’

‘Well Ludwig bought three million acres in northern Para, on the north side of the Amazon, about 200 kilometres from the island of Marajo. He planned plantations of a fast growing Indian tree known as *Gemilina arborea*. They’d calculated that there would be a shortage of wood fibre for the paper pulp industry.’

‘Was he wrong?’ said Fitznorman smiling.

‘You know he was! There’s no shortage, now, or in the near future, but then Brazil imported all of its paper pulp from the USA, illogical when you think of the vast forests resources in Amazonia, wasn’t it?’

‘What about Borneo?’

‘You don’t need to cut down all the forest, that’s what I keep telling them. A couple of hundred thousand hectares can supply all the wood you want. They don’t need to need to push the Dayaks into slum towns and run down villages where’s there’s no work. Anyway it wasn’t only pulp wood plantations that Ludwig planned, he also envisaged vast rice paddies, the biggest in the world, mining and livestock operations and workers townships, as well as 2,500 miles of roads and about fifty miles of railroad track.’

‘Sounds a bit like Aris’ project,’ said Fitznorman frowning.

‘That’s exactly why I’m here in Indonesia. Not only Aris, but the Ministry of Forests want to avoid the kind of mistakes made over the last few years in the forestry industry here. They want to set up eco-tourism, providing a living for the local peoples and developing nature reserves, like the Komodo National Park. Not making the same mistakes Ludwig and Ford made. There everything that could

go wrong went wrong from the start, Murphy's Law. I'm not making excuses, even if I had been there, it wouldn't have made any difference!' he laughed.

'You know those god dammed bulldozers, even scrapped off the top soil, and practically all of Gemilina seedlings failed,' he said shaking his head. 'The rest were attacked by disease.'

The boat veered the right as they neared the shoreline sailing down the west coast of Komodo.

'Sandbanks, I have to be careful, we wouldn't want to be stranded would we?' he laughed.

They were still some ten kilometres away.

'Don't worry,' he laughed and continued his story. 'Anyway, less than a quarter of the planned plantations had been actually planted, and the success rate of those was fifty percent below what they had calculated.'

'How was that?' asked Fitznorman, accepting a beer and one of the sandwiches that Jim Collins was handing around.

'I suppose the real reasons were a lack of botanists and experienced silviculturists in tropical forestry.'

'What happened then?'

'Ludwig ploughed ahead with his plans and a paper pulp mill was built in Japan.'

'Yeah, I'm more or less familiar with the rest of the story, but fill me in on the details.'

'Well, as you know, the mill was built on a couple of enormous barges. They towed them all the way from Japan, across the Indian Ocean, around the Cape of Good Hope, then across the Atlantic and finally down the Amazon to the Jari River.'

'Yeah, I remember it was a really quite a Pharaonic project.'

'You're right, the barges were beached at the final destination, at an already prepared site on the banks of the river.'

Collins pointed to the bay ahead of them, 'That's Loh Liang, the landing point, we'll be there soon.'

‘The mill was started up on time, but the plantations had fallen way behind schedule, so the mill lacked raw material. Because the plantations could not provide all the wood needed, they started cutting down the natural forest to fuel the mill’s boilers for steam to run the power generating turbines.’

‘What about the rest of the project.’

‘Well then they hired some Japanese agronomists, but they also ran into trouble.’

‘Are you saying there was some kind of sabotage?’

‘That’s really difficult to say, but my opinion is there were too many coincidences. The whole thing was a complete financial disaster after Ludwig had poured in hundreds of million of dollars. They were hiring and firing project directors one after the other, in total over a period of fourteen years, there were about thirty of them.’

‘And you were one of them?’

‘Yes and no, I wasn’t one of the project directors, I hired as a consultant to put order into the forestry projects and plantations. I was there six years altogether, a miracle.’

‘And after that?’

‘Well the whole thing practically came to a standstill. Ludwig could not obtain any more money from the Brazilian government to extend his operations for a second stage of the pulp mill. Finally he threw in the towel and sold out to a consortium of companies.’

‘What about the plantations then?’

‘Well they didn’t exactly give up, but the Gemilina plantations were finally abandoned, too expensive. It wasn’t what could be called an outstanding success story!’ he said slapping his knee and laughing.

‘What about Komodo?’

‘The island? Well, you could call it, hot, dry and hilly. It’s about three hundred square kilometres with a lot less rainfall than just about anywhere else in Indonesia, it’s not volcanic like Flores, that’s further east, where there’s a huge extinct volcano called Keli Mutu.’

They sailed around the rugged south coast of the island with its sheer cliffs, the result of volcanic activity in the distant past, evidenced by the crater bay in which Nusa Kode lay, then north up the Linta Strait to the Bay of Loh Liang where they anchored twenty metres off the beach.

They were met by the park's rangers who were to guide them on their tour of the island and to see the dragons at the feeding site. Komodo Island was thirty-five kilometres long and fifteen wide, with a low range of mountains running along the north to south axis. Most of the island was a palm type savannah with the vestiges of rainforest and bamboo forest on the mountains.

The dragons, or monitor lizards, measured over three meters long and weighed up to 165 kilos. They were fearsome creatures, the largest lizard on earth with enormous jaws, preying on live deer, goats and wild pigs. Until the end of the nineteenth century beyond Indonesia they were thought to be nothing more than a legend.

The visitors made their way up to the feeding station, about half an hour from Loh Liang, noting the signs 'Danger Zone' and heeding the warning of their guide.

'Don't forget they're big and powerful with very sharp teeth and claws, so don't try to annoy them. They can open their mouth like a serpent and even swallow a whole animal, you know a goat or a man.'

They looked at him unbelievably.

'I'm not kidding, they're also very fast over short distances.'

'Not as dangerous as Jakarta right now!'

'You're right on that point, it's looking bad.'

'How do you see things in Indonesia Alfonso?'

'Well, to be frank I agree with you, it's going to get worse before it gets better.'

'Do you think it will affect our expedition?'

'If things get out of hand yes.'

'Like what.'

‘They can get pretty wild, if they start running amok, as Indonesians have a tendency to do when things get out of control, then it could get very nasty.’

They planned the night on board the yacht as the accommodation onshore consisted of a few cottages. Dinner was grilled fish on the beach, freshly caught that afternoon by the local fishermen.

Chapter 28

ARCHAIC ANCESTORS

Pierre Rossard liked to introduce borneensis to the camp’s new arrivals by describing him as a not very good looking individual by modern standards. He would have been of a similar build to modern men though perhaps a little more rugged. The colour of his skin was unknown, though in a tropical region the chances are that he was brown, with long hair and certainly as unwashed as an orangutan living in his forest habitat.

From the skull it could be seen that his forehead was low with large protrusions over his eyes and a jaw line that was thick and powerful. He lived in the vast forests of Borneo like the present day Punans spending a large part of his time gathering food, roots, fruit, bird eggs, and from the evidence of tools, and the bones found in his shelters, it could be deducted that he hunted animals, wild pig, monkeys and birds. The remains of charcoal show that he possessed fire, perhaps only in more recent times and as a result of his contact and by observing the newcomers...Homo sapiens, who as the excavations at the Great Niah Caves showed his contemporaries used fire.

What kind of family life would he have had?

Well man had always been a gregarious animal, living in small family groups, consisting of women and children with close relatives, brothers, sisters and perhaps one or two relatively older persons.

Like modern hunter-gatherers he had his favourite camp sites, under cliffs, in cave mouths, or on river banks, shelters that offered protection on one or more sides. The forests of Borneo were full of dangerous animals until relatively recent times, large animals, including tigers and rhinoceros.

No doubt borneensis communicated with some kind of language that was to eventually evolve into modern language. His entire knowledge was in his head and transmitted to each generation by example and word of mouth. In equatorial Borneo there were almost no seasons as in temperate zones and trees produce fruit according to different cycles which erectus would have observed in his daily search for food.

The arrival of more advanced humans did not take place like some biblical style invasion, these men came one by one, in small groups, slowly, over very long periods of time, hundreds and thousands of years. They cohabited at a distance with erectus, who retreated deeper into the forest whenever menaced by better armed newcomers.

Life on Borneo had continued unchanged for hundreds of thousands of years and erectus was perfectly adapted to his environment, the proof was in the fact he survived so long. The greatest dangers were from other groups who could wanted to take over his territory, steal his women, or even eat him.

Borneensis did not have to contend with the harsh climatic changes of his contemporaries to the north, ice ages, in China or in Europe. Borneo was a paradise on earth as it still was in many regions.

‘A Garden of Eden?’ said Fitznorman

‘If you like!’ Pierre replied pleased at the idea.

Homo habilis and erectus, began leaving Africa sometime around two million years ago, spreading across the Eurasian landmass, reaching Java, the most distant site from Africa, where one of the earliest non-African erectus remains were found.

The Borneo populations of erectus had also become progressively more isolated from other populations of erectus in the region. Until

recently, few scientists considered it possible that modern humans were descendants of Asian *Homo erectus*. The idea was abandoned by most Western scientific thinkers who considered that Asian *erectus* was an evolutionary dead end.

‘Today the idea modern humans could be direct descendants of *Homo erectus*, is considered a possibility by the Chinese, and Western scientists confronted with evidence of mixing are reviewing their ideas,’ said Tegu.

‘The comparison between those fossils and the *borneensis* find remains to be seen and they may be two separate species, sub-species, or hybrids,’ said Pierre.

‘Would the differences in the skulls seen in Indonesia be due to normal variability in any population?’ asked Fitznorman.

‘A good point Scott, but if we examine modern human populations, we see people with round skulls, long skulls and narrow skulls, these are normal variances within a given population,’ he said. ‘So I think it’s wrong to suggest that *borneensis* is not part of the Java family of early man, that is his latter period.’

Palaeoanthropology, one of the most controversial modern sciences followed by the general public, in the most progressive nations, was in the process of substituting science for religion in man’s effort to explain his own existence and position in nature’s order of things.

The prima donnas of the scientific world, launched barely veiled insults at each other in the most unethical manner, pouring scorn on the learned papers of their colleagues and rubbishing their discoveries and theories in the press and on the television.

Scientific journals were filled with a cacophony of opinions from scientists with their conflicting arguments. However, the general facts were relatively clear and the small but very comprehensive fossil record was very significant and for science indisputable.

Modern humans considered themselves as the highly evolved result of a long evolutionary process, but the reality there were many dead ends and failures before archaic sapiens slowly acquired present day man’s characteristics.

However, contrary to religion and human self-esteem there is and never was a preordained destiny.

At the time *Homo sapiens* appeared, between one or two million other earlier human individuals lived in Africa and on the Eurasian continent, and the question scientists have posed is whether *Homo sapiens* had developed in isolation then burst forth from their isolated territory in the Horn of Africa, around one hundred thousand years ago, replacing all other pre-existing forms of man as he conquered the planet.

Or on the other hand, did *erectus* evolve slowly into the different forms of men that people the planet today, in Africa, Europe and Asia, exchanging genes with other populations as they migrated to and fro in the never ending search for food and game, as they sought to survive nature's perpetual cycle of climatic change, which followed as surely winter follows summer..

It is a fact that many accepted scientific precepts of the past have been transformed into the curiosities of scientific history, as new discoveries contradict well thought-out theories. The discovery of what is *Homo erectus*, or possibly *habilis*, at Dmanisi in the Black Sea Republic of Georgia forced eminent scientists to re-examine their ideas, just as they had done following discoveries of *erectus* at Atapuerca in Spain.

The problem was that many palaeoanthropologists built their theories around scant incomplete skeletal remains of individuals who had lived at moments separated by vast periods of time, tens of thousands, hundreds of thousands and even millions of years.

Further, similar but different kinds of men lived in places separated by great distances, tens of thousands of kilometres apart, from Sterkfontaine in South Africa to Java, or Zhoukoudian in Northern China to Western Europe. The grand scientific theories linking these in a framework of space and time were often tenuous.

In spite of the press coverage given to the latest spate of troubles with the Palestinians, there were little very signs of problems at the Tel-Aviv Sheraton. Pierre Rossard saw no reason to waste their time

hanging around the hotel and proposed that they join the Saturday evening crowd, of young Israelis intent on enjoying themselves in the bars and restaurants of the beach area.

They found a terrace bar overlooking the sea front, ordered two large beers and settled down to watch the joggers and other keep fit fiends at their work outs. Pierre filled Fitznorman in on the history of the Soreq Nuclear Research Centre near by to Tel-Aviv.

They had arrived to conclude an agreement with Soreq to corroborate the dating results made in Paris and Jakarta. It was a scientific imperative to cross-check these, even though the CNRS in France was one hundred percent reliable, since work at Gadjah Mada University was at a virtual standstill. The Indonesian university was plagued with huge difficulties including daily student demonstrations, communications breakdowns and budget problems as a result of the disastrous political situation in Jakarta.

Pierre Rossard's organisation had collaborated over many years with the Soreq Nuclear Research Centre located near Yavne, west of Beersheba and twenty kilometres to the south-east of Tel-Aviv. Soreq could be counted on to carry out highly reliable U-series dating, as they had developed excellent radio isotope techniques and in addition could count on their experience with human fossils discoveries made in Israel.

Soreq was a government laboratory specialised in nuclear research for both civil and military use. It was originally built by the Israeli government for the development of its nuclear research program and more to the point for the design and production of its bomb. The program for the construction of the first reactor had commenced in 1955. At the outset the prime purpose of Israel's nuclear programme had been to develop a deterrent to protect them from their unhappy Arab neighbours.

Once they had their bomb, and the means to deliver it to Tehran or Baghdad, their research diversified into other futuristic military fields, where non-chemical propellants were developed for curious applications such as anti-satellite guns, conceived for the Star Wars programme, capable of firing solid projectiles into space at great

velocities using rail gun technology, such projectiles could destroy enemy spy satellites or be used in terrestrial combat to pierce any armour invented by man.

With the end of the Cold War the menace had receded and Israel's stock pile of nuclear weapons provided a sufficiently great overkill capacity to turn politician's attentions to the great cost of their country's research centres and to look more closely at the obscure programmes their scientists had invented. In this way Soreq's program was extended to commercial space technology as well as industrial and commercial applications for their nuclear know-how, putting the centre's expertise, scientific facilities and human resources to work for profit.

Israel was doted with many brilliant scientists and many an upstanding Jewish mother thought of nothing better than one of her sons becoming a respected scientist. The result was too many brains working on non-profitable research programmes. Scientists were notoriously unrealistic when it came to economics, especially those used to weapons research with unlimited budgets.

Late that afternoon a message arrived from Jakarta, they had a date for the charcoal found at the discovery site. The laboratory at Gadjah Mada had established a radiocarbon date of $2,600 \pm 320$ BP. That was close to C-14 dating of the calvarium made in Paris. Pierre Rossard immediately decided priority should be given to investigating the archaeology of the caves, so as to establish a coherent stratigraphical and chronological relationship between the various deposits, as the samples of charcoal were stratigraphically below the jaw bone and isolated teeth.

Chapter 29

BEYOND OF AFRICA

The prehistoric site lay beneath the ruins of a medieval castle an hours drive from Tbilisi, capital of the Republic of Georgia, in a small town called Dmanisi. Archaeologists had first begun excavating the remains of a 10th century castle on the site in 1936. The castle was perched on a one thousand metres high rocky peak that dominated Dmanisi. In 1983, while examining an ancient garbage pit, an archaeologist uncovered what was identified as a tooth of a rhinoceros, a very strange find in a medieval castle in the Caucasus Mountains.

This led to further excavations and the following year stone tools were discovered, then in 1999, the first of two fossil skulls were unearthed by the archaeologist David Lordkipanidze. To his very great surprise the skulls dated to around 1.8 million years BP. The fossils included part of a young man's skull and skull cap of a teenage girl, the physical characteristics of which linked them to early Homo erectus, though their brains were smaller. This led paleoanthropologists to compare them with Homo habilis and the unexpected proof of very early man's presence outside of Africa.

In all, the fossil from Dmanisi included three skulls, three jaw fragments, and hundreds of stone tools and animal remains from the same strata. It also showed the environment and climate at that time was similar to that of the present day East Africa savannah.

The discovery at Dmanisi together with evidence from Indonesia and China reinforced the proof that early man had left Africa hundreds of thousands of years earlier than had been previously thought, which posed the question as to exactly when and why early humans left Africa.

Before the discoveries at Dmanisi, it had been supposed that the first humans to migrate out of Africa had large brains and advanced stone tools. However, the discovery of Homo habilis at Dmanisi with his smaller brain and a basic tool kit consisting of choppers and scrapers, similar to those found in the Olduvai Gorge, in Tanzania, showed that early humans with elementary technology had spread out from Africa before erectus.

Fitznorman remembered his visit to the spectacular Olduvai Gorge some years earlier on a safari to Tanzania and the Ngorongoro Crater. The Olduvai site had been excavated by Louis Leakey in the sixties. Standing at the edge of gorge, overlooking the hundreds of layers of sediments, all colours of yellow and ochre, thousands of generations of humanity that had lived on the African savannah, Scott Fitznorman remembered how he had been moved as he stared eternity in face.

Men not too different from himself had lived in the same environment and for some reason had migrated, spreading out, up and down Africa, then into Eurasia and finally occupying the netier plant. The question that was asked again and again was, why do people migrate?

The answer was always because of food and survival, and the availability of food was and still is linked to climatic variations.

In Africa, as the climate became drier, men moved north, towards the Horn of Africa, or south, towards the Cape, depending on their starting point, their territory, as the rains shifted.

Certain left Africa, heading to the north, then eastwards, some finally ending up in what was a primitive Garden of Eden, Borneo, where food was plentiful, without too much competition. Borneensis and his ancestors lived for almost two million years in a very ecologically stable niche, which probably explains why he survived so long.

Many scientists had supposed that the first humans to have left Africa needed the same set of tools as modern hunter-gatherers. The reality was that early man had moved across a familiar savannah like environment in search of food and game, not according to any intentionally planned form of immigration, conceived by men with more developed brains and tools, but simply by wandering across a familiar savannah like environment, reaching the Red Sea, moving up and down the coast, crossing into what is present day Israel and then on to Eurasia when the conditions were propitious for their survival.

It was logical, after all the great apes and monkeys had colonised the planet over millions of years without the least tools and without bipedal adaption.

When and where *Homo erectus* emerged in Africa was not known with any certitude, but evidence shows his presence about two and a half million years ago.

Very soon after he appeared in regions outside of Africa, which include Georgia, China, Indonesia and Spain, evolving about half a million years ago into different forms, Neanderthals in the Western part of the Eurasian continent and archaic humans in China and Indonesia.

Discoveries in the Awash region of Ethiopia, yielded the world's longest fossil of early man, spanning five million years, where evidence shows how the African branch of *erectus* evolved into *Homo sapiens*.

Ethiopia was a pivotal region between Africa and the Eurasian continent, where with cyclic climatic change over the last two million years, the landscape swung between desert and savannah, where fossils showed that the fauna was not very different to that of the present East African savannah.

Homo erectus was considered by most paleoanthropologists to be a single species with a wide distribution across Asia, Europe and Africa. Thus it was logical to imagine that a mixing of genes must have occurred between nomadic populations of hunter-gatherers that would have met as they hunted and foraged as they drifted across the Eurasian and African continents over the course of many thousands of generations.

Western Europe, Eastern China and Indonesia were all extremities of the Eurasian continent, in other words dead ends, which had always been sites where vestige populations survived.

Fossils from the site of Ngandong in Java, clearly demonstrated that *erectus* continued to live in that extreme point of the Eurasian landmass until just 27,000 years ago. The Ngandong crania were considered as *Homo erectus*, though having certain variations in comparison to the earlier specimens found in Java, or in China. Some

scientists suggested that Ngandong man lay somewhere between the earlier *Homo erectus* of Java and modern Australians, with the hypothesis of gene flow between Asian *Homo erectus* and *Homo sapiens*.

Chapter 30

ATAPUERCA

Lundy's description, of what was probably the largest palaeoanthropological sites in world at Atapuerca in Northern Spain, persuaded Fitznorman that a visit would be useful to get a broader picture of the distribution of erected and his cousins. Moreover, it was just a two or three hours drive from his villa in Biarritz, which lay close to the Franco-Spanish border in the Southwest of France.

The weather in Paris had been exceptionally hot and it didn't take much convincing to get Lundy to accept a few days break in the Basque Country, from where they could organise a short visit the site of Atapuerca nearby to the historical City of Burgos.

It was in the late afternoon on the fifteenth of the August, the Ascension Day bank holiday, when Fitznorman, Kate, Lundy and his daughter Carol, took-off for Biarritz. A little more than an hour later as the plane prepared for its approach to Aéroport de Parme, Fitznorman pointed out the peaks of the Pyrenees against a clear blue sky to his friends, a breath-taking view of the mountains rising above the foothills to the south. As they descended, the plane turned west towards Biarritz, and soon they were gliding over the typically white villas and their red Roman tiled roofs of the small city, beyond which the sun reflected off the Atlantic.

Scott was just as absorbed by the spectacle as he had been many years before when he first visited the Basque Country, this time however, another thought wandered through his mind, those soft green foothills had been certainly the passage used by primitive man on his migrations to or from the south.

They were picked-up at the airport by Enrique Suarez, who Fitznorman employed as caretaker for his villa. Enrique tended to the up-keep of the villa and its fine garden, he also acted as chauffeur whenever Fitznorman was in town. The stocky Portuguese had worked in the French construction industry for many years until he had been forced to retire on a modest pension following a work accident, his wife, Nicole, a lively French woman, acted as the housekeeper and cook. The couple was lodged in a small but attractive house to one side of the villa, which in another age had been the servants' quarters.

The villa was situated in a smart residential area of Biarritz, on rue du Fer de Cheval, just off avenue Foche, a short walk from his gallery in the town centre. Fitznorman had bought it for a song a few years back with a little help from an architect friend, James Charret, after he had spotted the bargain and with his agreement had acquired through the local court after an endless and typically French family dispute over the inheritance.

The villa had been built for a Spanish marquis at the beginning of the twentieth century, when Biarritz had been a fashionable destination for European nobility. There were three floors totalling six hundred square metres surrounded by a small but fine garden, hidden from the curious by a high wall and protected by large wrought iron gates. James had renovated it for Fitznorman in grand style after it had been abandoned for several years, lying in a state near decay, transformed into a squat by a series of hippies and passing itinerants.

The problem of maintenance and security had been solved when Fitznorman engaged Enrique Suarez who had been presented by his friend. It had been an excellent decision as Suarez and his wife were totally trustworthy maintaining the villa and taking care of Fitznorman and his guests at the shortest of notice.

The organisation of their visit to Atapuerca had been confided by Lundy to a friend and colleague, Maurice Lacour, a renowned palaeoarchaeologist from the Department of Human Origins at the University of Perpignan. Lacour was leading a joint research program between the University of Perpignan and the University of

Burgos for work on the dating of stone implements discovered at the Atapuerca site.

The guests were warmly welcomed by Nicole Suarez who showed Lundy and his daughter Carol to their respective rooms, informing Fitznorman that Lacour had called and would arrive in time for drinks, towards seven, she confirmed that she had reserved a table for them at a local restaurant just a short walk from rue du Fer de Cheval.

They planned to leave for Burgos after breakfast the following morning, by road, a distance of around two hundred and fifty kilometres, a drive of about three hours.

A bottle of Veuve Cliquot stood in an ice bucket on a low table next to five Champagne glasses in the vast living room situated at the elevated garden level of the villa. The lower level was where Fitznorman garaged his Porsche Carrera adjacent to an office and gallery where he invited his wealthy clients for private presentations of his latest collection of Asian antiquities.

Lacour turned out to be an amiable intellectual and an occasional supporter of the Basque independentist movement, and in general everything Basque, including pelota, at which in spite of his corpulent figure he was a good player.

Lacour was a scientist who enjoyed a private fortune inherited from his family who had left him one of the finest vineyards in the Jurançon at the foot of the Pyrenees, producing a delicious sweet liquorous white wine appreciated as an accompaniment to duck liver pâté and other culinary specialities of Southwest France.

Lacour was in his late fifties, tall with a more than bulging waist line. Fitznorman was surprised by his full head of greying, curly hair, but soon he suspected it was a toupee woven into what remained of his own hair. His straight white teeth and smooth face left little doubt that he had enhanced his image with plastic surgery and corrective dentistry.

Fitznorman quickly discovered Lacour was a charming and cultivated individual, in addition, as a Spanish speaker and a life long aficionado of the Correda he provided them with a broad picture of

Spain peppered with amusing anecdotes, taking pain to emphasise his knowledge and affinity for the Pais Vascos, which according to him was not Spain.

In short he was a man who sought to please and not only for his own personal pleasure, but for the company especially when a couple of attractive women were present.

As they sipped their Champagne Lacour outlined the programme for the following day, concentrating on the cultural and culinary aspects of region and its vineyards.

By the time they had reached the restaurant Fitznorman and Lacour were already in good spirits, discovering they shared the same tastes and interests. At the table they batted back and forth puns and jokes, competing in a friendly joust trying to win the approval of the company as they savoured the chuleta of beef grilled over a charcoal braise, rare in the middle and deliciously grilled and sprinkled with coarse salt on the outside, accompanied by an excellent Rioja from a region of the same name nearby to Burgos, finishing with thick dark coffee and Patxaran, a local Basque liquor.

As they strolled back to the villa in the warmth of the summer evening air, Lacour described his technical innovations relating to the dating of the stone implements from the Atapuerca excavations. By the time they reached the villa he was enthusing about how they could be applied to the work in Borneo.

They talked well into the night, their exuberance, reinforced by well filled glasses of Patxaran, bubbled over, exchanging ideas and theories, and as a result their departure the following day was pushed back a couple of hours by mutual consent.

The next morning weather had changed, the sky was heavy with low grey clouds and showers of light rain. Lacour's Mercedes SUV joined the autoroute at Biarritz, La Negresse, taking the direction of San Sebastian. The road to the south swept through the foothills of the Pyrenees rising and falling through the graceful curves. From Irun they turned inland to Pamplona, a road that twisted and turned as it rose to the central plateau of the Iberian Peninsular five hundred or so metres above sea level. They climbed with ease overtaking an

endless procession of Spanish, French and Portuguese trucks that made the regular run between the Peninsular and northern Europe carrying their heavy loads of fresh fruit, wine and other goods.

The alpine scenery of the Basque country with its green pine covered mountains suddenly gave way to a drier continental landscape, an undulating panorama of golden wheat fields stretching to the horizon fifty kilometres to the southwest of Pamplona.

After a short stop for coffee they arrived on the outskirts of Burgos where they quit the autopista and turned north to Rubena . A couple or so kilometres further they followed the signs to Atapuerca and arrived just after ten thirty in a small dismal village under an unusually grey Spanish sky. Lacour explained to his disappointed guests, who surveyed the desolate scene, that it had not rained for more than two months which was little consolation for his visitors. The long low building of the reception centre was accessed by a platform that resembled a railway station platform, it was closed, three or four people with rucksacks stood waiting glumly before the door.

Lacour spoke in Spanish to an attractive young woman who had the air of a student, she took a key from her bag and opened the door, she was the receptionist. They entered a long empty hall at the end was a desk on which were displayed a number of brochures and books for sale describing the site.

‘The visit is three euros.’

‘We have an appointment with Professor Ortega,’ said Lacour in Spanish.

‘Oh!’

‘He should be here at ten thirty.’

She pulled a mobile from her pocket and made a call.

‘He’s not here yet,’ she replied ending her call.

‘Did you speak with him?’

‘No, but the bus will be here in ten minutes, you can take a coffee if you like,’ she said indicating the direction to a small bar a short distance further across the road from the reception.

‘Is Professor Ortega on the way?’ persisted Lacour.

‘I think so,’ she replied with a positive air.

Lacour shrugged his shoulders. ‘Let’s take a coffee and I’ll call Ortega.’

The bar was closed, it was morning after the Ascension Day bank holiday, there were few visitors in the village, apparently things would not pick-up again before schools and colleges got back into swing with the new term. They returned to the reception and waited as Lacour tried to call Ortega.

‘The bus is cancelled as there are not enough visitors,’ the receptionist gaily announced.

‘Okay,’ said Lacour a little put out before an insurmountable wall of incomprehension. ‘It’s probably too early I suggest we drive around to the main entrance of the site, there’s a cabin and we should find some of the research people there.’

They climbed back into the Mercedes and headed towards the N120 that led to La Trinchera about ten kilometres around the flank of the low hill, the Sierra Atapuerca.

‘On this side it’s a military zone, you can see all those antennas up there,’ he said pointing to the left. On the summit of the small hill, 1024 metres above sea level, but only a couple of hundred metres above the surrounding plain, they saw a mass of aerials and satellite dishes.

They turned off at the village of Ibeas de Juarros and took a dirt road to the entrance to La Trinchera where they parked the car next to a small wooden cabin planted next to a solid looking gate that led into the excavations.

A young man approached the car and asked Lacour if it was he who was expecting Professor Ortega, then informed him that the Professor would be there in fifteen or twenty minutes.

‘Okay,’ said Lacour, ‘we have to wait for a short while, so I suggest we take an overview of the site from above.’ He pointed to a path that led up hill through clumps of low shrubs.

They followed him as he recalled for the benefit of Fitznorman the origin of the site at Sierra Atapuerca. La Trinchera, meaning a trench or culvert, was cut into the Sierra Atapuerca between 1896 and 1901, for a railway, owned by a British entrepreneur, to transport coal and iron ore as well as passengers for the booming steel industry that had sprung up at that time in the Basque Country of Northern Spain.

The geology of the Sierra Atapuerca was composed of a cap of limestone about one hundred metres thick, a sedimentary base laid down 65 millions of years ago on the bottom of a shallow sea during the Upper Cretaceous period.

The limestone rock was composed of the shells and skeletons of a myriad of small sea creatures that had died and sunk to the seabed. As the sea withdrew and tectonic movements forced what had become a solid sediment upwards, forming and folding it into hills and valleys.

At certain moments in geological history the caves in the Sierra Atapuerca were at a lower level and the underground rivers that then drained the surrounding hills dissolved and eroded the limestone on their passage, cut channels into the rock by the effects dissolution and erosion on the rock's principal element, calcium carbonate.

The geology was in fact very similar to the karstic region in Borneo at the discovery site.

When once again geological forces modified the lay of the land and the nearby River Arlanzon cut a deeper bed, water levels fell and the channels in the limestone were drained leaving empty tunnels and deep galleries.

The excavations of the Trinchera cut through the galleries and caves, which were since named Gran Dolnia, Galeria and Sima del Elefante. At the time of the works nothing special was noticed by the railway engineers, there was no reason for them to remark the galleries, which had been completely filled by a solid gangue of clay, loose rock and natural debris that looked identical to the rest of the open cutting.

The railway after its completion had an unexpectedly short life, only nine years after its inauguration it turned out to be unprofitable and was forced to cease operations. In 1917, the owners went bankrupt and the line was completely abandoned to the elements.

They followed a path that led along the edge of the cutting with viewing points where visitors could see the excavation works at Gran Dolnia, Galeria and Sima del Elefante.

The mostly smooth grey limestone walls of the Trinchera were punctuated by irregular zones of red earth. Lacour explained that these were cross sections of the underground galleries that had been filled with natural debris over hundreds of thousands of years.

Erected on the face of each of these vertical cross sections was a series of platforms built over a dense network of yellow scaffolding that rose from the floor level of the Trinchera to the top of the cutting with a roof structure to protect the excavations from the elements.

This structure enabled the archaeologists to work on predefined sections of the excavations, scraping millimetre by millimetre at the accumulated deposits, uncovering evidence of early man's presence at the site.

From above, overlooking the Trinchera, they were able to appreciate the extent of the site and understand from the cross sectional view how the galleries were formed, and how they had been filled over hundreds of thousands of years, a fact which was not evident until it was seen first hand.

'Here you can see how our excavation work has progressed over recent years,' said Lacour with an expansive gesture of his hand and in a deep voiced professorial tone without the slightest embarrassment in using the first person plural.

Fitznorman was amused by Lacour since he had understood from Lundy that the French had not been part of the excavation team or worked on the site, which had been naturally been the reserve of the Spanish with the exception of minor tasks.

Lundy's team had an associative role in the international research partnership that had been later developed by Burgos University as a complementary research programme. This enabled the Spanish to

take advantage of the experience at Perpignan University and their dating methods that relied on advanced scientific equipment developed by the French nuclear industry and the CNRS.

Fitznorman was becoming used to Lacour, who charming as he was and with his unquestionable scientific knowledge, was a self appointed expert on all that was Basque and by extension Spanish.

‘Let’s return to the reception Professor,’ Lacour proposed with a smile.

They made their way down the slope and saw parked next to the cabin a silver Mitsubishi SUV, a tall distinguished man stepped out, in his middle to late forties, sporting a fine moustache, dressed in khakis and wearing, to the great amusement of Fitznorman, what appeared to pith helmet, a Hollywood hero out of a Jurassic Park style movie.

‘Ah, Carlos,’ cried Lacour advancing, a broad smile of his face and his hands raised in greeting.

Ortega returned the smile and Lacour stepped to one side as protocol demanded leaving Lundy the first to shake hands with the Spaniard.

‘Nice to see you again professor, I’m sorry the weather is not so good today.’

Lundy graciously waved the apology aside, ‘Professor Ortega, you know my daughter, Carol.’

Ortega gallantly bowed over her hand, ‘It’s a pleasure to meet you.’ He was an admirer of young women, during his long years at university and head of the Human Origins research program he had been surrounded by willing female students who had enabled him to hone his seductive powers.

‘Let me introduce you to Scott Fitznorman, and my niece Kate Lundy.’

‘Ah, Señor Fitznorman, I have heard a lot about you,’ he said before turning to Kate with a gallant bow.

‘A pleasure to meet you Professor Ortega, I hope what you heard me was not all bad.’

After the introductions Lacour greeted Ortega in Spanish embracing him in a masculine Castilian hug, a signal to the others that he enjoyed a privileged relationship with the Professor. It was true that he had known Ortega for many years, who had been one of Lacour's post graduate students at Perpignan, long before Atapuerca had become a household name in the world of anthropology.

They laughed and then Ortega turned and introduced a young woman who came out of the reception cabin. 'This is my assistant Lola Martinez.'

'So let's start our visit.'

It was a privilege for visitors to be guided by Pr. Ortega, but with Lundy's prestige as one of the world's leading anthropologists, Director of the Musée de l'Homme and the Institute of Human Palaeontology, an associate partner in the Atapuerca international programme, protocol demanded the presence of Ortega.

'Señor Fitznorman, you must tell me about your extraordinary discovery.'

'Of course, the work on the site is still very confidential, because of the agreements we have with the Indonesian authorities, in addition the political situation is extremely unstable.'

'I understand that there's a difference with Malaysia.'

'That's right, the border region is not well defined, especially when part of the site is underground, like here in Atapuerca.'

'What is extraordinarily interesting for us is that Erectus appears to have continued to survive in Borneo for tens and perhaps hundreds of thousands of years after they disappeared in Europe.'

'Yes, that is what we would like to understand, perhaps by a comparative study based on your discoveries here in Spain, comparing the two cultures and for example their tool modes, the types of animals that they hunted and ate.'

'I see what you mean. So let's start,' he said leading the way through the gate into the cutting. 'We'll commence with Gran Dolnia that's further down the Trinchera after Sima del Elefante and Galeria.'

They walked along the floor of the cutting between the vertical walls and past scaffolding that gave access to the excavations.

‘So here we are at Gran Dolnia where the deposit is eighteen metres thick, the most interesting, because it was here we found Homo antecessor, the first European,’ he announced with pride pointing to a mass of scaffolding that rose up twenty metres on the right side of the ancient railway cutting.

‘The work here started before my time in 1976. When the Trinchera was cut for the railway it sliced right through what is now Gran Dolnia exposing it like a layer cake. At that time it was without interest just another face in the cutting. We now know that each layer represents a different deposit laid down over thousands of years and the each of these layers corresponds with climatic variations.

‘Our team had to first remove the earth which had slide into the cutting, you know...washed down by rain and erosion over decades after the line had been abandoned. Then we mapped the exposed deposits and divided them up into eleven stratigraphic levels, labelled from TD-1 to TD-11.’

They looked up at the flags and marks that identified the levels.

‘In 1992, the covering rock was removed, then over several years the levels were explored, by delicately scrapping away the sediment millimetre by millimetre.’

‘When were the fossils discovered?’

‘That’s a long story, in each of the three sites tools and bones were found, but nothing was found in Gran Dolnia until 1985, when prehistoric stone tools were found in what is called level TD-11.’

‘And the bones?’

‘There were plenty of them, mostly animal bones, however, the first human bones found in Gran Dolnia date back to 1994, the 8th of July to be precise. In level TD-6 we found skull fragments, part of a lower jaw and upper and lower teeth, these were dated back to 780,000 years.’

‘These were Homo erectus?’

‘Yes...well...that is...we baptised it Homo antecessor, but it is in fact part of the Homo erectus family.’

‘Incredible...780,000 years old,’ Fitznorman said half to himself in a low whisper, ‘and to think our friend Homo borneensis is also part of the Homo erectus family, is only 3,000 years old.’

Ortega catching his words said a little tersely, ‘That remains to be verified scientifically of course.’

‘Of course,’ interjected Lundy not wanting to start the day on the wrong foot.

They continued to the other excavations terminating at El Sima del los Huesos, Lacour translating the name ‘The Pit of Bones’. It was effectively a pit, thirteen metres deep, where the fossilised bones of thirty two individuals were found, men who lived 300,000 years ago.

‘Sounds a little like something from Hannibal Lector!’ he laughed.

‘This is probably the most important site in the world for human palaeontology,’ said Ortega. ‘Skull 5, Homo heidelbergensis, which we shall see later, is the finest preserved skull ever discovered in the history of palaeoanthropology.’

‘Why were there so many individuals found in the same spot?’

‘Ah, that’s a good question, but the fact is we don’t know. There are several hypothesis, but the most likely is that it was some kind of burial pit, or sacrificial pit. It is possible that the population of the small community of early humans was too great and certain were probably sacrificed.’

‘That means they had developed a fairly advanced concept of community life?’

‘Yes, the bones are representative of all ages, children, adults and older persons.’

Can we visit the Sima del los Huesos?’

‘Unfortunately no, for the simple reasons it could be dangerous, it’s a vertical hole thirteen metres deep and at the bottom there’s a broad steeply sloping tunnel with a low ceiling. It’s part of a four

kilometre long network of tunnels and caves. We wouldn't like our visitors getting lost or having an accident and leaving their bones there.'

They all laughed and followed Ortega to the Galeria where they climbed the scaffolding where he proceeded to describe the excavation works for the benefit of Fitznorman. The floor of the level being excavated was about fifteen metres long and four metres wide, criss-crossed by planks and boardwalks. A grid system of strings divided the work area into one metre square sections.

'You can see how the excavation is carried out during the campaign, the excavators, mostly students, work sitting or lying on these planks, supervised by archaeologists and other specialists.'

Fitznorman noted the same techniques were used in Kalimantan, though the bones were not comparable, borneensis was no older than the Egyptians of historic times, builders of the pyramids.

Ortega continued with his presentation, but Fitznorman's thoughts were elsewhere, nodding from time to time without really listening, the scale of the site was such it was impossible to compare it to Kalimantan. What he wanted to see were the fossils, the skulls.

'We shall now take lunch and then visit the Museum, it's normally closed Mondays, but for our distinguished guests we have arranged a private visit. You will see we have a fine display of the fossils and artefacts that had been found of the site. The visit is at five o'clock so we have plenty of time. In the meantime we have booked you into La Puebla nearby Avenia Cid Campeador in the heart of the old city, it's a small but charming hotel and very practical, Professor Lundy knows it very well.'

'I've stayed there several times,' added Lacour with a smile of knowing approval.

'Are the skulls in the museum?' asked Fitznorman.

'No, unfortunately those in the museum are copies in synthetic resin, of course there are plenty of bones of lesser importance, but the real skulls are kept under lock and key in different laboratories, and under very strict conditions of temperature, heat and light. Our goal today is to extract samples of DNA, if any remains that is.'

‘That’s a pity,’ said Fitznorman unable to hide his disappointment at not seeing the skulls.

‘But,’ said Ortega, ‘you are lucky, today we are working on skulls 5, 6 and 7, at the university with the scanner. That means after our visit to the museum we can take a look, from a distance, as all human contact with the bones could contaminate any remaining traces of DNA.’

The museum was disappointing, it was small and seemed detached from the preoccupations of Fitznorman who was anxious to see the skulls.

‘We are building a vast new complex, the Centre for the Science of Human Origins, half a kilometre from here. Right now the works are held up because of archaeological works on ruins discovered under the site,’ he said laughing. ‘So, shall we get over to the university?’

The laboratory was equipped with a three dimensional ERM scanner that allow them to explore all the hidden interstices of the fossilised skulls and bones.

‘What is interesting about our discoveries is that all the bones of the human body, even the smallest have been found, including those of the inner ear and even more important and much more rare...the hyoid bones.’

Fitznorman looked at Carol puzzled, not sure what the hyoids were.

‘Ah, the hyoids, they are small fragile bones at the top of the larynx connected to the base of the skull,’ explained Carol.

‘Yes,’ replied Ortega flashing a smile at Carol. ‘They enable us to reconstruct the form of the throat of Homo heidelbergensis.’

Fitznorman was none the wiser.

‘Permit me to explain,’ said Ortega taking on a doctoral air. ‘One of the most intriguing questions is whether these early men spoke or not. Our power of speech is a complex subject, it relates to the development of our brain and also the organs that permit us to form the sounds that compose the elements of human language.’

‘The form of our throat differentiates us from other animals that cannot produce the range of sounds that we can make. Unfortunately the soft elements of our throat and mouth are not fossilised and the hyoids are small and fragile, and as I just explained are very, very, rarely preserved. By an extraordinary chance we have the hyoids and as a result we can go a long way to reconstructing the larynx of our dead ancestors.’

‘So *Homo heidelbergensis* could speak?’

‘Not so fast, we can reconstruct the larynx but we don’t know if his brain was sufficiently developed.’

Fitznorman suddenly realised the importance of the planned work in Kalimantan, the fact the *Homo borneensis* skull was so recent it meant that the small bones could also be present. It was urgent to proceed with the greatest of care with experienced workers to avoid the loss of vital evidence. He would mention this to Lundy as soon as they were alone.

In the scanner room work was in progress. Through the viewing window they saw that a skull was posed on the motorised table of a scanner. The radiologist pressing on the remote control button advanced the table into the annular scan zone and a few instants later a first image appeared on the screen.

The information stored in the computer was used to reproduce a three dimensional image that could be rotated as desired and viewed in any cross-sectional configuration.

‘So Señor Fitznorman, are you prepared to trust us with your discovery?’

Fitznorman was as much taken by surprise as was Lundy. Ortega laughed, ‘Why not?’

That evening they were seated in the Asador Aranda in a square just behind the magnificent medieval cathedral. They had invited Ortega to diner and he recommended the ‘*cordero lechal*’, roast suckling lamb, cooked in wood fired oven, whilst Lacour consulted the wine list selecting a 1989 Rioja Alta. They started by helping themselves from a large plate of delicious Jamon Serrano and another

piled with Pimientos de Gernika lightly grilled with a light sprinkling of coarse salt.

Chapter 31

THE CHOSEN PEOPLE

Abe Avner complained of stomach problems and feverishness. Fitznorman was not very kind to him, he suspected it was nothing but a strong dose of diarrhoea. Avner was not used to the tropics and even less the rain forest and once the excitement of this new world had worn thin he grumbled and complained.

Each additional day spent by the ancient limestone cliffs that rose from the river became hell, he preferred press conferences in grand hotels, first class flights and a three day week, each on a different continent. In recent times he had put on weight though he was now losing it by the hour.

Avner was out of condition, it was perhaps his first on-site working expedition since his renowned discovery in Israel many years previously, where he had stolen the limelight from his colleague, Dr Max Bernstein, jumping the gun with a press release of their find to the world media, fixing forever, his own name to their discovery, to the chagrin of Bernstein and the Israeli authorities.

‘It’s probably some of the meat from those little black pigs our chef slipped into the dinner last night that’s upset you,’ said Pierre, getting a sneaky pleasure from provoking Avner.

Avner shook his head, he was too insensitive to see the jibe.

‘A shot of whisky is what would do you good.’

Avner perked up at the suggestion, he was a believer in the medicinal value of alcohol, especially Pierre’s good Scotch whisky.

‘Some of us here know very little about early man in Israel, Abe,’ said Pierre finding a glass and pouring him a good three fingers full. ‘Why don’t tell us a little about your work?’

‘Why not,’ he said looking a little more cheerful, ‘we’ll have to go back a couple of hundred thousand years.’

They nodded approvingly.

‘It started when the population of the world was just over a million, including Homo erectus and the Neanderthals, and when Homo sapiens had first made his appearance on the scene.

‘Another hundred thousand years passed before Homo sapiens left the African continent, and just a few family groups crossed into the Sinai and Israel.’

‘The Chosen People!’

‘Yes, in a manner of speaking, because in just another 60,000 years Homo sapiens sapiens had conquered the entire planet, reaching Australia and the Americas, supplanting all other forms of man on his way.’

‘Didn’t any of the other forms of man survive?’ asked Collin Williams. ‘I mean until recently?’

‘Yes, the Neanderthals lingered on, for example the fossils I discovered in Israel date from between twenty and thirty thousand years ago. But, the Neanderthals and others could have well continued to survive for much longer, but for the moment we simply haven’t found his bones.’

‘Maybe we have!’

‘Not in Israel.’

‘There are other places Abel!’

‘In any case the chances that all of those other million or so early men disappeared simultaneously is very unlikely. We’ve seen large native populations wiped out by new arrivals, in America and Australia. Though in most other places the populations resisted the new comers, in China or Japan for example, or they survived in their isolation...Eskimos, Dayaks and Papuans.’

‘Which brings us back to borneensis!’

‘Yes, but that’s all very interesting and philosophical,’ said Fitznorman, ‘the urgent problem now is both the governments of Malaysia and Indonesia want the paternity of borneensis, which is

also the paternity of humanity as we know it, if Professor Murtopo's theory is proved right.'

'It would certainly be an enormous satisfaction to Mahatir,' said Avner grimly, 'he would like to have his revenge on the Jews and all other scapegoats who are supposed to have put his people down.'

Murtopo was one of the leading Indonesian palaeoanthropologists, who like Avner, tended to confuse man's origins with national, or even racial pride. He was not the first, many Europeans and Americans had preceded him, but even serious anthropologists such as Charlton Coon had often been accused of racist ideas in their works.

'So you see nothing is new!'

'So the weak were pushed into the forest?'

'Certainly, more primitive hominids, Asian forms of erectus, like Solo Man, who we know for certain had already lived there on Java half a million years ago, and were slowly replaced by more evolved versions of hominids who had trekked across Asia, out of Africa.'

How and when that happened was uncertain. The volcanic activity of Java was the most intense on the planet, its volcanoes had spewed out fire and death for millions of years and there was a real possibility that early men were wiped out by a volcanic disaster, such as occurred at Toba in Sumatra.

Almost eighty thousand years before the explosion of the super volcano, Mount Toba, had an effect on a planetary scale, wiping out a great number of the larger mammals over a radius of several hundreds of kilometres, causing a fall in temperature when the planet was covered with a cloud of dust causing a catastrophic winter, depriving plants of life and men and animals of food.

Fitznorman was irritated by Avner's somewhat conceited attitude and his habit of grabbing attention at every opportunity, though in general he had to admit, Abe, in spite of himself, could be unwittingly amusing company. The real question however, was to prevent Avner from pulling off the same trick he had played in Israel, once he was back in Tel-Aviv.

In the meantime they had to concentrate on getting deeper into the caves to see what other discoveries remained. It was important to explore all galleries before they left the site, since once the discovery became public the government would seal the cave and probably put Murtopo in total charge.

There was also the unresolved territorial question, according to the survey carried out by PT Indosatmap, the southern entrance was clearly situated on Indonesian soil. However, doubts remained as to whether the northern entrance lay on the Sarawak side of the border or on the Kalimantan side. Several hundred metres of tunnels and galleries connected the narrow entrance, through which Fitznorman had first penetrated in the cave complex, to the cavernous rock shelter on the Kalimantan side of the mountain.

It was a problem that could only be resolved by the inter-governmental frontier commission, which was not about to meet and ponder such delicate questions with the political crises that was wracking the region.

The chaotic state of Indonesia was a serious problem, and even though the authorities had laid claim to what was a national heritage, it would not be long before the more hardy kinds of tourists arrived, not to speak of ignorant and unscrupulous treasure hunters attracted the prospect of easy money. Local tribesmen from would be only too happy to sell old bones for a few dollars to antique dealers from Pontianak.

The pressure on the government increased as rioting mobs rampaged through the streets setting Jakarta aflame. At the same time the rich and privileged trembled, they had long considered themselves invulnerable, above the struggling masses of Java. The rumour had started making the rounds that the president would step down in favour of the more popular vice-president, who in spite of everything was a member of the ruling clique, a life long political crony, and just as deeply involved in the tentacular business of the first family, which was riddled with graft and corruption.

When questioned by journalists on the crisis and his country's future the vice-president replied, 'You know, if you are swimming

and you are surrounded by sharks, you have to swim, otherwise you will be eaten by the sharks. And I'm not going to be eaten by the sharks. I am going to swim and help my country return to normal.'

He had been Minister of Science and Industry for over twenty years, backing ambitious and sometimes useless, or extravagantly expensive, nationalistic projects including a fully designed Indonesian airliner.

It was also he who had enthusiastically endorsed the French led expedition to West Kalimantan sponsored by Aris, easing the way for the issue of permits for archaeological exploration and scientific investigation, sponsoring a joint team of Indonesian specialists led by Professor Murtopo.

Reports also circulated of new factory closures and bankruptcies, as thousands marched through Jakarta's business district chanting, 'Hungry, hungry.'

Things were beginning to look dangerous and the shadow of chaos fell across the archaeological expedition.

At the remote discovery site, work continued as usual, nothing had changed, but the City of Pontianak had been transformed into a state of anarchy with daily riots as the police and army looked on helplessly. The expedition supply line ran through Pontianak and the question of evacuation was posed daily as news from the capital grew worse.

Crowds assembled outside of the Central Bank waving rupiah notes, the national currency, that had fallen almost eighty percent against the dollar, as mobs rampaged, burnt shops and killed Chinese.

Under pressure from world opinion and the mob, the president was finally forced to step down, with vice-president taking over as interim president, in the hope that the crisis would be defused, and new elections could be organised. However, the promised elections were fraught with danger as the opposition in the form of an extremist Muslim leader appeared and the former president's daughter gathered popular support.

The immensely rich Chinese business establishment and the first family had held the country in an iron grip, with the civil service acting as their agents for rich rewards. The staff of government ministries, departments and state owned industries, amongst which was the Ministry of Forests, lived grandly, thanks to rampant corruption, it was evident to all their official government salaries could support their life style.

Men like Riki Adyatman, paid official salaries of less than one thousand US dollars a month, lived on graft, driving expensive SUVs, living in fine villas in the capital's wealthy suburbs, their children at top universities in the USA and Europe. Together with his likes, he lived in the fear that the status quo would be destroyed and he would find himself on the streets as economic refugees, struggling to make a living like the masses they despised.

Such people were subsidised by businessmen, including those who owned the logging companies and forestry based industries, who paid them richly for their services, which consisted of attributing their companies with valuable forestry concessions and logging permits for the rich timber of the primary forest. First felling hardwood giants for immensely profitable export timber and plywood, then clear-cutting the remainder of the forest for pulp wood. And to complete the pillage, the clear-cut areas were ploughed under for palm oil plantations and cash crops.

Chapter 32

GENOCIDE

‘For almost 40,000 years, two different species of man lived side by side on the Island of Borneo.’ Pierre said as he sipped his coffee. ‘And according to current scientific theory during that unimaginably long period of time, in human terms, there was no communication between the two species. Does this seem logical given our knowledge of our own species?’

Fitznorman nodded.

‘The first time I saw an erectus it was right here in this café, almost twelve months ago.’

Fitznorman looked at him in surprise, as though he was about to describe an odd looking individual. They were waiting in a nondescript café just across the street from the Jussieu metro station, a short walk from the Natural History Museum in Paris.

‘I was sitting there with my back to the window on that bench seat,’ he said pointing to a table. ‘The café was full of smoke, just like now. Over there a couple of students from the university were shaking a pinball machine that beeped non-stop. The place was packed with people, you know students, professors, office workers, Arabs, Africans. My coffee had just arrived. The crowd was so tightly crammed against I could just drink it by making myself very small. The noise was just like that in any other small working man’s café in Paris, and I had to shout to be heard, and everybody else shouted.

‘I’d fixed a meeting with a fellow who’d called me the same day, saying that he needed to talk to me, I vaguely recalled his face, a fellow from the CNRS department of anthropological research. It was he who recognised me, he made me a small sign with his hand and pushed past the crowd at bar and sat down at my table, over there. He was an anthropologist named, Gil Bruno. He sat down and placed a small packet in bubble plastic sealed with tape on the table to one side.

‘We chatted for a few moments and then I asked him what he was doing in Paris. I was a bit surprised when he replied he’d come especially to see me.

‘I couldn’t tell you over the phone, but I thought you might be interested in this,’ he said carefully unwrapping the small packet on the table.

‘There, amongst the coffee stains and empty sugar wrappers, was the lower jawbone of a man, a very old jawbone. Most of the teeth were still there, yellowed and worn, it was clearly very old.’

‘What is it?’ I asked him carefully picking it up.

‘It’s from an erectus, we found it at the Thomas Quarry, in Casablanca,’ he told me. ‘We have only this mandible. But as you can see it’s in excellent condition. My estimate is that this fossil is only 15,000 years old.’

He then explained that André Etxeberri had dismissed his dating estimate out of hand, firstly a fifteen thousand year old erectus, according to current thinking, did not exist, and secondly, if it did indeed exist it should not have been in Morocco!’

‘Why not?’

‘As you know the theory is that we can all be traced back to a common female ancestor about 200,000 years ago, that is to say one of the first Homo sapiens that evolved in the Awash region of Ethiopia. This is the Out of Africa theory, which claims that humanity is nothing but one big happy family, even though you can see just looking around this small café that there’s a considerable difference of race and culture, even though it can be said to be just skin deep.’

‘So you’re talking about Mitochondrial Eve.’

‘You’re becoming an expert Scott.’

They both laughed.

‘I suppose that’s why you’re involved in work in Morocco.’

‘Yes a nice place, you should come down and see what we’re doing there.’

‘I’d like that, but it’s a problem of time.’

‘Stop worry about time, it could be useful to compare it with our work down there in Borneo.’

‘Maybe.... What’s interesting though,’ said Fitznorman reflecting on the date of the Moroccan find, ‘is what happened to all these pre-sapiens?’

‘At some point between 100,000 and 50,000 years ago, the new race of people, Homo sapiens, began to spread out across Europe and Asia, becoming the ancestors of all future human generations, that is according to the Out of Africa theory. However, as they entered new

territories the newcomers found thousands, hundreds of thousands, of other human species already living there.'

'So, what happened to them all?'

'That's the big question, although in the long run it's not too complicated to answer as they simply disappeared.'

'But how? Some kind of genocide?'

'Yes, nothing is new in history. *Homo erectus* and the other early humans were just not smart enough to compete, their territories were seized, their game hunted, and even they were hunted and perhaps eaten. They failed to compete with the invaders, more intelligent and more efficient. It was like when Cortes arrived in Mexico, or when the British set up colonies in Australia, in modern terms genocide, only much slower, much, much slower!'

'What do you mean by much slower?'

'There's plenty of evidence in Israel, Spain, Australia and now Morocco that *erectus* and modern humans co-existed for 100,000 years, according to current theory, they lived in close proximity, like two species of antelope on the African savannah.'

'I see.'

'However, they could have had some kind of exchange.'

'Intermarrying?'

'Maybe, personally I'm inclined to think so, if you look at archaic *Homo sapiens* and evolved *erectus* they were extremely similar.... *Borneensis* and Bruno's jawbone from the Thomas Quarry in Casablanca certainly means that many ideas have to be very seriously reconsidered.'

Chapter 33

GOLD

That weekend Aris was due to leave for Melbourne, where discussions were due to be held with Soetopo Jananto, an Indonesian

Chinese, who controlled Australian Minerals Pty, one of the biggest mining companies in the Pacific Rim. They had just turned in a huge rise on their pre-tax profits, bringing earnings to over one-and-a-half billion dollars for the first time. Its board of directors had decided for a major expansion in West Kalimantan, in a company called Borneo Gold Corporation, together with an Australian Israeli investor, Gary Solomon, where they planned to produce about eighteen tons of gold a year, the equivalent to several hundreds of millions of US dollars yearly for ten to fifteen years, based on the fixing for gold at that moment, and was rising.

Aris was somehow involved with Solomon, but Fitznorman was not sure exactly how, but he did know Aris had supplied Borneo Gold with the services of Indosatmap, his mapping company.

Solomon was a mining engineer whose family had immigrated to Israel when was a child, but he preferred the open spaces to fighting with the Palestinians, and after graduating he quit the country and returned to Australia. He qualified as a mining engineer, and profitably turned his knowledge to exploring for minerals, and developed new projects in New Guinea and Indonesia, building a fortune in mining investments.

Aris had persuaded Fitznorman to join him in Australia, as Soetopoe Jananto was a collector of Chinese porcelain and antiques whom Fitznorman had always found very friendly, but had done little business with him.

It suited Scott, as it coincided with a symposium held by the Australian Archaeological Association, at the University of New England, on the subject of new anthropological discoveries in Oceania.

More than two hundred delegates from all over Australia, as well as from the UK, France, Indonesia and Canada, were expected, giving him the possibility of meeting leading anthropologists from the University of Wollongong, whom Pierre Rossard had often talked about, known for their extensive work on Indonesian and Australian prehistoric sites.

The Borneo Gold development lay in a zone north of Lanjak, not far from the borneensis discovery site. It was in Pontianak that Fitznorman had been present when Soetopoe had declared to the press, 'We will grab any opportunity that fits our strategy and helps in the development of West Kalimantan.' It was also a good moment to diversify his operations as his nickel interests had been in difficulties due to political unrest and strikes.

Scott had first met Soetopoe at the Hilton in Jakarta, when he and Aris had dropped in on a party with Solomon.

Borneo Gold planned to mine almost twenty million tons of ore annually with a yield of two grams per ton of ore. But before they started there was thirty million tons of overburden to be removed to get to the ore bearing rock.

The mine would be open cast with operations on three sites, covering several thousand hectares, including areas for mine rejects. There were no access roads and they planned to cut one through the jungle to the site. The ore was to be crushed and ground using a cyanure separation process and production was scheduled to start the following year.

Soetopoe was in a delicate situation as the crisis threatened the whole Indonesian economy. The problem was the financial guaranties for his projects, it was not that his companies were unprofitable, on the contrary they were very profitable. But the crisis had led to desperate free for all. The Indonesians authorities, discovering the high projected profits from the mine, wanted bigger royalties and the lenders took advantage of the turmoil by calling for a delay and supplementary guaranties.

They arrived in Melbourne on the Qantas' overnight flight from Jakarta. It was almost ten in the morning when they were picked up by a car laid on by Australian Minerals to take them to their hotel. It was hot and the car's air-conditioning had broken down, the driver, a Serb, drove with the driver's window open. He spoke to them over his shoulder, from time to time turning his head, he was over inquisitive, where had they come from, and how long were they going to stay. The car weaved dangerously with the driver's lack of

attention making Fitznorman nervously as he watched the huge wheels of a truck thundering hauling at least three trailers loaded with live sheep for Melbourne's slaughter houses.

They were booked in at the Hyatt on Flinders where a Soetopoe had a vast suite. During the overnighiter from Jakarta they had over indulged in the excellent first class bar service on Qantas and had only managed a couple of hours sleep. Their plan to relax for a couple of hours was quickly forgotten as they were informed Soetopoe was waiting for them to join in his suite on the 18th floor for lunch.

The weather was fine, it was one of those balmy Melbourne summer days, and from his room window Fitznorman could see the bay in the distance and the sails of the windsurfers speeding across the waves between the dinghies. He hoped he would find time to get to an evening session of the Australian Tennis Masters and enjoy a few hours of relaxation, maybe he could even get to the England-Australia test match.

The skyline never ceased to amaze him, from his side of the Hotel he could see at least a dozen high-rise office buildings under construction, adding to the Manhattan style skyline that had grown up over the previous twenty years.

Fitznorman, still phased out after the flight, grabbed a shower, he didn't really feel like eating, and headed up to join Soetopo. His stomach lurched as when looked at the array of steaming Chinese dishes set out on the dining table. That was the problem of dropping out of the sky into another time zone and culture, especially at meal times when those already adjusted were hungry, responding to their daily biological clock.

He decided he would take something light, he could see from the look on Aris's face that he felt the same, whilst Soetopoe looked at the food with relish. The best antidote in those circumstances, was a good stiff drink, he opted for a scotch as a starter as Soetopoe poured himself an XO cognac.

'So, Aris,' Soetopoe opened. 'What's the news?'

Aris looked into his orange juice with that inscrutable face, Scott knew he was dramatising a bit and maybe he had something up his sleeve.

‘I’ve talked to you know who’s son, he’s suggested that foreign investors should be prepared to allow a greater local participation, or a fairer distribution of profits. The government is promoting a new policy directed against the high concentration of wealth among businessmen and industrialists, this means mostly Chinese,’ he sniggered and pushed his glasses up his nose, ‘At the moment, with all the troubles, it’s popular if they take a strong position, defending the country’s resources, especially when it comes to our groups.’

‘Sorry we have to talk about business Scott, it won’t take long,’ said Soetopoe excusing himself, then turning to Aris, ‘Why are they getting involved in our business?’

Just looking after the family business I suppose.’

‘Okay then, but is their position flexible, I mean accept a compromise?’

‘At present they have a royalty of two point five on gold and one on silver and other metals, you could give one point more on gold and half a point on silver without seriously affecting the viability of the project,’ Aris suggested.

Soetopoe nodded and then changed the subject.

‘Tonight we’re invited to the Department on Foreign Affairs and Trade, a top level cocktail for promotion of bilateral relations between Australia and Indonesia, I think it will be interesting, come along, you should meet them,’ Soetopoe said addressing Fitznorman.

The reception was held at the Westpac Banking Corporation building just a few blocks down from the hotel on Collins. Westpac was the lead banker in pool financing the gold mine.

Fitznorman realised Australia’s political relationship with Indonesia had always been a very up and down affair, a densely populated country of over two hundred million, many poor and underdeveloped, lying just some hundred miles or so away across the Torres straits, or the Timor Sea, facing an empty continent with its

small population concentrated in its southeast corner, thousands of kilometres away from the vulnerable northern shores.

He couldn't help thinking, it was probable those same shores that had seen early man arrive tens of thousands of years earlier.

Australia had never hesitated, with its strong democratic traditions, to criticise Indonesian politics since independence, over half a century earlier, from the time of Sukarno and his politics of 'Confrontasi' with British Malaysia, then the annexation of East Timor, and more recently the question of political prisoners and human rights.

The Australians were probably the keenest observers of Indonesia from a Western point of view, it was in their interest, with Indonesian studies being highly developed especially at Brisbane University.

When Soetopoe's Australian mining group became interested in the newly discovered gold deposits in Borneo, the government was enthusiastic to provide assistance for the development of the project, and it was soon written into the protocol for economic cooperation between the two countries, signed some eighteen months previously at the start of a cyclic warming of relation between the two countries.

It was not until the top politicians in Jakarta realised that the deposits were real and confirmed and that the commercial exploitation was extremely feasible, that they started to apply pressure for a larger share in the production royalties. Certain ministers saw it opportune to press arguments in the traditional style against foreign exploitation, reminiscent of the start of oil operations many years before.

But the objective of the Borneo Gold promoters was to get into production as quickly as possible, avoiding fruitless delays, thus the visit of the Foreign Minister Suropto was the moment to get the business under way. Suropto was an aggressive go getter who could apply a great deal of influence to unblock the situation, and avoid Australian investors from bailing out as the Indonesia became mired in its difficulties.

The Foreign Minister was a small man, even for an Indonesian, but he was a bull terrier, as round and solid as he was high, he did not have the charm and grace of a typical foreign minister, but he was immensely pragmatic. He laughed loud and easily, he was not shy about making direct statements, sometimes in conflict with his role as foreign minister, but above all he had the confidence of the family and its clique, and could be relied on to push through ideas and policies, if he was convinced of their validity.

Fitznorman had been introduced to Suripto at a French Embassy reception in Jakarta and remembered by him for explaining the meaning of 'ubiquitous', a word used in the Favitski's long winded speech, and had remembered him for that and the joke that they shared.

Fitznorman persuaded Aris to walk over to the Westpac building enjoying the fresh air and chatting as they strolled down Collins, they had plenty of time as long as they were there before the minister arrived.

It was Friday evening and there was a good crowd of people out on the streets as the trams clanked slowly by down towards Swanston and Elizabeth, before climbing the hill on the other side. It was warm and pleasant, they relaxed, looking forward to meeting all the friends and acquaintances who usually turned up for that type of reception, almost anywhere Indonesian business and politics was rather esoteric, and the uninitiated stayed away. It wouldn't last more than a couple of hours and after they decided to get in a late dinner and discover nightlife in Melbourne.

The Westpac building was one of the highest in the city, and the reception was on the 42nd floor in the boardrooms and salons of the bank. In the main entrance hall a receptionist was checking the names of the guests and then directing them to one of the lifts, which would take them directly to the 42nd.

An attractive blond, looking like the kind of Australian brought up on fresh air and fruit juice, was involved in a seemingly complicated explanation with the receptionist. She had forgotten her invitation and the receptionist could not find her name on the guest list.

‘How do you spell it?’

She spelt her name.

‘Sheldon, hmm,’ she looked down the list again, ‘we have a director who’s name is Shelbourne.’

The blond fidgeted and started to look a little desperate just as Soetopoe arrived and announced with an exaggerated display of gallantry to the hostess, ‘This young lady is my guest,’ with a broad friendly smile, puffing on his Kretek cigarette.

‘Oh how are you Mr Jananto? It’s been a few weeks hasn’t it,’ the receptionist said with a splitting smile.

‘Yes it’s been a couple of months, how are you keeping Susan?’ he said turning up the charm. Susan and one of her girl friends had been guests to one of his parties at the Hyatt, a pleasant evening with a bit of flirtation.

‘Good, okay if Miss Sheldon is going up with you then there’s no problem.’

They walked over to the lift with Soetopoe’s new friend, Rachael, looking a little bit embarrassed and flustered.

‘Thanks very much, I’m feeling so stupid, I must have left his invitation in the car and it’s parked a good couple of blocks away.’

‘Well you’re in now, I’m Soetopoe Jananto and these are my friends, Scott Fitznorman and Bak Aris.’

‘I’m Rachael Sheldon as you now know, I’m supposed to be writing an article on Kalimantan.’

‘Oh, so you’re a journalist then.’

‘Not exactly, I’m a Geologist, I also write for the press and anything like this interests us.’

Fitznorman could not help thinking how attractive she was, clear blue eyes and perfectly shaped teeth, which had probably set her parents back a packet, he guessed that she was probably about thirty maybe a little less.

The lift arrived at the 42nd and a chime woke him out of his daydream, the doors opened and she stepped out before them into the lobby. It decorated with floral tributes, the kind that Indonesians

always send for special occasions, SELEMAT DATANG MENTRI, welcome minister, with the name of the company who had sent it also spelt out in flowers. The bank's PR manager together with a couple of attractive hostesses were there to welcome the guests and guide them to the bar, sumptuously laid out with a wide variety of European and Indonesian cocktail delicacies with waiters standing by to serve drinks.

They started with the drinks then filled a plate with cocktail snacks.

'Well let's start with this,' said Fitznorman, looking around at the same time, to see who was who.

There were fewer interesting people than expected, it was a typical reception, just lots of hellos and polite exchanges. Fitznorman quickly agreed with Aris that they should get out as soon as it was reasonably possible.

In a corner two or three people watched the TV news, an Indonesian general was being interviewed by a reporter from the Sydney Morning Herald. Fitznorman caught part of his words, 'I am afraid there will be bloodshed.'

He then saw Rachael Sheldon out of the corner of his eye, she was alone at the bar, if he was quick she could make the evening more interesting.

'So you're interested in Geological studies?' he asked arriving as casually as possible, asking the barman for a refill of the excellent Australian sparkling wine.

'Yes, that's right, and you? You're not from these parts!' she said alluding to his accent.

'No, I mean I'm not from these parts, my speciality is Antiques and Fine Arts,' then if that was not enough he added, 'I'm also involved in anthropology.'

'Oh, so you must be interested in Mungo Man!'

'How did you guess?'

'You're not involved in the find in Indonesia by any chance?'

Fitznorman was surprised. After several months work on the site their information black-out seemed to be leaking, obviously news had reached certain circles in Australia.

‘Well, in fact I was in at the very beginning,’ he replied coyly, feeling very pleased with himself and feigning a little embarrassment.

‘That’s incredible, look we must get together, I’d like to write an article, you know the geological context of Flores.’

‘Flores?’ exclaimed Scott puzzled.

‘Of course, the site,’ she said laughing.

Chapter 34

MOROCCAN BONES

The hotel Tour Hassan had been built at the beginning of the century, it was about ten minutes walk from what is now Avenue Mohammed V that ran from the Palace grounds down to the Medina. Wisecracks said the slope was designed to slow down the king’s subjects whenever discontent broke out and the mob headed for the palace, it also helped the palace guards when they charged downhill to break a few heads and restore order.

At the outset the hotel had been built for the visitors from France to come to inspect their recently proclaimed protectorate, and Rabat its capital. The Tour Hassan was of course in keeping with the life style of the administrators of empire towards the end of La Belle Époque.

The establishment was discreet, its entrance and lobbies decorated in Moorish style, there were no large grounds or gardens. The doorman and bellboys were dressed in the traditional costume in keeping with the Cherifian Kingdom, ruled by Mohammed VI. The king stood at the head of a state possesses of the means and methods to keep its citizens in their place, if the became unruly, according to age old usage.

Fitznorman together with Pierre Rossard and two CNRS specialists arrived from Paris on a Royal Air Maroc flight. After clearing formalities they loaded their baggage into one of the airport taxis, a Mercedes that had definitely seen better days, and ordered the driver to take them to the Tour Hassan.

They were to be met by Christian Charles, who for some unknown reason was not at the airport. Charles was the resident representative of the CNRS natural history section and the linkman in the different scientific programmes between France and Morocco. Fitznorman had been introduced to him in Paris, he was a Frenchman who had lived in Morocco for several years, in spite of his small stature and habit of chain-smoking Marlboro in a grubby cigarette holder, he was charming and cultivated.

Why on earth Charles had chosen Morocco was not very clear to Fitznorman. Marrakesh was fine for a couple of weeks in the sun, but apart from a passing interest in the souks and bazaars, he couldn't for the life of him see why anybody in a reasonably state of mind would choose the country as their permanent residence. However Charles felt at home in Morocco and had been successful in a number of important finds and was apparently 'well-introduced-at-the-palace'.

Morocco had become a renowned centre for palaeontology after the discoveries of some extraordinary specimens of dinosaurs, amongst which were some of the largest specimens ever discovered. The sites were centred around the High Atlas Mountains, where palaeontologists had uncovered the bones of sauropods with names like carcharodontosaurus, spinosaurus, tazoudasaurus and atlasaurus, beasts of up to fourteen metres long.

The government, through the Ministry of Mines, planned to build a museum and a geopark between Marrakesh and Ouarzazate, to which they hoped to attract hundreds of thousands of tourists each year, and had invited the French Museum of Natural History to participate, as a joint partner with financing from the French government along with the King Abdul Aziz al Saoud Foundation, a purely financial partner.

The rooms were comfortable, but as in such hotels the functioning of the telecommunication systems often corresponded with the vintage of the hotel. Fitznorman quickly regretted not being booked in the new and luxurious Hyatt. Charles had insisted their presence be discreet, at the Tour Hassan they ran little risk of being ‘spied’ upon which seemed a curious idea to Fitznorman.

Charles had made all the arrangements with Ashraf Ghali, an ex-minister, head of a vast state owned chemical company, Office Marocaine d’Industries Chimiques, the world’s largest exporter of phosphates and fertilisers, representing several billion dollars a year in revenues, a welcome revenue for a country that had no oil and very little other natural mineral resources. The company owned many open mines and quarries that had been the source of rich fossil finds.

Once settled into their rooms, Pierre Rossard called Fitznorman, who joined Gil Bruno, the specialist who had discovered the jaw bone, to look over the geological survey maps he had brought from Paris. His room door was open, Fitznorman knocked and walked in. Bruno’s bed was covered with papers and the room was full of smoke from the cheap cigarillos that he smoked. His assistant, Lejeune, was sitting in an armchair, also smoking and in the process of pouring a couple of glasses from a bottle of duty free Cognac.

‘Hey, have a drink,’ he said offering him one of the glasses. The CNRS men had both downed a good amount of free Cognac on the flight from Paris.

‘Not just now,’ Fitznorman said declining the offer, ‘I’ll wait until Pierre is here.’

Brun, an anthropologist specialised in on-site excavation, was fortyish, slightly podgy, and fond of cracking nervous jokes, which he thought were enormously funny. He wore a tobacco stained moustached and had a vague air of shabbiness about his appearance, as though he were struggling financially. Lejeune was younger and did not have much to say, he simply followed Bruno’s cues.

They had the look of debt collectors, rather than scientists. After glancing over the maps that meant little to Fitznorman, he suggested going down to the bar to wait for Charles and to escape the smoke

and Cognac fumes. The bar was situated on the first floor level was deserted, normal, it was the middle of Ramadan and not yet sundown. The lounge bar typical of many hotels in the Arab world, furnished with very low couches and low tables. Pierre not seeing a waiter and as a typical Frenchman could not bear to sit before an empty bar table was about set off in search for one when Christian Charles appeared, his cigarette holder clenched between his teeth.

Stretching out his hand, he bid Fitznorman and Pierre Rossard welcome to Rabat and waited for him to present the others. Charles was excessively formal and polite, more than well brought up. Fitznorman suspected that Charles could be easily slighted if things were not done correctly according to his strict code of etiquette.

‘I’m really sorry I couldn’t get to the airport, I was called to the Ministry of Culture Affairs, over on rue Ghandi. You know it’s Ramadan and everything runs at half speed. Now the sun is now setting it’s the moment when everybody normally disappears to eat something quickly after their day’s fasting, that’s why you can’t see any waiters,’ he explained. ‘Well now that I’m here there’s no particular rush tonight. What do you say to a simple dinner, we can chat about our program tomorrow? There’s that small restaurant around the corner here, it’s called the Oasis and they serve typical Moroccan cuisine.’

Charles insisted on driving them there in his car, a not very recent Peugeot, even though the restaurant was not more than a few hundred metres away. The owner informed them that it was already full on the ground floor and a waiter led them to the first floor balcony. Charles ordered pigeon pastilla and lamb tagine with a bottle of ‘Cabernet du President’, that unfortunately tasted nothing like as good as it sounded, and a bottle of Sidi Ali mineral water.

‘So what are the arrangements for tomorrow?’ Pierre enquired.

Charles dropped his voice and with a furtive movement glanced around. ‘The meeting is at ten in the offices of the Musée Royal du Patrimoine et des Civilisations. Murad El Malik has organised everything, he’s the museum’s vice-president, and is also on the

board of the Institute National des Sciences, de l'Archéologie et du Patrimoine.'

'Excellent,' said Pierre

'It's not far, on avenue Kennedy. Driss will also be there, you know him Pierre, be careful of him, he looks after all the details.'

'Ghali will not be involved?'

'No.'

'How come!'

'It's like that, don't worry. He doesn't get involved in the details.'

'Will we get to visit the site quickly?'

'No problem, it's about eight kilometres south-west of Casablanca, a quarry called Carrières Thomas.'

It was where Bruno had found his erectus mandible, the subject of a heated debate in Paris, when André Etcheberry had rejected the 15,000 year old estimate made by Bruno, to him a mere junior scientist. The outcome was the reclassification of the fossil as an archaic sapiens, which Bruno had silently accepted whilst waiting for new evidence. The site had also produced at a much lower level part of a skull and a lower jaw bone together with Acheulian stone tools, dating to around 400,000 years old and at a deeper level tools dating to 700,000 years old had been found.

'What about the other sites?'

'We have recently found a couple of others site in the Atlas,' said Brun, 'there is evidence of archaic Homo sapiens and Homo sapiens sapiens, first estimates indicate dates between 30,000 and 190,000 years old, we have only just started preliminary work there. For the moment I don't know what the programme will be.'

'Will El Malik allow us to visit the sites in the south, I mean there won't be any problems will there?' Fitznorman asked anxiously.

'No, not if our friends from the CNRS have got all of the papers ready as agreed, then there should be no difficulties,' Pierre said.

'Our problem right now is that Ghali is 65 years old. He's under pressure from his family and clan to make the most from setting up the new museum before being retired by the King.'

Fitznorman was up early, he was on edge, the telecommunications were so bad in the hotel that it was difficult to have telephone contact outside the country, he was worried about the situation in Jakarta. On the garden terrace in the warm morning sunshine that filtered through the ample leaves of a banana tree, he sat alone trying to relax and relished the taste of freshly pressed Moroccan oranges. He thought about the meeting with the Moroccans, he was unfamiliar with their methods, but suspected they could be difficult.

Morocco had many problems, like any other developing nation. Charles had told him over dinner the previous evening that there was a slow but irresistible pauperisation of the rural population, who followed the footsteps of the poor of the world, seeking relief in the overburdened cities. Huge shantytowns, the breeding grounds for revolution, developed, which were carefully camouflaged out of view of the tourist or casual visitor.

Over the frontier in Algeria, the regime which had ruled for thirty years was almost bankrupt, both economically and ideologically. With the menace of the Islamists, Algeria's neighbours were deeply worried by the contagion, which could overflow into their populations, who had no other form of free expression than that offered through the Mullahs.

As Fitznorman gazed at the Geckos inert on the garden wall, his thoughts wandered to Homo erectus, the images that came to his mind were mixed with those Indonesia and Israel as he drifted into a dreamy fantasy.

'Bonjour, how are things this morning!' Christian Charles greeted Fitznorman, snapping him out of his daydream, it was time to start with more serious matters.

The offices of the museum were not much more than a ten minutes brisk walk from the hotel, normally a pleasant stroll under the trees. There were no crowds in Rabat, except at evening time in the old town. In the business area at that hour, there was just the occasional passer-by and the waiting chauffeurs, or the cleaners who seemed to be perpetually sweeping the steps of office building entrances in their desultory manner.

That morning, however, they had decided to take a rented chauffeur driven Mercedes limousine. The driver took the long way round with the one-way system, heading down to the palm lined ring road that ran parallel to the picturesque walls of the royal palace, turning left back into the centre, at the old red fort, the Chella, that overlooked the river valley separating Rabat from the old town of Sale.

It was one of those fine but hazy mornings, not yet too hot outside, but already overheated in the Mercedes, the driver shrugged, explaining without too much concern that the air conditioner was not functioning as it should. The traffic was light, Charles looked indifferently at the passing sights, which were more interesting and exotic to Fitznorman, who had taken the precaution of removing his jacket avoiding creasing in the heat of the car. He carried just a light document case, whilst the Rossard and the CNRS men had their brief cases squeezed onto the seat between them.

The administrative offices of the museum were situated on the third floor of the ministry building, in the small but relatively modern and pleasant business area of Rabat. The street was lined by closely planted evergreen trees, designed to give shade from the hot sun, but the branches were a touch too low, forcing the passers by to skirt around them so as to avoid being peppered by the heavy red dust that had accumulated on the thick leaves.

The six-story building, dating from the early seventies, was set back from the pavement and fronted by a narrow garden. They walked up the steps and into the lobby, taking the modern but shaky looking lift to the third floor. They followed each other into the executive reception area that was luxuriously appointed, with exotic wood panelling and thick piled wall-to-wall carpeting.

There was no reception and they proceeded directly to the office of Murad El Malik's secretary. She was an attractive Moroccan of about fortyish, she wore rather heavy French style make-up and was fashionably dressed, the skirt on the long side.

There was a much younger and plainer girl seated at a desk in front of a computer screen, she looked on whilst El Malik's secretary

gushed over the visitors in an exaggerated display of familiarity. The offices were hot, the secretaries did not enjoy air-conditioning, apart from that discomfort the offices were well equipped with all the latest equipment, and there was an air of efficiency.

They stood a little uncomfortably exchanging niceties, there was no waiting room. Fitznorman inquired whether Murad El Malik and his staff had already arrived. Before the secretary could reply, Mohammed Driss arrived, shirt sleeved and tieless, his forehead which appeared enlarged by his receding hairline, glistened with beads of transpiration.

‘Well, hello Monsieur Rossard, how are you, when did you arrive?’ he said with a broad friendly smile, which seemed to have a touch of genuine friendliness to it. Charles had learnt it was merely a facade.

He went through the formalities of welcoming them and invited them to El Malik’s office, which also served as a conference room for important meetings. The office was elegant furnished with fine, thickly upholstered, leather chairs and behind the president’s chair displayed on a small rostrum were a magnificent pair of elephant’s tusks, which would have certainly been considered in bad taste in Europe.

Mohammed Driss invited them to take a seat at the conference table as they waited the arrival of El Malik. A few moments later he appeared together with Rachid Benani, both dressed in formal business suits in contrast to Driss’s short sleeved shirt.

They rose and shook hands.

‘Ah, Monsieur Rossard, good of you to make it, please sit down. We will have a busy morning,’ El Malik said gesturing to them to be seated.

After Pierre Rossard had made the introductions, El Malik launched into the niceties of welcoming their foreign guests to Morocco and the importance of Franco-Morocco cooperation complimenting the far sightedness of the French government for providing loans not only for new research and exploration, but also for the construction of a new museum.

Murad El Malik was seated at the head of the table with Rachid Benani facing Fitznorman and Mohammed Driss opposite Charles.

The secretary served thick black coffee in small glasses decorated with gilt arabesques as they went through the preliminaries, taking out files and shuffling their papers.

‘Well Mr Rossard, let’s get down to the serious business on the day. I think that all of the so called technical points have been covered.’ El Malik said looking at Mohammed Driss.

Fortunately the sweaty little bastard isn’t required to reply, thought Charles, as Murad El Malik’s had made a statement rather than having asked a question.

‘Today we shall talk about the expedition to our new Palaeolithic site in the south.’

There was some confusion as Benani, in a low voice, sounded out Driss in Arabic. To Charles’s pleasure Driss appeared confused. Benani frowned heavily and started reading through the list of personnel whilst Driss shuffled his papers nervously under the glare of his superior.

‘Monsieur Rossard,’ he spoke in French, ‘whilst we have already indicated our desire to cooperate, we can only do so on the basis of an equitable agreement! These conditions seem rather strange and don’t concord with the wishes of our staff. I think it would be good if your people re-examined these points.’

Fitznorman looked on a little perplexed after all it was not his project, but he had promised to assist Pierre Rossard in the negotiations, it was normal, a return for all that Lundy and Pierre had done for him, after all he could have been thrown out as a fraud if at the outset he had presented his skull cap to Etxeberri.

Pierre’s problem was that he was not commercial and usually gave in to everything, he was too kind, soft in a nice way, but Lundy had made it clear that they needed the agreement to satisfy the financial people back in Paris, some of whom had started to make noises about cost overruns in Kalimantan.

Fitznorman put on his most serious look, and indeed he did feel serious, it was important for the financing extension of the

Borneensis dig. Otherwise the Indonesians could bring in other partners and he imagined himself being forced to slink off like one of the mangy beaten dogs he had seen lurking in the filthy back streets of Rabat.

They had rehearsed what he was going to say on nod from Pierre.

‘If I could make a suggestion Monsieur El Malik,’ said Fitznorman. ‘I know it is very difficult to increase the French participation in the Museum project, but there are some important new events of which I cannot talk at present that will make a significant contribution to the interest in your new museum. I have discussed this with Professor Lundy and certain private investors who have permitted me to inform you that a further five percent participation could be made from our side.’

He waited for their reaction there was none, their faces were blank, he looked at Rachid Benani, but his face was also closed, he was not ready to contradict vice-president, who was in effect the museum head as the president was the King.

Murad El Malik open his file and jotted a note with his gold pen.

He appeared to be thinking deeply, he took a breath and appeared to collect his thoughts.

‘Thank you for your interest Monsieur Fitznorman, unfortunately this is really too little. If you are really interested by this cultural joint-venture, you will have to come up with something more realistic, you must understand that a potential American partners has made some interesting proposals and the difference remains significant, as I said and I repeat France has a major role to play, but not under these conditions, you should understand that we expect a bigger effort from our friends.’

Fitznorman waited, a little surprised by the mercantile attitude of the Moroccans, however his experience told him that he should let Murad El Malik pursue his reasoning so that they could then analyse his position.

‘Please reconsider your proposals and what we have said, and we shall wait for your reply here on Thursday at 11 o’clock in our offices,’ El Malik said with a said smile.

Murad El Malik closed his file, indicating that the day's discussions were at an end. It had been too quick for Pierre Rossard and the CNRS men, Charles made them a sign and they fumbled their papers together, stuffing them into their brief cases as they rose to leave.

Charles left them at the hotel, returning to Casablanca. He would contact Rossard at the hotel later that day.

They headed directly for the bar, the favourite meeting place of disappointed business travellers all over the world. They went over their brief meeting trying to explain the reason for the unexpected position of El Malik. They sat drinking their beers whilst Fitznorman tried, in spite of his own confusion to explain the situation to them.

'It's all part of the normal process of commercial negotiations.'

'Not in the scientific and academic world, we don't play games like that,' said Pierre Rossard.

Fitznorman knew that to be untrue, he had found academics were as devious as anyone else. The French in spite of their experience refused to see the point of view of the other side. Their deep suspicion of Moroccans was difficult to overcome.

I suppose we have to think of it as two camels sniffing each others back ends before engaging in more serious business,' laughed Pierre Rossard hopefully trying to raise their hopes with his coarse pleasantry. They appreciated that and laughed but did not seem to be more convinced as to the progress of their business.

'Look, get on the phone to Paris and find out what can be done.' Fitznorman suggested to Rossard. 'We've got a couple of days to come up with the right answers, I don't think it should be too difficult.'

Rossard looked at Bruno and nodded, it was true that they needed to act, they couldn't leave the field open to the Americans.

Towards six Fitznorman called Charles, but he had left the office. He waited in his room hoping that Charles would call. Towards eight Rossard called him, he was hungry and they decide to eat in the hotel restaurant. The conversation was morose as they tried to make the best of their lamb mechoui. Fitznorman looked at his watch it was

nine thirty and no news. He collected his key to return to his room and strolled to the lift.

‘Monsieur Fitznorman, Monsieur Fitznorman.’ the reception manager called him holding a telephone in his hand. ‘A call for you.’

‘Hallo Scott, sorry it’s so late. Listen I can’t speak now, but I think we can arrange things. We should meet tomorrow here in Casa, I’ll explain why tomorrow. Take the train if you like, come alone for lunch. At the Hyatt.’

Fitznorman understood he could not talk over the phone, but it was irritating to be kept in suspense. He explained the situation to Rossard asking him to push Paris with the aide of the Cultural Counsellor, who had nothing much else to do in Rabat except wait for his retirement, Pierre would live up his day.

The next morning he took the train from Rabat to Casablanca, it was a good idea and he had enough of the local drivers who activated his imaginary ulcer. The train was comfortable and relaxing, in the air-conditioned first class wagon, it was also a moment of escape. The meeting with Charles was fixed at the Hyatt Regency where they could take a light lunch in the privacy of the pool side restaurant where it was always relatively calm.

He walked up from the Port of Casablanca station to the Hyatt, under the thick palms that lined the roadside. It was a moment of pleasure, he enjoyed the clear fine weather and the tourist’s view of the city. In the hotel lobby he saw Charles hurrying in.

‘Ça va Scott.’ he said between his teeth and his cigarette holder. ‘Sorry I’m a bit late, but I was on the phone with my friend talking about what happened yesterday.’

They crossed the lobby, it was dark and cool in contrast to the strong sun outside, the black granite floor reflecting the light from crystal chandeliers, they made their way through a maze of corridors and halls to the pool situated discretely at the back of the hotel.

The tables were set at the pool side and as usual the restaurant was practically empty apart from a couple of women sunning on

themselves on their chaise longue, no doubt waiting for there husbands absent business.

They consulted the menu and ordered a Moroccan salad and a bottle of local rose wine as they watched the swallows diving and skimming over the pool. There was little noise except the dull drone of the traffic beyond the high wall that separated the hotel pool from an adjoining avenue.

‘A cousin of El Malik’s, will come to my apartment this evening at seven and I have reserved a table at Le Cabestan for eight thirty, like that we can review the situation, I imagine you can stay overnight, there are no problems so we can relax, the only open question concerns the financing schedule.’

‘What was all that story about yesterday?’ said Fitznorman impatiently.

‘Internal problems don’t worry.’

‘What about our participation?’

‘Well you’ll have to make some concessions.’

‘How much?’

‘Another five should be okay.’

‘I see, that’s quite a bit.’

‘You’ll have to convince Lundy if you want their approval.’

‘Okay. As far as participation is concerned it should be possible, is there any specific thing they would like.’

‘Well yes, is it possible to make part of the side arrangement, you know the commissions, in cash.’

‘Cash! I don’t know, that’s not really my problem. I wonder if the people in Paris would agree.’

‘Why not,’ he smiled slightly embarrassed.

‘Do you know how much that is in cash!’

Charles laughed and shrugged his shoulders.

‘That’s what they asked.’

‘They don’t trust us?’

‘I don’t know.’

‘Sure, I cannot see why not, except for the fact that it’s quite a sum of money in cash as I just said.’

‘Can it be in France?’

‘In France! I don’t think so. I suppose that Belgium or Luxembourg would be okay.’

‘Fine, Brussels is okay.’

‘Good, I’d like to get on with the rest of the visit and see the sites that interest me.’

They dined at ‘Le Cabestan’ an excellent restaurant run by a French woman to the south of the city, in Anfa, a fashionable district overlooking the sea. The cuisine was typically French, seafood based on quality with light sauces, though the imported wines were extravagantly priced and local wines a little lacking in class. Through the panoramic window they had a view onto the seashore beneath the restaurant where the waves broke on the rocks and the wind carried the spray high into the light cast from the restaurant.

The cousin, who’s name Fitznorman did not catch, confirmed in a low voice the agreement. His role was that of the so-called coordinator, which in simple terms meant ensuring that payments were approved and monies were paid in cash or transferred to the nominated banks.

For Fitznorman this was good news with El Malik part of the arrangement it would ensure that the project was carried out according to the agreement.

The next morning just after breakfast in his room the phone rang, it was Driss and he sounded mad.

‘Fitznorman!’

‘*Oui.*’

‘Who’s this person telephoning us all the time?’ Driss said.

Fitznorman was taken by surprise ‘I don’t know, what do you mean!’

‘He’s called five or six times asking for information, why?’

‘I’ve no idea.’

‘Is he your agent?’

‘No, the only agent I know in Morocco is Charles.’

‘He’s the managing director of a tourist organisation.’

‘I don’t know...’

‘In any case he doesn’t know the ministry very well, we’re a state organisation you know.’

Trouble, thought Fitznorman. This is going to screw things up.

‘In any case, we have decided for the Americans, they have offered us better terms.’

‘You’ve already signed an agreement?’

There was a silence whilst Driss seemed to hesitate.

‘Yes...well no...we’ve taken the decision.’

Bastard, I’ll get that arrogant little bastard, Fitznorman thought.

‘I see then there’s nothing to do,’ he said forcing Driss into a corner.

‘No, another time maybe.’ He was calmer ‘We’ll send you a mail,’ he paused again, ‘In any case the final decision is with El Malik, he’ll contact you.’

‘OK, goodbye.’

His first thought was to get hold of Charles but there was no reply. It was strange, there should be somebody from his staff there. Finally when Fitznorman did get through the secretary told him Charles was absent, he had left with another visitor for Fez about two hundred kilometres from Rabat.

Fitznorman went down to the bar to let the others share the bad news. They were not very happy, they suggested trying another approach.

Fitznorman had no plans for the day and Rossard left with his men on some other business after agreeing to meet early that evening.

After lunch just as he was beginning to doze off, the phoned rang, he picked up the receiver and the operator asked him to hang on a moment.

It was Charles.

‘Hallo Scott, I had a call from the office, it seems like there is a problem, tell me how the meeting went, but don’t mention any names.’

He quickly described what happened and the call that he had received.

‘Hmm I see, well it appears that our friend is with the other side, but don’t worry you should know that he cannot make any decisions, but of course he can to some extent can influence things, but a decision like this is really out of his power,’ he paused, ‘as I said if some concessions are not made, it will make life difficult for his boss.’

Fitznorman concurred, but said that they should at the very least have an exact indication on the price.

‘I’ll try to call our friend.’

Fitznorman was not too surprised when he received a call from Driss. He was charming as if there had been angry words earlier in the day. He invited Fitznorman to dinner that evening at a hotel about half an hour south of Rabat, it was at a beach called Atlantic Plage behind a coastal woodland, a plantation of eucalyptus.

Fitznorman suspected and hoped that pressure had been applied to Driss, who was now trying to put the pieces back together. In any case their dinner in tête-à-tête would give him a good idea of where they were with the discussions. He didn’t trust Driss, but he had gracefully accepted the invitation. He hoped that it would be reasonable clear, not too oblique, as he was discovering the Moroccans tended to be.

Driss lived nearby in Rabat, not far from the hotel, in a comfortable modern apartment and that evening he picked Fitznorman up at the hotel in his new Citroen.

They arrived at the restaurant in the middle of a power cut, or maybe it was the generator that had failed. With the sea wind the evening was chilly and Fitznorman shivered as they were shown into

the dinning room where they were the only diners present. It was light by candlelight and shadows flickering across the walls.

Driss was a man who lived in two worlds, he was a Moroccan, an Arab, part of a culture that ran from the Indian Ocean to the Atlantic, he was also a Muslim. His other world was France, which had once governed Morocco as a protectorate, he had been brought up bilingual in a French school in Rabat. He then studied archaeology at the University of Leige in Belgium and had married a girl from the Northern French town of Lille.

Like the rest of his people, he was dependent on Western know-how and was in constant conflict, defending his world against disparaging French academics. Many Northern Europeans looked down on Moroccans, as underdeveloped at the best, and potentially dangerous terrorists at the worse, with dirty habits, unclean food and bad drinking water.

For the French natural scientists he was a the key to their research programmes considering Morocco's rich archaeological and palaeontological records, they were obliged to court him and treated with him obsequious respect, but that did not prevent them from dropping barbed anti-Arab remarks.

A man such as Driss, was more than aware of that two sided relationship. He had to live with its soul rending conflict, as did many of his fellow Arabs. He saw around him, the difficulties of his country, the impoverishment, galloping demographic growth that his leaders had done nothing to prevent with their poorly conceived political ideas, equating numbers with strength, in a race against their neighbours who pursued the same ideas under a military dictatorship.

He saw the forever dwindling resources in education, in housing and in employment, the rapidly deteriorating environment, without the slightest effort at pollution control apart from the window dressing in tourist zones.

'You know Mr Fitznorman, the economy is bad, this area for example is a supplier of eucalyptus wood to our local industry, unfortunately the situation is becoming more and more difficult as

the quality of the wood supplied by the forestry department is slowly but perceptibly declining.'

In the half light one or two others dinners arrived. Driss ordered the dinner from the waiter who struggled to see what he was writing on his order pad.

'The villagers steal the growing timber, the other day riding in the plantations I stopped some fourteen or fifteen year old boys who were tearing down branches. I tried to explain to them that the trees would never reach productive maturity if they did that.'

He paused looking at Fitznorman wistfully, the candlelight flickering in his sympathetic eyes.

'You know what they replied?' he paused questioningly 'They replied that maybe it was not right, but their needs were more immediate. They had to eat, their families needed wood to cook, for heating. They had no other resources, no money, no jobs, what could I say to them, because I know it's true!'

They ate a typical Moroccan dinner, a couscous with a local wine. Fitznorman made an effort to relax, but the cold and the emptiness of the restaurant made him feel ill at ease even though the conversation was easy. Driss was a talkative and intelligent man.

He ordered deserts and coffees.

'You know Mr Fitznorman, really we would like to work with you, but I must be frank and tell you that the conditions proposed by Monsieur Rossard are unacceptable to us, you have competition from the US. Personally I prefer France, but the French will have to make concessions.'

Fitznorman nodded and told Driss, that he was sure that a last effort could be made prepared, and he would communicate the message.

There was a silence. Driss looked into his coffee shifting his spoon about.

'You know I have a daughter who is studying in the US, she will be finished in June and is looking for a position.'

Fitznorman understood Driss was now feeling his way along and he helped him.

‘What has she been studying?’

‘Bioarchaeology, you know excavation of burial sites and analysis of skeletal remains.’

‘Where?’

‘University of Arkansas, under the King Fahd Middle East Studies Program.’

‘Very interesting. I think we can help her. Look, ask her to email the details of her work to me personally and as soon as I return I’ll get things moving, count on me.’

That would not be too difficult, if it would reduce Driss’s resistance, he knew his daughter came before anything else. Finding a job for her would not be too difficult.

What else did Driss want, his daughter was no doubt a starting point, but Fitznorman was not going to anticipate any demands from Driss, they had to come from him. Suddenly the lights came on, a good sign he thought.

Thursday morning at eleven, they were again in the ministry building waiting for the lift. Three other people from the office staff waited with them, it was usual everybody took the lift, even if they were only going up or down one floor. Fitznorman supposed it was a question of status, only cleaners took the stairs, it was the same in Indonesia. They all crowded in, the four of them and the three Arabs, who sneaked side glances, hoping to glean a clue as to the reasons for the foreigners presence, which would them a good subject for conversation.

As they arrived at the secretary’s office Driss appeared quickly dismissing her and warmly welcoming them.

‘So have you had a good rest, is the Hotel okay?’ he said shaking hands with Fitznorman and then Rossard and the CNRS men.

‘Everything is fine, no problems.’

‘Better here than Paris, not so cold.’ he grinned.

‘Let’s go into the conference room, Monsieur El Malik is not yet here, he will be here shortly and in the meantime we can look at the papers.’

‘I shall order some coffee.’

‘Well have you come up with some constructive proposals?’

Fitznorman looked to Pierre Rossard who was already fidgeting with his briefcase.

‘Yes here is your copy of the new pages,’ he said passing the papers to Driss.

‘As you can see there are the three distinct areas in the agreement, the first concerns the museum, the second the research programme and the third field work at the Thomas quarries and the Atlas sites.’

‘So it looks like everything is in order,’ Driss said looking through the papers.

‘So would you like some tea or coffee’ Driss asked as the secretary entered the conference room.

It was eleven thirty, El Malik was over half an hour late. Fitznorman hoped there were no difficulties at the ministry. They shuffled the papers and made small talk, as there was no way they could precede without El Malik’s presence. The secretary came back with the tea and coffee and whispered something in Arab to Driss.

‘Please excuse me a couple of moments, I must attend to something.’

Fitznorman gave Rossard a questioning smile, it appeared there might be a hitch.

At that moment Driss returned in a fluster and was followed by a dignified El Malik, impeccable as usual, he was tall and elegant, dressed in an immaculately tailored pin strip suit, from a Parisian tailor without any doubt, and as calm as a hawk observing its prey.

‘*Je suis désolé*, I’m sorry, I’m late, urgent question at the palace.’

‘So gentlemen what is your reply, you’ve discussed our remarks with Paris?’

‘Yes, we have re-examined the conditions of the agreement to suit your wishes.’ Fitznorman offered passing the documents to El Malik.

El Malik paused knitting his eyebrows in concentration he scrutinised the documents.

‘Gentlemen can I ask you to leave us for a few moments whilst we discuss this together.’ he said.

They stood up and left the room. Driss showed them into a small office further down the corridor and left them alone. Fitznorman looked out the window, which gave out onto the back of the building. Some moments later the secretary brought them more coffee.

Twenty minutes passed, they hardly spoke.

The door opened it was the secretary.

‘Monsieur El Malik is ready for you Mr Fitznorman, could you ask the other gentlemen to wait.’

Fitznorman entered the office, there was an air of tension, Driss was no longer there, another person seemed to have taken his place.

‘So gentlemen, we have examined your conditions and are ready to make a decision, which appear to be acceptable, however the French financial participation is still inadequate!’ he paused and lifted his eyebrows. He raised his hand to stop any protest that Fitznorman might offer.

‘However we are ready to do business if you can extend the field work to the aerial survey we are doing of the fossil beds in the Anti Atlas!’ He made a sign to the person on his left whom Fitznorman seemed to vaguely recognise, he paused again letting it sink in, ‘If you can that then we can shake hands.’

Fitznorman paused in reflection, it would be unwise to jump up and accept instantaneously. He turned over the pages he held in his hand in a semblance of hesitation, it was not his prerogative, it was a question for the French. Pierre looked at him and with the slightest of nods indicated approval.

‘Monsieur El Malik,’ said Pierre, ‘as you know this is a decision for Paris, however, I can say that your proposals are very reasonable and will be accepted.’

Pierre stood up and held out his hand. El Malik did likewise, the tension fell away as they shook hands and they all broke out into

broad smiles. El Malik nodded to his administrative assistant, who stood up and left the room.

‘All of the documents are ready,’ he said looking at Benani.

‘Yes Madame Hammadouche has prepared all the files.’

‘Well gentlemen I think we are in agreement and Mr Driss and his staff have informed me that we have come to an agreement on all the so-called technical points, there is just one point that he feels we should re-examine.’ he paused causing Fitznorman a surge of anxiety. ‘That is the name of the new fossil man, we would like it named Homo berberis.’

‘I don’t think that will be a problem,’ Pierre said with a broad smile.

The secretary discretely slipped into the conference room with a folder containing the different documents, which she handed to Benani.

‘Eh bien! We can start the signatures if you are in agreement.’

The contents had already been approved and El Malik handed one to Benani who compared them to the copies in his possession whilst they perused their own knowing already that they were in order.

‘So Monsieur Benani will start initialling and signing this one if your party will commence with the other,’ said El Malik.

The contracts were then exchanged for the other party to sign and on completion Benani stood up smiling and held out his hand to Pierre Rossard and Brun, the official representatives of the Centre d’Evolution Humain and the CNRS.

‘Congratulations, I sincerely hope that this is the start of a long and fruitful cooperation in this agreement, we look forward to our cooperation partners in this ambitious programme.’

Pierre Rossard beamed and Bruno grinned, mumbling some suitable phrase for the occasion, whilst Fitznorman was thinking about their departure to the south.

That evening they were invited by El Malik at the Rabat Hyatt for dinner to celebrate their agreement in the exclusive Bedouin restaurant designed in the style of the traditional desert tent. A six-

piece orchestra played traditional Arab music, lancing sounds that slowly induced its listeners into a semi hypnotic trance.

Fitznorman was to the right of El Malik who was acting out the role of a regale host and Pierre sat to his left. They were offered aperitifs and wine to accompany a succession of dishes, including those Moroccan favourites of pigeon pastilla and lamb tagine with prunes and almonds, as they listened to a succession of different singers of classical Arabic music.

El Malik made small talk and as the dinner progressed he became slowly aware of a message being passed over in a typical parabolic fashion wrapped in suave innuendo as Arabs of high breeding are well practised in.

‘You understand Mr Fitznorman it is essential that you respect your promises for our contract, there is a lot at stake.’

Fitznorman was not sure if he was talking of his own side of the agreement or the contract with the CNRS.

‘Our institution has the responsibility of fulfilling its engagements and this is most important for those of us who wish to develop our scientific research concerning our rich Moroccan prehistory.’

Fitznorman listened with a demonstration of enthusiasm and sincerity designed to assure the speaker he could be trusted.

‘It is imperative that the instructions that are communicated to you by my staff led by Mr Driss are respected and followed up in a discreet and confidential manner.’

Fitznorman nodded.

‘Good I am pleased to see that you understand, let us watch the show and relax now, remember that we consider a man’s word as a question of honour.’ His smile did not soften his hawk like eyes.

At that moment an oriental dancer stepped into view, her skin was pale, she was astonishingly beautiful, dancing with striking skill and force, full of natural presence and grace. Fitznorman was hypnotised, she was like a beam of moonlight in contrast to all the oriental dancers he had ever seen. He could not remove his eyes from her as

he was carried into a fantasy of dreams far from wearisome discussions of the previous days.

Chapter 35

LAND OF THE DINOSAURS

The south of Morocco is a parched desert that sweeps around the western flank of the Magreb. Whirlwinds rise over the parched earth like genies between the mirages dancing above the endless reg watched over by vast silent temple of rock supported by tier like buttresses of stone.

The four Toyotas Landcruisers rolled across the desert leaving a white plume of dust rising behind them, the baggage roped onto their roof racks protected by heavy white plastic tarpaulins from the sand that penetrated even into the most tightly sealed baggage. Here and there an isolated tamaris or acacia stood out against the coppery green landscape that had once swarmed with life in the distant past which in more recent times had witnessed the arrival of men.

They passed dried river beds and occasionally a camel, the only large living creatures capable of surviving in the harsh desert environment, grazing on the sparse vegetation. Huge slabs of rock rose up into the sky baked by the sun and weathered by the elements, their sides scattered with slabs that had broken off, then breaking into smaller pieces in an infinitely slow slide down the steep slopes towards the plain. The desert spread in an endless sea of sand and rock across the Western Sahara and Mauritania, then Algeria and Chad.

Rare tiny ochre coloured villages built of mud bricks and pisé appeared like mirages and oasis parched by long periods of what was described by the Moroccans as drought, but which in reality was nothing more than the eternal cyclic variations of climate that now forced the burgeoning population from their villages to an exodus towards the country's large towns and cities.

The contrast with Borneo couldn't have been starker with stubs of palms standing mournfully in the burning sun, all that remained of a once green oasis abandoned by its Berber cultivators.

They stopped for a pause and suddenly a young Touaregs appeared as if by magic from the dunes of sand proffering a handful of trilobites, real and manufactured, ready to sell to passing voyagers.

The main fossil sites that interested them lay to the southeast of Afni, where the reg met the mountains, which rose like a great fracture on the landscape piled with geological layers, the nature's giant quarries cut by aeons of time, now exposing rich fossil beds containing the remains of a multitude of creatures, ranging from simple trilobites to the terrifying cachrydon, creatures that paved the way for the arrival of mammals, and then, as Rolande their geologists, believed, early man.

The wind rose and a mist of sand blurred the landscape that had slowly flattened out into an endless desert of sand and stone. Clouds of red sand now swirled up in long plumes behind the Toyotas.

They passed Tagonnite, a formless one camel town, facing the edge of the encroaching desert. The road ran through the low sand covered buildings in a straight line as if it were pressed to leave the desolation.

Beyond the town in the reg, the Chergi, a hot, dry, wind from the south, was blowing. They paused to look silently at the dried out remains of a camel, its bones protruding from its sack like skin, witness to a nature that showed no mercy, not even to those creatures that had learnt to respect its harsh laws.

The driver, Sala, a tall friendly, though laconic Berber, contrasted with the scowling driver of the second Toyota. He wore a yellow chesh over his balding head, a devout man he a prayer mat tucked between his seat and the door jamb.

The landscape gave way to scattered with patches of vegetation and a few acacia at the foot of the hills that lay off to the west, Sala pointed out a group of twenty or so camels grazing on the sparse vegetation, they were raised for their meat, he explained, the most delicious of all meats eaten on very special occasions.

Small cairns of rock and stones erected on the side of the trail guided travellers across the vast open space, a landscape that changed endlessly, but without the signs that men used to life in towns and villages could recognise.

The vegetation quickly gave way to the flat sandy bed of a dried up lake that stretched as far as the horizon, a huge formless expanse ahead of them without any sign of a trail, but the drivers knowing every inch of it drew up four abreast and raced across the salt flat, a relief from the bone breaking monotony of the reg. It was as flat as a billiard table in every direction, the horizon meeting the sky in a shimmering mirage where three or four camels seemed to walk on the waters of a silver lake. From time to time they passed tight patches of tiny plants miraculously sprouting between the cracks of the long dried up lake bed.

To the right were the foothills of the Anti-Atlas. A control point stood on a rise overlooked by a small rose coloured military fort which stood on a small buff, they were stopped by a guard standing at a barrier who after checking their papers waved them on.

Then they crossed a region that looked like a vast demolition site, the convoy throwing up a cloud fine grey dust. The variety of desert types was astonishing to those who imagined sand and dunes, but for Fitznorman who had arrived from the lush, rain washed, jungles of Sarawak it was a savage but beautiful landscape void of all visible life.

The weather was perfectly suited to the survey expedition with the temperatures in the mid-afternoon of between twenty-five and thirty degrees, and ten to fifteen during the night. In the summer months the shadeless desert reached temperatures of almost fifty degrees.

A lone Bedouin appeared walking on the side of the rocky trail his blue robe and blue black head scarf protecting him from the sun, he lifted his hand in salutation, he was miles from nowhere. Many young Bedouins once they discovered the easy life, compared to the harshness of their ancestral traditions, headed towards the villages and towns abandoning their land, their goats and camels. By progressive steps they moved on from village to village and finally

ending up in misery of the shantytowns in Casablanca, the economic capital, where there was hope, beyond, of a better.

The government did everything in its power to keep the sparse Berber population from quitting their ancestral lands, once a village reached three thousand people, electricity and running water were installed, rudimentary, but effective.

Night was falling when they reached the survey camp, set up in advance with the help of local Touaregs hired by Claude Poirot, the camp head, where the tents and vehicles were already covered in a fine layer of dust and sand.

The Touareg tents were of coarse woven sheep and camel wool, Poirot ensured them that if in the unlikely possibility of rain the wool would swell becoming water proof. Inside the tents were folding camp beds were set up with what looked like fairly comfortable mattresses and thick blankets. There, in spite of the Spartan comforts, as soon as night fell, and to their great relief, the wind died down and the flies disappeared.

Nearby an ass belonging to the Touaregs heehawed in the desert. In the distance a couple of stray camels stood idle in the setting sun and nearer to the camp a few crows had appeared in the hope of scavenging the waste whilst large black beetles obviously well adapted to the environment scuttled over the sand in search of food.

The logistics manager of the French Bureau of Geological Research and Mines, Claude Poirot, welcomed them to the camp, he was a rugged no nonsense type and had long experience of geological expeditions in Morocco. The Institute's expedition manager, was Abdel Hassim a young Moroccan who had graduated in Commerce and Management and spoke excellent French, with fairly good English, he worked with authority and efficiency, cooperating with Poirot without the least friction. Poirot, who spoke a little Arabic and no Berber, relied on Abdel for communication with the local people who spoke little French.

Zybnek Jaros, the director of the Department of Paleo-archaeology of the Czech National Museum, had joined them. He pointed to the three ULMs parked under tarpaulins protected from

the wind by their tow vehicles. These were part of the equipment necessary for the geological survey over the rugged terrain where air observation could save them weeks of exhausting footwork for the survey, exploring for minerals and studying the geological sediments. Poirot had obtained the necessary permits from the administration at the office of the Glaouie for permission to explore the zone from the air with their low flying ULMs.

After moving their personal affairs into the bivouacs, they settled down on the rugs spread over the outside of the canteen tent facing the sun as it started to settle behind the smooth lines of the Anti-Atlas mountains, drinking refreshing mint tea in the evening air after their gruelling trip from Ouarzazate.

The ride across the reg had been bone breaking but demonstrated the solidity of the Toyotas that bore no visible signs of the experience apart from a covering of dust after crossing the lunar-like landscape. Fitznorman who was still feeling stiff from the hours pent in the Toyota, wandered off to relieve himself in the dunes that lay two or three hundred metres to the east of the camp, he made his way to the top of the nearest dune surprised by its size, at the top he saw before him a vast sea of dunes some of which rose like mountainous waves to the rose coloured sky.

A full moon was already visible in the sky on the eastern horizon, over the dunes, it was as red as the sun, covered by a grey blue veil. The heat of the day lingered on, radiating from the sand, it was intense, heavy, by the time he reached the top of the next dune he was damp with transpiration. He looked at his watch, it was almost eight, time to the camp for the evening meal.

They sat on the rugs and carpets under the clear, cloudless, sky. Fitznorman saw a shooting star flash across the bright dome of the night to the east of the half moon.

Fresh bread was baked in pans over red embers taken from the camp fire of brush wood and eucalyptus. A freshly killed lamb baked on a spit a short distance from the main fire.

The smell of the roast mixed with a perfume of orange blossom wafted over them as a bottle of chilled Goulamine Gris rosé appeared

and was opened. It was corked. Quickly adjusting to the rigours of camp life they realised that it was the best they were going to get, they slowly sipped it, almost as though it was a fine Champagne. The silence was broken by low voices and the faint echo of some distant muezzin carried by the night air of the desert called the faithful to prayer.

As they savoured their dinner they discussed their plans with Lauri, a palaeobotanist, specialised in hominid diet and her colleague, Ann, a palaeontologist. They talked of Pierre's theory that erectus had crossed into North Africa much earlier on in the course of evolution than was currently thought by science, up to then there was no proof simply because proof had not been found. Another bottle of wine to go with the desert of couscous sprinkled with powdered sugar and canella as Ann described the area they would explore the next day, a fault area that exposed layers going back more than a million years.

Lauri shared the tent with Fitznorman and Pierre Rossard, there were no niceties between the sexes. She was in her late thirties and single, a professional veneer hid a girlish charm, Lauri told them she had never found time for the pursuit of a partner, her life was dedicated to the pursuit of the strange creatures that had roamed the plains of Africa in the long distant past. Fitznorman noted how she wandered off from the camp occupied by her own thoughts, as if searching amongst the rocks for eventual clues to past, or perhaps simply to get away from life that was too complicated by the politics of specialists which was of little interest to her.

The soft throb of the generator situated about one hundred metres from the tents was hardly heard against the general activity ceased at ten leaving the camp in almost total silence. Those who wanted to could read or write by gas lamps. Others wrote reports on the laptops or consulted their mails powered with the help of vehicle batteries.

The next morning the sky lightened just after six. The embers of the heavy eucalyptus log continued to flicker in the early morning dusk. The camp toilet was rigged about thirty yards from the tents and after the first visit Fitznorman realised that from a strictly hygienic point of view it was best avoided. Showering was

impossible since the nearest point of water was too far from the camp. After a couple of days he barely remarked the rank odour in the canteen tent though the occasional breeze agitated the smell of unwashed bodies mixed with heavy doses of rose water.

Ten thousand years earlier the now parched rivers and lakes had been filled with crocodiles and hippos, whilst what was now a parched desert had been a lush savannah teeming with game. The rock carvings he had been shown were the proof that hunter-gatherers had once peopled the whole of the Sahara.

Life had prospered or faded with the ebb and flow of climatic change as it has always done. A hundred thousand years earlier when nature had smiled upon man's ancestors, Homo sapiens had arrived in North Africa from the east of the continent and before him other hominids had arrived to wander across its fertile plains and over its cool mountains. The migratory movement turned northwards to Europe whenever the regions population grew too fast, or when the climate changed once again and conditions became drier, as route to the south was cut when the Sahara formed an insurmountable barrier.

The motors of the Landcruisers were already running as the camp personnel packed their material onto the roof, they had a two hour drive before them to the site through a stark mountain landscape rising up to more than two thousand metres before plunging down into the valley formed by the geological fault.

Rolande, a geologist turned anthropologist, haggled with a young Touareg boy who had appeared from nowhere, he held two dinosaur teeth in his small grubby hands. Rolande was more interested in where they had come from than by the price. She had already bought several fossil teeth in the town of Errfoud at exorbitant prices.

Rolande scrambled into the Toyota alongside Fitznorman and Ann, a trained palaeontologist cum anthropologist, and an amiable dyke. She immediately identified the teeth as belonging to one of the largest of the theropods, a beast related to the Allosaurus and Giganotosaurus, a Carcharodontasaurus saharicus.

Ann, preferred field work to all other things, her work was more complicated than collecting mere mineral samples as did the

expeditions geologists and she seemed to pass more time swaggering around the camp a cigarette hanging from her lips, and butting into conversations and offering advice in a gruff friendly way.

She played her chosen role to perfection, wearing large khaki trousers belted around her bulging waist line, like many a middle aged male, into which was tucked a bulky tee shirt that did little to hide her large, falling, bust. She chain smoke in broad masculine movements and spoke with an effected upper class English accent. Ann was considered as one of the leading specialists in an obscure branch of primitive archaeology, the ancient stone carvings, especially those of Africa, a speciality she had chosen with the natural enthusiasm that she exulted in, after having forsaken mainstream palaeontology.

‘This creature had a massive tail, a bulky body, and heavy bones. Its arms were short and had three-fingered hands with sharp claws. Imagine jaws, one a half metres long full of teeth like these,’ she said turning over the tooth in here hand. ‘It was almost fourteen metres from its nose to tail, its head alone over one and a half metres long. They ran the show around here in the Early and Late Cretaceous.’

‘For your information Scott,’ she said looking at Fitznorman in a faintly patronising manner, ‘the Cretaceous, that is between 144 and 65 million years ago, was the last part of the Age of Dinosaurs, and it was in this period that the first modern mammals and bird groups as well as the first flowering plants appeared.’

‘Interesting.’

‘It was when the prehistoric continent of Pangaea continued to break-up.’

He nodded absorbing the lesson.

‘When the differences in the flora and fauna of the new continents became greater, the Cretaceous when life as it now exists on Earth evolved.’

‘Like Jurassic Park,’ he remarked with a smile.

‘Technically it should have been called Cretaceous Park,’ she corrected him. ‘As there were more Cretaceous animals like Velociraptor, Tyrannosaurus, Triceratops, Spinosaurus, Pteranodon

and Mosasaurus. The Jurassic animals were Stegosaurus, Dilophosaurus, Brachiosaurus, Brontosaurus, Dimorphodon. But Hollywood went for the more commercial title Jurassic Park.'

'What about our friend the Carcha....'

'Carcharodontosaurus! As I said they grew up to about fourteen metres long and weighed up to eight tons. It had huge powerful jaws with long, serrated teeth. Look! If you hold it up to the light you can see the serrations, some of these teeth were as much as thirty centimetres long. Carcharodontosaurus were bigger than T-rex, but its brain was smaller, it was a more primitive dinosaur than T-rex.'

'Great!'

'Actually, carcharodontosaurus fossils are quite common here and they also exist in Egypt, Morocco, Tunisia, Algeria, Libya and Niger.'

They fell silent as the buffeting and shaking of the Toyota over the rocky trail made conversation almost impossible. On a mountainside, spelt out in white washed stones, were the words, Allah, the King and the Nation.

They arrived at their destination Foug Zguid, near an abandoned village half submerged by the encroaching sand, the sun dried mud bricks and ochre walls worn down by the elements into a strange beauty.

It was where Homo erectus fossils had been discovered in a fault that exposed several million years of history. The BRGM geologists had identified the horizon to between one and a half to two million years old.

The discovery when confirmed and published would put the final coffin nail into the Out of Africa theory.

Chapter 36

AN OASIS

Finnt, an oasis accessed by a trail across a vast undulating reg, was a village that lived as it had lived for centuries, in almost complete autarchy, the oasis provided onions, carrots, beans, wheat, barley, aubergines, tomatoes and of course dates. There were chickens, goats, sheep, camels and donkeys. Only recently a water pump and tower had been installed and a diesel generator to supply the basic needs of the village in electricity. There were no shops, roads or other services.

Abdel told them Finnt was Berber for 'hidden village' and hidden it was. After crossing an almost endless reg they had suddenly dropped into a valley, invisible until the last moment, then from nowhere and to the surprise of their senses, dulled by the unchanging desert, a scene of surprising contrast burst open, displaying a fresh green splash across the landscape, an almost dry wadi and a dense oasis that lined its banks.

The old sheik, head of the small village, was standing there to greet them in front of the first house, he had been alerted by a signal from a young boy who had obviously spent the afternoon watching into the distance for the telltale plume of dust thrown up by the small convoy.

The sheik guided them to his house, past a small group of women washing clothes in the river, then small gardens where seeds were planted ready for re-picking as soon as the shoots were viable.

They arrived at a largish house in the centre of the village, it was built of mud bricks with its roof constructed of thick palm tree planks and fronds, the sheik indicated that it was to be their quarters during their stay in his village.

They were then invited for refreshments in the tradition of Berber hospitality, the sheik personally preparing the tea ceremony, pouring the tea backwards and forwards from the teapot into the glasses until he judged the mix was right as he generously sweetened it with thick lumps broken from a large loaf of raw sugar. Galettes of bread, hot from the cooking pan, were placed on a small copper table with saucers of olive oil spiced by herbs, the sheik with a deft movement showed them how to break off a piece of bread between the

forefingers and thumb, then dipping it into the olive oil, before carefully placing it into his mouth and washing it down with a sip of mint tea.

They installed themselves in the small bed rooms off the main area of the house, each of which was furnished with one or two simple camp beds and a basin of water for basic ablutions. They carried their baggage inside, organising themselves in what was to be their home for the following few days.

After sunset they were joined for dinner by the sheik, served by his women folk who had prepared a copious meal of couscous, vegetables, and a lamb tagine with a desert of dried apricots and dates.

‘The problem is that detailed maps of Morocco are somewhat confusing, they patchy and incomplete and available scales vary according to location,’ Charles explained.

‘We’re using information supplied by the Ministry of Energy and Mines of Morocco. They are based on a geophysical survey of the Anti- and High-Atlas Mountains from the air.’

‘This formation is called the Chenini Formation,’ said Rolande. ‘It was explored by the Institut Scientifique an organisation founded in 1920, it was then called the Institut Cherifien. Its activities were defined as fundamental research, mostly in Natural science, the idea was to make an inventory of the country’s natural resources.’

‘A bit out of date?’

‘Perhaps,’ said Ann. ‘Anyway, your beast was described by a couple named Deperet and Savorin in 1927. It lived during, the Cretaceous periods, Aptian, Albian and Cenomanian. It was christened with the unwieldy name *Carcharodontosaurus saharicus*.’

‘You’re wrong there!’ Pierre interrupted.

‘How come?’

‘How could it be christened, they’re Muslims here.’

‘Don’t be stupid. To be precise it’s classified as *Saurischia theropoda tetanurae carnosauria carcharodontosaurida*, a carnivore,

thirteen and a half metres long and weighing about eight tonnes, actually it was an ancestor of Tyrannosaurus Rex.'

'By the way, it's quite risky near the frontiers with Algeria and especially south of here in the Western Sahara,' Charles warned.

'You mean it's mined?'

'Yes, the Royal Moroccan Army carried out a mine clearance programme in the Western Sahara after the Polisario independence movement signed agreements with Morocco, exchanging information on minefields.

'Quite a large number of sites have been cleared and thousands of mines destroyed, but not all,' Charles said slowly looking around.

'My God isn't that dangerous?' Lauri exclaimed.

'Sure, the local people know and if people like us need to travel or work in these areas, they're informed about the possible presence of landmines and take the necessary precautions.'

'Do any people ever get hurt?'

'Sure, recently the Moroccan authorities registered fifty-one victims of anti-vehicle mines and explosions in the Western Sahara. Seven people were killed, another nineteen were severely injured as well as twenty-five with slight injuries.'

'Christ!' exclaimed Scott feigning fright.

'I don't want to worry you,' said Charles seriously, 'but don't wander off by yourself, as a warning a Portuguese support car driver in the Paris-Dakar lost a foot when he drove over an anti-vehicle mine in Mauritania near the border with Western Sahara.'

'Speaking of human fossils,' said Lundy, 'with all the evidence found in East Africa, it seemed evident that our ancestors evolved there and then spread to other parts of the continent. However, the rule in palaeoanthropology demonstrates that each new fossil find modifies the accepted theory and in 1996, that rule has been proved once again.'

In Koro Toro in Chad, more than 2,500 kilometres away, one of the supposed cradles of humanity, the fossil remains of a three and a

half million years old *Australopithecus* were discovered by Michel Brunet.

Scott recalled Brunet's talk, which was the starting point of his own adventure into palaeoanthropology, when Brunet presented his discovery, a new species *Australopithecus bahrelghazali* which greatly resembled *Australopithecus afarensis*, better known as Lucy.

'Is there any evidence of stone tools here in Morocco?'

'Not for the moment, we don't have a specialist. It's a problem, if you look at other sites such as Olduvai, in Tanzania, the tools consist mostly of pieces of lava and quartz, which came from another source as those materials didn't exist naturally nearby. Here in Morocco, the rock is mostly limestone and you can't make tools from that!'

'So what did they use?'

'Mostly crude rounded pebble tools called choppers,' Zybnek Jaros replied. 'but there were more sophisticated tools for example engraving-gouging tools, quadrilateral chisels, large and small scrapers, and other special purpose tools.'

'In limestone?'

'No, as I said limestone is too soft and friable, you need lava and quartz to make solid cutting tools in this region.'

'It is commonly accepted that when Java and Peking men were around there were part of what we call the Pebble Culture.'

'Lundy said there's evidence of that in France.'

'Yes, there's a site in France on the Riviera which has been dated at about one million years where evidence of Pebble Culture was found.'

'What about fire? Did they have fire?'

'Not on the Riviera site, but other sites in Europe are dated at about 750,000 BC also in the Mediterranean region, not far from Marseilles.'

'There seems to be a lot of remains in France.'

'You're right,' replied Jaros, 'there are hearths of charcoal and ash caves and tools from between 750,000 and one million years ago.'

‘What about here?’

‘No, not up to now.’

‘There is a big difference between Borneo and more northern regions such as China and Europe, above all the climate,’ said Pierre. ‘On the equator there’s no seasons, so in a certain manner of speaking I suppose life was easier. Which probably explains why there was little evolutionary pressure, Borneo was also isolated during long periods when the sea level was higher like today.’

Chapter 37

AMMAN TO JERUSALEM

The road to the frontier wound through a parched mountainous landscape that led down to the Dead Sea, 360 metres below the Mediterranean. The eastern shore lay to the left flanked by a sun devastated panorama of red rock strewn with the dust of time.

The taxi Fitznorman had booked the previous evening at the Amman Intercontinental dropped him at the frontier post on the east bank of the Jordan River. He had arrived in the Jordanian capital the previous day by Gulf Air from Casablanca, there were no direct connections to Tel-Aviv. He had over-nighted in Amman where he was informed that he could enter Israel at the Allenby Bridge frontier point.

The taxi could go no further and Fitznorman was left at the drop-off point, where he made his way by foot to the passport control. His passport was given a cursory glance and a slip of paper with the Jordanian stamp was inserted into it. He then climbed into a waiting bus that carried those entering Israel across the Jordan River to the Israeli baggage and passport control building, joining a motley crowd of mostly Arab passengers. He selected a window seat hoping to see the biblical Jordan, he was disappointed, it was nothing more than a miserable stream, barely visible between banks of scrubby vegetation, trickling under the iron bridge.

They passed through the high barbed wire fences under the blue and white Israeli flags that fluttered in a stiff breeze. The passengers were carefully scrutinised by the guards, identifying their baggage as it was loaded onto a conveyor then disappearing into a low barrack like building.

As they were led inside they were observed by Israeli security personnel, young women for the most part, Lenin would have been proud of the way they flaunted their arrogant equality. Fitznorman was given a quick once over and waited for his bags that had not yet emerged from the screened control area. A skinny blonde in jeans barely twenty years old treated an elderly Arab, leaning on a walking stick, in a condescending and loathful manner. Fitznorman could not help thinking of the scenes from Nazi Germany as he observed the blonde, forcing the old man to hoist his djellaba over his head and unbuckle his trouser belt as he raised weak protests, to no avail.

Other young female guards in tight pants and white short-sleeved shirts, their tits thrust brazenly forward, looked on in haughty unabashed masculine poses, holding their impressive automatic weapons at ready on burnished shoulder straps.

The formalities completed, he took a shinning new yellow taxi for Tel-Aviv. As the taxi climbed up from the Dead Sea they passed a group of miserable Bedouin tents before which small wretched flocks of sheep grazed. As they then sped through Jerusalem and down the highway towards Tel-Aviv, Fitznorman was convinced the driver was doing his best to fulfil a death wish.

The outlying suburbs of Tel-Aviv were not unlike those of any southern European city, the highway bordered by modern industry and office buildings and as they approached the inner city zone they were caught in a vast snarl of traffic.

The taxi delivered him to the Dan Hotel which backed onto the Tel-Aviv sea front. It was not his first visit to Israel, a country that he had seen through the eyes of a tourist, history and beaches, but also as a place of confrontation seen through press and TV news with reports of bombs, attacks and war.

He was curious to set about discovering the city and stepping out from the taxi was surprised by the exquisite mildness of the early December weather, an extraordinary change from the biting cold of Europe or the steaming equatorial heat of Indonesia.

Pierre Rossard was already waiting in the hotel for a meeting set up with Dr Steiner, who according to Pierre had developed new technology that they could be used to corroborate material dating from the discovery site in Kalimantan.

Steiner, a nuclear scientist, was working on the development of new applications for radio isotopes, including dating techniques in the field of archaeological research. He had convinced Pierre Rossard that their ideas were far ahead of the field and had been successful in fixing new dates for Israel's early human fossils.

Almost as soon as he arrived in his room Pierre called to inform him that they were to be picked up by Steiner for a meeting at his apartment. It seemed a little unusual to Fitznorman, they could have met in the hotel, or at Steiner's offices.

Steiner must have been in his late forties, the first impression was that he was a kind but effusive person. Between the hotel and the nearby suburb where he lived he talked non-stop, almost without taking a breath, he was informative and replied to the brief questions Fitznorman squeezed in with a deluge of information.

The apartment was a large penthouse on the thirteenth floor of a modern apartment building with a view over the Mediterranean in the middle distance. The entrance to the building was flanked with gardens filled with palms and other exotic plants. Fitznorman gathered from Steiner that it was a smart residential area where politicians and celebrities lived.

Like all Israelis, Steiner was immensely proud of his country's achievements. His family were Sabras, his grand mother was born under the Ottomans, and the Steiners considered themselves aristocrats of their country, constantly reminding the visitor of their nation's scientific achievements and military prowess.

Steiner offered them cocktails and an Israeli buffet as he described his work at the Soreq Centre, near Beersheba, about thirty kilometres

from Tel-Aviv where he worked in isotopic research. As they ate and drank, he told them that like most Israelis he was a Tshal reservist, holding the rank of colonel, in a communications, telling them in a matter of fact manner of his chaotic experiences in the six day war as a young officer and then in the 1973 war.

Full of apologies Steiner informed them that a Russian scientist from the Institute of Natural History in Moscow, Alexis Vyacheslav Kutznetzov, would be joining them during their visit. It was unavoidable he explained, the Russian was scheduled to arrive the next day from Moscow, and to celebrate the arrival of his notable visitors he invited them all to a welcome dinner for the following evening.

The next day Kutznetzov arrived on a Transaero flight, a Boeing, one of the more recent Russian airlines that had sprung up, and one of the better companies. For Alexis Vyacheslav, like quite a few Russian, Israel was a home from home with its seven or eight hundred thousand Russian immigrants in the country, many of whom had seized the opportunity to leave Russia after the fall the Soviet Union, mostly well educated Russians with industrial, scientific and academic skills. Tel-Aviv had also become a centre of activity for the Russian Mafiya as money could be freely moved in and out, as could people, especially those of Jewish or claimed Jewish descent.

It was a pleasant break from Moscow for Kutznetzov where the full force of the Russian winter had hit the city with early snow, ice and Arctic temperatures. Tel-Aviv was another world away from the daily grind in Moscow, the mercury hovered pleasantly in the mid-twenties with a light breeze from the southwest under a clear blue sky.

Monday morning Steiner picked them up from the hotel in his Volvo and drove them out to his offices near Beersheba they arrived twenty five minutes late after struggling through the heavy traffic. Tel-Aviv was suffering from gridlock and pollution like all cities that had experienced fast and almost uncontrolled development.

The population of the city was growing and the country's economy galloping ahead, peace was bringing its fruits, prosperity and with it the problems of modern society.

They were they were met by his friends from the National Museum to make a tour of the Soreq research and development facility. Starting in the conference room where an enlarged colour photograph of a blockhouse like building in the Negev Desert decorated one wall. Shlomo pointed to the photo and without the slightest attention to confidentiality described the layout and his role in that project.

'We are the only significant company in the field in Israel and probably in the middle-east specialised in the development and application of radio isotopes.'

He pointed to one area of the photo. 'Here we are to build a new research unit.'

They looked at the photo as his colleagues started arriving.

'Well, everybody's so let's get down to our business.'

'Maybe you should tell Scott something about of the human fossils found in Israel,' said Pierre.

'Sure,' said Shlomo, standing up and going to the marker board. 'Israel is the home to some of the oldest archaeological sites known outside of East Africa. The site at Ubeidiya in the Jordan valley south west of the Sea of Galilee, is one of the oldest. However, palaeoanthropology really got going in Israel when one of Pierre's compatriots, a French anthropologist, Bernard Vandermeersch, Professor of Anthropology from the University of Bordeaux, discovered a series of Middle Palaeolithic burial sites full of distinctly modern humans in the sixties and seventies at a place called Qafez in Lower Galilee.

'It was quite sensational discovery and Moshe Dayan even provided a helicopter to transport the fossils of a modern woman and child encased in a limestone block.

'About fifteen years later, just a few kilometres from Qafez in a cave called Kebara, a fossilised man was found and identified as a Neanderthal. Then in eighty-three we discovered the most complete

Neanderthal skeleton ever found, with its spinal column, rib cage, and pelvis.'

'They called it Moshe,' said Pierre with a good hearted laugh.

'A short distance from Kebara along the coast road is the Tabun cave which has deposits twenty-five metres deep spanning more than 100,000 years of Neanderthal occupation. Then not far away is another cave, called Skhul, it's an older site, what I mean by that is that it was discovered in the 1930s, there they found some modern-looking humans.'

'Quite a mixture,' commented Fitznorman.

'Absolutely, Neanderthals and modern humans, and what's interesting is that the tools found with the bones are all very much similar. Suggesting that the fossils found in Qafez could be "proto-Cro-Magnons", that is to say almost modern man.'

'What about the dates, have you been able to investigate these?'

'That's why we're here Scott.' Pierre Rossard said with a broad smile. 'Explain Shlomo!'

'We needed a new way of measuring time, if possible an absolute dating technique, so that we can determine the age of the Mount Carmel fossils with precision.

'I don't have to tell you that the most well known method is radiocarbon dating, but it only works for material up to around fifty or sixty thousand years old. After that the amount of radioactive carbon left is so small that it becomes almost useless. Then there is radioactive potassium technique used to date volcanic deposits older than half a million years, this was used for dating Lucy.'

'So there was a gap between these two techniques?'

'Right,' replied Shlomo, 'the fossils we found here in Israel fell into a black hole as far as exact dating was concerned.'

'That's where we came in,' said Pierre proudly. 'One of our scientists, Hélène Valladas, used what was then a new technique, thermoluminescence, to date stone tools Kebara and Qafzeh.

‘This works on the principal that minerals give off a burst of light when heated to about 500 degrees centigrade, so when a stone tool was heated enough by fire, it gave up its thermoluminescent energy.’

‘How did that happen?’

‘No doubt some of the cave dwellers stone tools got accidentally kicked into their fires and were buried in the ashes of the hearth where they remained until we rediscovered them, so with these stone tools we could determine with precision the moment when they were kicked into the fire.’

‘Where does this thermoluminescent energy come from?’ asked Fitznorman.

‘Ah, that’s a complicated question, but it’s a bit like this, thermoluminescence, or the light emitted, is due to the recombination of electrical charges trapped at defect sites within the mineral’s lattices, and the quantity is proportional to energy absorbed by the mineral as a result of previous exposure to ionizing radiation.’

Fitznorman looked blank.

‘In simple terms Scott, naturally occurring radiation, or radioactivity if you like,’ interjected Pierre.

‘Actually we use it in the antique business for dating ceramics and stone statues, but I’ve never really given much thought to how it works,’

‘Well as I said it sounds a little bit complicated,’ Shlomo said laughing at Fitznorman. ‘But in reality it’s quite simple. Normally, those electrical charges trapped in the mineral’s lattices will remain there indefinitely that is if the mineral remains at normal ambient temperatures. But if the mineral is heated up to 500°C, the electrons trapped inside are ejected, as photons, or light, in the visible spectrum.’

‘So when a stone tool is heated above that temperature it’s like resetting a clock. Over time the energy in the stone slowly builds up again, so the greater the quantity of light emitted from a stone tool when we heat it up again in our laboratory, the greater the time passed since it was kicked into the fire and its clock reset.’

‘This means that we can use this method for fixing dates for stone tools up to about half a million years old, ten times greater than with carbon-14.

‘So if we get back to our Neanderthals and moderns. Valladas fixed the age of our Neanderthal, Moshe, at Kebara at around sixty-thousand years from the stone tools found next to him.

‘That was great until Valladas then set the cat among the pigeons as you say, by announcing the so-called “modern” skeletons at Qafzeh were 92,000 years old. In other words Moshe was 32,000 years younger than the Qafzeh woman and child.’

‘How is that possible?’

‘Easy, if modern humans inhabited the Levant 40,000 years before the Neanderthals, and used the same tool kits, it shows, at least as far as their technology was concerned, they were at the same level of development.’

Israel had been the road out of Africa for early men over hundreds of thousands of years. It was a land where Homo erectus and then Homo sapiens lived side by side with the Neanderthals. Homo sapiens sapiens later passed through what is today Egypt, the Sinai and Israel, spreading out in all directions to Europe and Asia about one hundred thousand years ago before finally reaching Australia.

The political significance of those finds was enormous, reinforcing an image of the Holy Land as a truly ancient source of humanity, showing that it had been populated by man from the earliest times, a sacred site bequeathed to a wise and ancient people, the Jews, whose roots lay in the distant past, and who were chosen by God as his people.

Steiner took the coastal road from Tel-Aviv to Haifa, the traffic was snarled up as usual and once it got going most of the drivers seemed bent on suicide.

Their destination was the Kebara Cave an archaeological site lying on the southern edge of the Carmel Range, a series of limestone

hills that rise out of the sea on the southern flank of the city of Haifa, in Israel, part of the Levant, a small habitable zone that lay between the Mediterranean and the Arabian deserts, linking the two great landmasses of Africa and Eurasia.

Shortly after leaving Tel-Aviv, as they approached Netanya, Shlomo pointed to the right. 'Look, over there, six or seven kilometres away, we've discovered an extraordinarily well preserved prehistoric site use.'

They turned, strong their necks. All they saw was a huge queue of traffic.

'We've found hundreds of knapped flint hand-axes, left by stone age hunter-gatherers over half a million years ago.'

He looked at them as he spoke, making them nervously grab their arm rests, as the traffic accelerated then ground to a halt.

'The place is called Kfar Saba, to be exact at Jaljulia, at a depth of about a five-metre, which points to the presence of homo erectus.'

He explained how at the time of erectus, the landscape once not unlike the African savannah, teeming with game. The site was perhaps a source of water with the abundance of game early man, attracting hunter-gatherers who left behind evidence of their primitive stone tools.

The tools had been discovered by a joint dig conducted by the Israel Antiquities Authority in cooperation with the archaeological department in Tel-Aviv University. These included hundreds of flint hand-axes typical of the Acheulian culture from the Lower Paleolithic about 1.5 million to 200,000 years ago.

This axe-making culture was characteristic of Homo erectus and early homo sapiens, with its distinctive oval and pear-shaped flint hand tools used for a number of different including butchering the game they hunted.

Other are two other sites linked to this period, not far from here, at Kibbutz Eyal and the Qesem Cave.

About a million years before, African fauna expanded their habitat as climatic change transformed the northern part of the continent into a vast savannah, favouring the movement of animals into a vast new territory. This included the Levant, a natural crossroad between the African and Eurasian landmasses.

Amongst the those that spread into the Levant and beyond to Europe where they evolved into *Homo neanderthalis* and Asia where they evolved into other kinds of *erectus*.

During the same period of time African *erectus* evolved and *Homo sapiens* appeared in the Horn of Africa.

As the cyclical variations of climate continued, that of the Levant went from warm and dry, to cold and wet, which was nevertheless more favourable than the glaciers that covered a large part of the northern hemisphere.

This suited the Neanderthals as fossil evidence in Israel showed, notably at the Kebara Cave, who met with early *Homo sapiens* arriving from the south, the two species cohabited over thousands of years, whether this was in peace or conflict we will never know.

Modern day Israel was small, very small, like an island in an Arab sea, to the north Lebanon, to the east Syria, a little further to the south Jordan and directly south the Sinai Desert and Egypt.

From what Fitznorman could see the country's history was a story of permanent conflict and from what Shlomo Steiner had told him as he struggled through the traffic it was just the same in distant prehistoric times.

'These caves we are going to visit are about twenty kilometres south of Haifa,' Shlomo explained. 'They were first excavated in the twenties and thirties, then after the declaration of the State of Israel, digs were started again in the late sixties.'

'If I'm right the Tabun Cave has one of the longest sequences of human occupation in the Levant?' Fitznorman said asking Steiner for confirmation.

'That's right, over a long period the climate changed, so the coastline receded here and the plain you now see was much narrower, covered with savannah type vegetation. When the glaciers

returned, the sea level dropped by about one hundred metres, so the coastal plain became wider and was covered by dense forests and swamps. In fact there are several caves, the Tabun Cave contains a Neanderthal-type burial which dates to about 120,000 years ago, one of the oldest found in Israel. Then there is the Skhul Cave.'

'An appropriate name,' said Pierre laughing.

'Yes, but not in the sense you imagine, it actually means the Childrens Cave, where a total of fourteen fossilised skeletons were found.'

'Archaic Homo sapiens,' added Pierre.

The Kebara Cave lay above a banana plantation on the western slope of the Carmel Mountains, which lay to the east as they continued along the coast road.

Shlomo explained decades of continued archaeological excavations had taken place at the site, where anthropologists and other specialists worked at uncovering the past.

Neanderthalis and modern forms of Homo sapiens had occupied the same territory between 25,000 and 50,000 years ago.

Fitznorman listened and could not help thinking how little things had changed, wondering about the kind of warfare that had been used in the confrontation between two species.

Shlomo had a better explanation, each species had occupied its own ecological niche, implying that the two species could have coexisted.

The theory didn't hold, as the same set of stone tools was found at Kebara and two other sites, Qafez and Skhul, occupied either by neanderthalis or sapiens, meaning they would have certainly competed for the same food and game in the same territory.

The question that excited anthropologists was, did they interbreed? To Shlomo it seemed unlikely, he saw no sign of convergence between the two species. Neither neanderthalis nor the modern type sapiens at Qafez and Skhul showed any change of morphology, as they would have if there had been interbreeding, and hybrid offspring.

Why though? The logical answer seemed to be they did not interbreed because they could not, they were incompatible, two distinct species of humans with parallel lives, just as *Homo sapiens* and *Homo erectus* in Borneo.

‘How do you define a species then?’ asked Fitznorman.

‘Well Scott, the biologist Ernst Mayer put it this way, “Species are groups of actually or potentially interbreeding natural populations that are reproductively isolated from other such groups.”’

‘So a species can only reproduce with its own.’

‘That’s it in a nutshell! Neanderthals evolved into a different species in the same way as all other species have always evolved in nature, influenced by geographically isolation and a changing habitat that favoured certain mutations.’

Chapter 38

PIERRE FINDS A FRIEND

Xinxin lived for kicks. She kept company with a strange mixture of high livers in Jakarta, for whom only the present mattered. On occasions, she was known to frequent certain less savoury personalities in the political world and did not disdain the company of known members of the local Chinese underworld.

Pierre had discovered her in a not very recommendable night club, the Hotman, an unlikely name, but that was what it was called. It was frequented by rig jockeys from the oil platforms in the Java Sea, diplomatic staff from certain embassies including a well known Commercial Counsellor, better unnamed.

He vaguely remembered being seated at the bar, where he must have been the most sober of the crowd that evening. The taxi driver had deposited him outside of the club and quickly disappeared before Pierre could change his mind.

Not wanting to linger on the kerb side with the tension that reigned in the city he made his way into the noisy, smoke filled club where he found an empty stool at the bar. He ordered a beer from one of the girls who leaning towards him gave him a dazzling smile and a spectacular view of her plunging neckline.

As he looked around he felt distinctly out of place as the music throbbed and the strobe lights flashed. He looked more than a little lost, it was not altogether surprising for an anthropologist in his early fifties, and still sober, but it was probably why Xinxin had singled him out.

A Chinese from Singapore, she had unusually striking good looks. Her family was said to be big in tropical timber and furniture manufacturing. Xinxin preferred the freedom of a more exotic life in Jakarta, rejecting the intolerant prudish environment of her family in Singapore, getting her kicks from coke and men who shared her tastes for adventure on the seedier side of life amongst the itinerant crowd that flowed in and out of Jakarta.

Later that evening Pierre, through a beery haze, imagined that she resembled one of those Chinese Communist posters portraying a Red Army heroine, strong, proud, defiant, with her long black hair in the wind, though there was little that could be described as revolutionary at the Hotman at two in the morning.

Pierre should have been in bed long before, but he was drawn like a moth to the flame. Xinxin was not tall, which suited Pierre who was fairly short himself, he found her attractive in way he could not describe and as for Xinxin, she was by her very nature attracted to unattainable kinds of men.

Inevitably, for her she returned to his hotel suite, which for Pierre was an event just as extraordinary as his finding a hominid fossil. They sat on his bed smoking and drinking as they talked into the night, she told him that she knew Aris, which he did not find altogether surprising.

What was more interesting for Pierre was that she talked of the first secretary at the embassy, whom she said she knew well, and was clearly not exaggerating.

Pierre was not sure that he was in his best form that night, considering the amount of alcohol he had consumed, but Xinxin was determined to show him what she could do, show him what attracted powerful men in high places to her. It was a gasping experience, especially for Pierre, who had thought until that moment that he was past that kind of thing.

The next evening, she called and asked him to take her to dinner, a Mexican restaurant, conveniently not far from the hotel, the only Mexican restaurant in Jakarta. Though Tequila was exotic and not to the taste of majority of its Indonesian patrons, they liked the tortillas and red peppers.

The moment the couple entered the restaurant, Pierre realised that he was with her, it was very definitely not the other way around. She wore a canary yellow Japanese designer dress, bought in Singapore, with pastel green shoes and a matching handbag. The shoes were high and she looked stunning, the waiters greeted her as did some of the restaurants clients, she waved towards a couple of girl friends seated at a corner table. Pierre felt uncomfortable as he made an effort to appear as nonchalant as possible, he was not used to the role of playboy.

‘Tell me about your work Pierre,’ she said stroking his cheek with the back of a long crimson fingernail as the waiter placed their drinks on the table.

Pierre was surprised, he had gotten used to hearing that question, but not from a girl like Xinxin.

‘What can I tell you Xinxin?’ he said.

‘You told me you were working in Pontianak.’

‘Did I!’ he said uncomfortably, glancing around at the nearby tables. ‘When?’

‘Yesterday.’

‘Oh.’

‘I have some friends there. There’s an American. Maybe you know him.’

Pierre shrugged his shoulders.

‘His name is Garry Lawford.’

The name meant nothing to Pierre.

After dinner Xinxin insisted on going to dance at the Cockpit, a discotheque on Jalan Thamrin, they returned to his room at about one where Pierre was treated to more of her seductive charms.

Xinxin then disappeared for a few days telling him she business to attend to. Pierre hung around the hotel, it was too dangerous in the streets, patrolled by the military, or to attempt trying to reach the airport, Aris had advised him to be patient and enjoy the comfort of the hotel. Then late on the Friday afternoon Xinxin called Pierre. She said she would meet him in his room.

‘Hi! How are you Pierre?’

‘Very well, you’re looking good,’ he said complementing her outfit as the waft of her perfume excited him. She dressed a little flashy, she liked to attract attention, catching men’s eyes.

He offered her a drink and she helped herself to a Seven-up sitting down on the couch, her skirt riding up to show her thighs.

‘So what’s new!’ he said trying to concentrate on her reply.

‘I met General Hartarto,’ Xinxin replied with a nonchalant look.

‘Who’s he?’

‘He’s head of the army in Pontianak,’ she looked into her glass.

‘Is he?’ said Pierre feeling a little piqued.

‘He told me what you’re doing there,’ she said slyly.

‘Oh, and what am I doing there?’

‘Looking for gold,’ she said sipping the Seven-up.

Pierre choked as he suppressed a laugh.

‘He was pulling your leg. What else did he say?’

She stood up and walked over to him and slipped her hand over his shoulder and kissed him on the cheek.

‘Nothing.’

Scott picked his car up from the parking at Charles de Gaulle and headed into Paris, the traffic was light, he called Biarritz to let his house keeper know he had returned and would be arriving for the Easter weekend late the following day.

It was towards nine-thirty when he arrived at the apartment. It was as he had left it, he seemed to be less and less at home with just the occasional passage. He decided spend some time the next day putting a semblance of order into his personal affairs as he saw the disorder and papers lying around on the bureau and the half empty bags from his last trip lying on the floor.

The next morning he called Air France to book his flight to Biarritz and then he checked the flights from Bordeaux to Rabat in Morocco for the following Tuesday morning. He then showered and prepared his affairs and drove to the gallery where he had little difficulty finding a parking spot. The school holidays had started and it took barely fifteen minutes to reach the gallery in the light traffic, it was almost like being a tourist.

The gallery was quiet compared to the rest of France in the run up to Easter, just Marie-Helene and an assistant. On his desk he found a message from Pierre Rossard asking him to call him in Jakarta, it was marked highly urgent. He immediately called Pierre, who seemed somewhat elated, informing him that Driss had been arrested in Casablanca!

There had been a crack down on corruption following a political scandal and an investigation had been ordered on all his business dealings. Fitznorman wanted to know what the implications were for them, if the Ministry had been involved or if the research contracts had been affected.

Construction companies had been springing up like mushrooms all over Morocco, though behind their respectable facades there were some doubtful projects. It seemed that Driss's family had got involved in the construction of a hotel with the Waffa, an important long established Moroccan bank. According to Rossard it seemed that Driss had used his position as to set up some shaky guaranties.

The CNRS had order Rossard back to Paris to keep him and the institution clear of any involvement.

He asked Pierre Rossard about what would happen to Driss. 'I'm afraid that's a question a lot of people will be asking, my honest opinion is that we won't see him for a long time to come if the past is any reference. You don't embarrass the King of Morocco!'

'I we wouldn't like to be seen associating with crooks and strange people, would we?' said Fitznorman.

Pierre was strangely quiet.

Chapter 39

STRANGE HAPPENINGS

'Where's Alfonso,' asked Aris coming out the meeting room into the lift lobby where Fitznorman was waiting for him.

'I haven't seen him here,' Fitznorman replied, he didn't keep tags on the Forestry Department's consultants.

'Would you mind calling his room?'

'No problem.'

Five minutes later Aris came back out of the conference room, his head was bowed as though in deep thought, he pushed up his gold-rimmed spectacles and pinched the bridge of his nose. Fitznorman recognised this as a sign of embarrassment.

'Did you find him?'

'No, no reply.'

'This is silly, we can't find him. He's just flown in from in from Vancouver for the meeting with the Ministry of Forests and he's lost. He's supposed to present his research on the effect of logging on local tribe's people in West Kalimantan.'

Alfonso's firm Enviroconsult Inc. was reputed for its excellent reports on the long-term effects on tribal life and the ecological

consequences of forestry operations had prepared a study on logging in concessions that lay near the border area close to Borneo Gold's concessions and the expedition's camp.

Ribeiro was known for his objective views, he was pragmatic, neither in the green nor the industrialist's camp, and had always focused his attentions on real problems and needs.

He had highlighted companies set up in the Cayman Islands and Belize by loggers and ship owners involved in corrupt or illegal forestry operations.

In Brazil the beef and soya industry had been responsible for large scale deforestation in the Amazon whilst in Indonesia and Malaysia the culprits had been palm oil and pulpwood plantations, all of which were involved in the shady world of offshore tax havens.

Investigations in Panama had exposed the methods employed by businesses, corrupt politicians and global elites used of offshore tax havens, however, the environmental impact of these activities have been largely ignored.

Ribeiro accused tax havens of being complicit in many forms of environmental damage around the world, from illegal logging to the wildlife trade and the destruction of the rainforest.

Ribeiro had highlighted the effect of irresponsible logging techniques in Malaysian forests. Showing that though only three or four trees were felled per hectare they were all large emergents, with crowns of twenty metres or more across. As they fell, they smashed a considerable amount of the lower layers of the forest. It was the traditional logging method.

Within the area where the tree was felled, ten percent of the timber was removed, fifty five percent was destroyed and only thirty-five was left undamaged. That was without taking into account the area totally destroyed by bulldozers and the heavy equipment used for access and extraction of the logs.

The result was the destruction of the tribal people's habitat with the growth of secondary forest which had a dramatic effect on the role of the flora and fauna, critical to the life of the forest and its equilibrium. The roads cut by the loggers in the forest were the

highways, opening up vast areas for shifting cultivation and immigration from the overcrowded Island of Java.

Ribeiro recommended logging techniques, which combined conservation and lower extraction rates, all of which was violently opposed by the loggers for economic reasons. Many of the loggers were in reality subcontractors to the big exporters or to the plywood and sawmills. They had invested very heavily in machinery and equipment.

These loggers were being progressively squeezed by new laws and regulations and had not enough capital to diversify into the wood transformation industries. They needed time to amortise their current investments and reduce their debt burden for the heavy investments they had made in machinery.

‘I’ll call the reception ask them to page him,’ said Fitznorman eager for Aris to finish to get on with the conference.

Aris returned to the meeting room and tried to continue, as best he could, with Rudini and his staff but he was no substitute for Ribeiro.

‘Gentlemen, I’m sorry to say that we cannot find Mr Ribeiro, I’ll have to ask you to excuse me for ten minutes, I think it would be perhaps a good moment to take a break, I’ve ordered some coffee that’ll be served in the next room if you would like to help yourselves.’

Aris took Fitznorman by the arm and took the lift down to the fourteenth floor. They stopped at Ribeiro’s room. The ‘Don’t disturb’ sign was hanging on the doorknob. Aris knocked on the door gently calling Ribeiro’s name. There was no reply. He knocked harder and called louder.

Fitznorman looked up and down the corridor, he saw the housekeeping trolley couple of rooms further along.

‘Call the maid. Ask her to open the door, maybe he’s ill!’

Aris called the maid and after a short explanation she produced her passkey, turned it in the lock and gently pushed open the door.

The room was dark, the blinds were drawn.

The bathroom door was slightly ajar and the light shone through the door crack.

‘Alfonso?’ said Aris softly.

He stepped gingerly into the room and walked across the small lobby. Looking towards the bed he saw that it was undisturbed, it had not been slept in.

He turned towards Fitznorman who waited at the door and shrugged his shoulders.

Aris knocked on the bathroom door and called, ‘Alfonso, are you there?’

He then pushed the door gently, it opened slightly before snagging on something, he pushed harder but the door was held back.

‘What’s the problem?’ called Fitznorman in a low voice.

‘I don’t know, the bathroom door is stuck!’

Fitznorman entered the room switching on the light in the lobby. He in turn pushed the bathroom door, it held, then he pushed harder. Something on the floor was holding it back.

They both pushed together, the door opened with resistance.

There was somebody lying on the bathroom floor.

It was Ribeiro.

He was fully dressed and face down.

Fitznorman saw that his feet were tied together at the ankles and his hands were tied behind his back.

‘Quick call a doctor, call the manager!’

They heard the room maid gasp as she backed hurriedly out of the room.

Fitznorman tried turning Ribeiro over, he was heavy and the bathroom was narrow.

He saw he was gagged, a broad plaster was stuck over his mouth.

He was cold.

Ribeiro’s face was purple.

Aris pulled the plaster from his mouth that was slightly open, his tongue protruding thickly through his lips.

A shower cord was knotted tightly around his neck, he had been strangled.

Five minutes later the hotel security manager was in the room, he told them to touch nothing, the police had been called.

Fitznorman saw that the room had not been disturbed, there were no evident signs of a struggle.

Aris returned to the conference room shocked and explained quickly to Rudini. The meeting was cancelled.

A barrel chested police officer in uniform questioned Fitznorman on the last movements of Ribeiro, and asked him to check the room for any missing items.

Fitznorman could not verify Ribeiro's personal belongings, but Aris quickly determined that his brief case and all documents concerning the Environmental Impact Study were missing.

Fitznorman was relieved to arrive in Borneo, having finally got away from the tense atmosphere that reigned in Jakarta following Alfonso Ribeiro's murder. The police investigation seemed to have made very little progress, at least according to the little information that had filtered out. There were a lot questions about the type of company Ribeiro had kept, the type of women he had been with, or men, implying foul play following some kind of sex deal.

Fitznorman was not at all convinced by such a theory, for one the Impact Study was missing. It could not have any possible interest, for the types of persons the police investigations were pointing at. It had been strange the way that Rudini had insisted on leaving the police to their job and not get mixed up with it. How could he not get mixed up with it, Ribeiro had been somebody that he knew and had worked with. Fitznorman had found it strange that Rudini had become uncharacteristically annoyed insisting that they lose no time and that Aris should provide logistical assistance to his men on the border area.

They left for the Discovery site where the work was in an advanced stage, they wanted to check out some last details and discuss the data collected before declaring the end to the seasons dig before the rainy season started, breaking camp and leaving Putussibau.

The political situation was bordering on explosion, flights had been interrupted and daily rioting had occurred in towns along the route to Pontianak. Aris was afraid for himself, being an ethnic Chinese, and the foreigners who could become a target of the mob.

He decided they travel by speed boat down the Kapuas and along the sea coast to the Port of Pontianak to avoid any potential danger.

A powerful seagoing outboard and crew was arranged, suitable for five or six passengers with their baggage, equipment, samples and essential materials. The three man crew consisted of the boat's skipper, a mate plus a boy of about fifteen. The boat was designed more for speed more than comfort, pleasure cruisers had not yet reached Kalimantan, the local populations problem was getting from A to B, and as quickly as possible, the speed depending on the price the passengers could afford to pay.

The boat was fitted out with two 200-horse power motors, a third lay in the back as a spare, there was no taking chances alone in the South China Sea, and three one hundred gallon drums of fuel. A tube of transparent plastic piping connected the fuel supply from one of the drums to the motors.

A bundle of life-jackets were piled in to one corner. Fitznorman realised that these were a special luxury added to the boats equipment because of the presence of foreigners. A canvas awning was stretched over the passenger area. The passenger comforts were basic, consisting of rudimentary bench seats fitted into the sides of the boat.

The skipper and his crew stowed the provisions in a forward compartment to one side and their luggage was piled into the compartment on the opposite side.

They made themselves as comfortable as they could as the boat headed out into midstream at the junction of the Little Kapuas and

Landak rivers, in the direction of the Kapuas Delta to the South China Sea. It took almost an hour to clear the mouth of the Little Kapuas before reaching the open sea. It was relatively calm, a slight swell and a steady breeze.

The skipper maintained a smart pace causing the boat to buck violently in the waves, forcing to sit on the floor, which was hard and uncomfortable. They soon realised that the boat, apart from the crew, could only have held four or five persons comfortably, but with the spare motor and fuel drums they were cramped.

Once they reach the Kapuas delta the river conditions became rougher. It was difficult to determine from Aris's translations the exact time needed to for the journey to Pontianak. He explained it depended on the conditions once they reached the open sea.

It was almost impossible to talk above the noise of the motors, the pitch rising and falling with the waves, once they left the river, and the constant thudding of the hull as it came down on the sea. They were low in the water and soon the shore was just barely visible above the waves, just a thin grey line on the horizon.

The skipper navigated by view, following the coastline and the reefs, distinguished by the surf that flanked them landwards. From time to time Aris looked at the map estimating the distance they had covered and anxiously glancing at his watch.

The wind whipped the wave tops in around the awning and soon they felt the chill of their sodden cloths. They avoided the warmth of the sun, knowing that it would burn them like Frankfurters on a barbecue if they stayed in the open.

The skipper broke out the lunch, Bintang beer chilled in packed ice, cold chicken – always cold chicken – accompanied by pre-packed sliced bread. It was not easy to drink from the bottles with the buffeting of the waves, but they soon got the hang of it by waiting for the calm between each series of waves.

The skipper watched the sea carefully, on the look out for sand banks and above all submerged logs detached from the logging companies rafts, or natural hazards, branches and dead palm trees from the coastal mangroves, all of which could be seen bobbing on

the waves from time to time on what was beginning to seem like a never ending journey.

There was not much else to do but occupy themselves with their own thoughts. Pierre Rossard was evidently worried about his heavy desert boots, Fitznorman taunting him with the idea he would sink if the boat overturned, a problem he resolved by loosening the laces when their heads were turned.

Four hours passed, they had made good progress and were now fairly close to the shore. They could make out the individual trees though they still had an hour or two before reaching Pontianak. The skipper had reduced speed relieving the constant hammering on their now sore backsides.

During the whole journey they had seen only passed three other boats not closer than half a mile. It was a lonely stretch of water. Aris had not frightened them with the stories of pirates he had told to Fitznorman the previous evening. Twentieth century pirates were common in the Java and South China seas.

Suddenly the boat heaved, it seemed to stagger, the motors stuttered and abruptly stopped. There was an intense silence except for the lapping of the waves against the keel.

‘What’s happened?’

They leaned over the side of the boat, it seemed to be strangely high in the water. They looked at the skipper who had jumped onto the forward deck with his two men.

‘We’ve run aground, it’s a sandbank!’

They tried to restart the motors, to no avail. They checked the fuel drum it was practically empty. The boy changed the plastic fuel pipe to the second drum and they tried again. The starter just whined, the motor did not even kick. They continued for ten or more minutes without any success, the skippers sniffed at the cap of the second drum.

‘What’s wrong?’

‘There something wrong with the fuel.’

‘What do you mean?’

‘He says there’s water in it, he thinks it was tampered with.’

‘What are we going to do?’

‘I don’t know, he says if we can get of the sandbank we can probably paddle to the shore.’

‘How do we get off then?’

The skipper smiled and said, ‘Push!’

He slipped into the water, with his feet barely touching the sandbank he could not push the boat. Fitznorman jumped into the water, it was warm, he was a head taller than the skipper and his feet were firmly on the sand. He pushed hard, but the boat did not budge, he called Pierre to help, he did not look very enthusiastic. Tegu jumped in and they both pushed hard. The boat moved a little, they waited for the next wave and pushed again, the boat floated gently off the bank.

They clambered aboard and the skipper tried the motor again, without success. They started paddling. Half an hour later they had barely progress, in fact Fitznorman had the worrisome feeling that they had actually been carried further out by the current.

They took turns to paddle, but after almost one and a half hours the shore was clearly further away. They fell silent. Pierre suggested swimming to the shore, but the skipper refused, explaining that the coast was deserted, nothing but small beaches and mangrove, one person alone could do nothing.

The sun was falling and they are a little and drink some beer. The skipper inspected the life-jackets. There was a flare gun, which did not seem helpful if no other boats passed. They decided to wait, they had no other choice.

They sat silently as the boat bobbed on the waves. Almost a half an hour later the skipper shouted ‘Angatan Laut’ and started talking fast in Indonesian, pointing towards the horizon. They could just make out in the half-light a plume of white spray, thrown up by the prow of a boat, the form was not that of a normal fishing form and it was heading in their direction, fast.

‘What’s that? What’s he saying?’ shouted Fitznorman.

‘The army, I think.’ replied Aris.

‘Why do you mean the army?’

‘The navy...coast guard...I hope!’ He said peering hard at the form of the oncoming boat.

As the boat neared a semaphore lamp was flashed, a sign for them to halt, which was not difficult. They could now make out the grey form, it was a high-speed naval patrol boat, like one of those that the French had sold to the Indonesians. The patrol boat pulled alongside of them, armed marines stood on the deck and pointing their arms at them menacingly. An officer scrambled aboard together with an armed man. He spoke to the skipper, who pointed at the Europeans.

‘Passports!’ Aris said. ‘They want to see your papers.’

The mate pulled out their baggage from the storage compartment, and they rummaged for their passports as the boat rocked on the swell. They presented their documents to the officer whilst the armed man searched in the other compartments for contraband or weapons.

A long discussion ensued and Aris followed the officer onto the patrol boat, leaving the others without an explanation. Ten minutes later he returned with two of the patrol boats crew carrying jerry cans. They were soon on their way again.

‘What did they say?’ asked Fitznorman.

Aris giggled pushing his glasses up. ‘Expensive fuel.’

‘How much?’

‘Four hundred dollars for thirty litres, enough to get us to Pontianak...we would have had to pay anyway. They said we were lucky, we could have spent the night there and at the worst never have been heard of again.’

They all laughed nervously. They had paid the navy’s levy for their presence in the patrol boat’s surveillance area.

‘They warned us, there have been problems in these waters, a couple of boats have disappeared, one with some Koreans on board, probably pirates.’

‘Pirates!’ exclaimed Pierre.

‘Yes pirates, Sea Dayaks!’ said Aris.

At the hotel that evening, Aris told Fitznorman about his concerns. He was not feeling at all happy and since the death of Alfonso Ribeiro he concern for their safety was growing by the hour. Amongst the people who would have wanted to see Environmental Impact Study disappear, were the loggers and their army concession holders.

‘You know the more I think about it, the more I suspect the problem with the fuel and that little boarding party this afternoon was not an accident. One drum of fuel was just enough to get us here. I think they’re watching us. It was a warning...we’ll have to be careful. Don’t say anything to the others, but keep your eyes open. It’s probably General Hartarto, he controls everything in this area.’

‘Hartarto!’ exclaimed Pierre.

‘Yes! Why? Do you know him?’ said Aris surprised by Pierre’s reaction.

‘No,’ spluttered Pierre, thinking of Xinxin.

‘Hartarto is a powerful man in these parts, I’ve had dealings with him for the forestry business and Borneo Gold, he’s very difficult, I know that Lawford has been involved with him.’

‘You think he had anything to do with Alfonso?’

‘I don’t know, there are two or three people who would like to get their hands on Alfonso’s report.’

‘Who?’

‘Well as I said General Hartarto, then there’s Olsson and his eco warriors...’

‘Olsson, they wouldn’t do a thing like that!’

‘How do you know?’

There was a silence as Fitznorman searched his mind, it didn’t seem to him that it was possible that Olsson’s activists would resort to such violence.

‘Then there’s Lawford...why not? in the pay of the loggers.’

Chapter 40

VIOLENCE IN KALIMANTAN

The crisis awakened all the underlying ethnic, religious and social tensions of Indonesian Borneo. Hundreds were killed in an orgy of ethnic violence in Kalimantan, adding to those killed in religious confrontations on other islands.

Aris had warned that the violence was expected to increase in the run up to the parliamentary elections and it would be necessary to wind up the fieldwork for the season, in the hope that a new campaign could be set up once the situation improved.

In the capital, Jakarta, the trouble was essentially political, but as time wore on ethnic violence surfaced as the economic crisis forced prices to rocket with widespread unemployment and resentment. The wealthy ethnic Chinese minority in the north and other districts of the city were once again victims targeted by roving mobs.

Though the core of the most serious violence lay further to the east in the Moluccas, with its mixed population of Christians, Moslems and animists, rioting and looting had intensified in Kalimantan.

Pontianak had long been the centre of reoccurring ethnic violence with its mixed population Dayaks, ethnic Chinese and immigrants from Madura. During Fitznornan's absence, underlying tension had erupted into pitched battles between local tribespeople and the recently arrived transmigrants.

It was after dark when they were driven to their hotel, just after seven, when the city should have been bustling with the evening markets, it was silent, too silent, and the tension was palpable.

They agreed to meet in the dining room at eight after they had cleaned up. Fitznornan stuffed his wet dirty clothes into a plastic laundry bag and after taking out a clean set of clothes relaxed under a hot shower. As he dried off was drying off he heard an urgent knocking on the room door. It was Aris, his face was pale with fear.

‘What’s happening?’

‘There’s a mob in the main street. They’re screaming, Kill the Chinese! Eat the pigs! Let’s have a party!’ He was trembling. ‘They’ve forced their way into the hotel, everybody’s running upstairs.’

They locked the door of the room, it was impossible to escape. They could hear banging at the room doors along the corridors and women screaming.

They waited and after what seemed like an eternity the noise receded, then decided to get out, taking Pierre, who was in the next room, with them. They took the emergency staircase to the car park where they found the driver cowering in the Toyota. Aris pushed him out and grabbed the wheel as the others piled in.

He accelerated into the street where the mob had caught a young Chinese girl. They waved their machetes menacingly when Fitznorman shouted at them, there were too many of them, there was choice but to flee.

Further along the street they were burning and looting shops and houses owned by Chinese. Aris ducked down so he would not be seen, putting his foot down on the accelerator, the Toyota zigzagging as it skidded through the mob who lashed out at them with whatever they had in their hands.

In the hotel Fitznorman had seen Singapore television reports that announced two thousand had died in Jakarta, most of them Muslims, not ethnic Chinese, though swathes of central Jakarta’s Chinatown district were destroyed, stores and banks belonging to Chinese were looted and burned. Muslim shop owners had painted with the word ‘pribumi’ on their doors to show there were ethnic Indonesian and Muslim.

Aris knowing only the centre of Pontianak was soon lost in the dark streets and seemed to be turning in circles. He then recognised one of the roads that led to the military barracks not far from the city centre. They passed still-smouldering buildings, where they saw charred corpses that lay twisted on the pavement amongst piles of

burning debris, all that remained of certain was a blackened ribcage and a skull in a pile of black ashes.

More than half of Indonesia's population of more than two hundred and sixty million lived on the islands of Java, Madura, Bali and Lombok. Under the government's transmigration program, originally started in 1905 under the Dutch, which had been introduced to ease the population pressure on those islands, entire villages had been moved to isolated areas in Sumatra, Kalimantan and Irian Jaya.

The Dayaks of Borneo were traditionally animists or Christians, who ate pork and owned dogs, which the transmigrants objected to, especially those from the Island of Madura who were strict Muslims. The Madurese, who had arrived in the sixties and seventies, were known for violence and strong family bonds in their closely knit communities.

The violence had commenced when Dayaks had attacked the Madurese immigrants in isolated areas slaughtering hundreds of people in a surge of bloody violence. Thousands have been evacuated to the larger towns, but the military and police were powerless to protect them with the result that new violence erupted as the sought to flee by boat from Pontianak.

They were hunted down and many killed, beheaded by the Dayaks who resorting to their ancient traditions of headhunting proudly displaying their trophies mounted on spikes that they carried through the streets on motorbikes.

'It's extraordinary to see headhunting alive one hundred years after it was outlawed by their chiefs,' said Pierre with amused disdain for the horror.

The barracks were guarded by hard looking soldiers their arms ready to fire at the least provocation. A heated conversation ensued and when General Hartarto's name was invoked by Aris they were pointed in the direction of the airport.

They sped through the outskirts of the city where homes and buildings in the poorer districts had been transformed into piles of

ash and twisted pieces of blackened corrugated iron, and the roadside scattered with smashed household goods and broken glass.

Access to the airport terminal was protected by a barrier and an army unit accompanied by several armoured vehicles. After a summary inspection of their papers, during which Aris produced a Singaporean passport from nowhere, they were waved past.

‘Just in case,’ he giggled to his friend’s surprise.

There were a great number of ethnic Chinese and a few Europeans present, amongst whom they spotted Collin Williams, cheerfully puffing at a cigarette studying the scene, at his side was and Zybnek Jaros.

‘We took a taxis, two hundred dollars!’ Collin said pleased with his exploit.

Most of the crowd had camped down on the floor for a long night, children cried softly as vendors made they way around selling food and drink.

Aris disappeared and after half an hour returned with an army officer. ‘We’ve got a ride on an Army C5 to Jakarta get your things together,’ he informed them

Silently they followed the officer out onto the tarmac where he paused to exchange a few words with a high ranking officer, Aris pointed to Pierre and the officer inspected him strangely. They then walked to the huge plane and up the ramp where they joined the other passengers who sat patiently on the floor of the cavernous transporter. After some time the ramp was finally closed and the plane taxied to the runway ready for take off to Jakarta, a two hour flight.

Once in the air Aris explained that it was Hartarto who had got them onto the flight, ‘He owed me a favour...it was funny though, he asked me who Pierre was!’

They found another two members of the expedition staff who recounted how had made it to Pontianak by road their experiences of the previous days.

‘We were passing by a field and saw a group of boys playing football...the ball was the head of a man. In one of the markets a man was standing on a wooden crate holding up a decapitated head, he pulled entrails from the neck and another man put a cigarette in its lips.’

‘A state of complete fucking anarchy.’

‘They believe they get the enemy’s strength by eating his liver after chopping off the head,’ said Aris.

‘When we arrived at the airport yesterday,’ Williams told them, ‘there was an impressive military presence, now most of them seem to have scappered!’

‘In normal times the government in Jakarta keeps these areas under tight control,’ Aris told them. ‘Any conflict that threatened ethnic or even religious harmony, was immediately put down by the governor provincial military governor.’

‘Now these are not normal times, since the start of crisis it’s gotten worse and worse,’ added Tegu. ‘The lid’s been really blown off now.’

‘Yeah, Kalimantan’s a free-for-all. The problem is that the military doesn’t seem to have a clear policy for dealing the violence. They’ve been criticized for their heavy-handed approach in other provinces,’ Aris said, ‘and the military, police and local government officials don’t think things are going to return to normal very quickly.’

Chapter 41

A CONFERENCE IN LONDON

Fitznorman had agreed to meet Fogg in England during the bi-annual Asian Arts conference that was held in London, sponsored by the Victoria and Albert Museum. It was a good timing as Kate was to give a paper on ethnic art in Borneo. The main themes of the

conference were the safeguard and restoration of monuments and the illegal export of art from Cambodia.

His first plan was a weekend on the South Coast of England with Kate, taking advantage of the long weekend break. Their plan was to drive to Calais take the Tunnel Shuttle, then a couple of nights in Brighton, before heading up to London for the conference. It would be a few days of business, but mostly pleasure.

They had booked a small hotel just outside of Brighton and were looking forward to relaxing and enjoying the fine summer weather.

They spent a pleasant couple of days finishing with a late Saturday visit to the pier, then feeling hungry they ended up in an Indian restaurant, the Star of Kashmir, where they found themselves with a weekend crowd of local thirty year olds who had forsaken the pubs. They ordered a Chicken Vindaloo with a Lamb Rogan Josh, which they ate accompanied by a not very memorable red wine.

The next morning after a solid traditional English breakfast they set out on the London road. They had not gone far when Fitznorman regretted their visit to the Star of Kashmir and the Chicken Vindaloo, his stomach started to churn.

He pulled in for an urgent stop at the Pease Pottage service station, where as he left the men's room feeling much better, he was startled by the sight of Garry Lawford, an American who had been introduced to Fitznorman a couple of days before Ribeiro had been killed. He was leaning against an electronic games machine reading the Daily Mirror, another person Fitznorman vaguely recognised stood next to him.

What the hell are they doing here? he thought, then quickly turning towards the exit, his head bowed and his hand over his face. It was more than strange, he knew of no reason for their presence, normally they should have been in Jakarta. But there they were, amongst the bank holiday crowds on the South Coast of England. Fitznorman's immediate reaction was they were following him, or was it just some kind of strange coincidence.

Fitznorman knew that Lawford had been investigating Lars Olsson – a conservationist, for the Tropical Timber Producers

Association. On his first meeting with the American, Fitznorman had realised he was not to be meddled with, a dangerous type who seemed to be living out a Texan tough man fantasy, a hangover from his marine captain days.

He slipped away behind a line of columns to watch them hoping that Kate would not leave the car to come in looking for him. After a few minutes they left and Fitznorman rejoined Kate in the car.

Arriving at Four Seasons on Hyde Park Corner, there were two messages waiting for Fitznorman. The first was from Aris informing him that Professor Nordin was dead, he had been found floating in the Kuching River the previous day, an autopsy was to be carried out as the police suspected foul play. Coming after Ribeiro's death and the presence of Lawford was more than suspicious.

The second message was from Jimmy Fogg asking Fitznorman to call him urgently. He called Jimmy from his room, who insisted he come to his home near Richmond, some urgent news for Aris that could not be discussed over the phone.

Fitznorman did not mention Lawford, or Nordin, there was no reason to. Jimmy did not know them and very little about the work in Indonesia. But it was a strange coincidence, Lawford's presence had struck him as sinister, perhaps Fogg did know something.

The following morning he took a taxi to Jimmy's place in Richmond, a sumptuous mansion set next to a fine leafy park.

Jimmy was waiting for him wearing a worried look.

'Listen I'm sorry to pull you down here Scott, but I think it's important, there's a couple of things. First I have some good news, I could have told you on the phone, but I have to be careful.'

'Good.'

'The other thing is a bit strange...'

Fitznorman looked at him questioningly.

'Well do you know a bloke called Gary Lawford?'

'Yes, I do,' said Fitznorman carefully.

'Well this Lawford came to see me, the day before yesterday.'

‘He came to see you?’

‘Yes, it was very strange, he said he was in Brighton and wanted to talk to me about a deal in Malaysia.’

‘A deal in Malaysia?’

‘Yes, but the funny thing when he came, he hardly spoke about his deal at all.’

‘What did he talk about then?’

‘You!’

‘Me?’

‘Yes, he wanted to know what were doing you doing in England, whether you were here for business. He didn’t ask like that of course, but that’s basically what it boiled down to.’

‘What did you tell him?’

‘Nothing important, only what everybody knows. But I have the impression that he’s involved with some kind of business in Indonesia or Malaysia, timber. He went to a great deal of pain to explain that they were serious business people, opposed to illegal logging and exports. Who they are exactly I don’t know, but it seemed that they’re not very happy about the allocation of timber concessions and your friend Mr Aris.’

‘I see.’

‘He was obviously digging for information.’

‘Did he mention our business...the bones?’

‘No, but it’s a funny coincidence. It’s none of my business Scott, but I’d be careful if I were you, my old man knows those Malays very well, he served out there during the Emergency. From the stories he has told me, they seem to be a dangerous lot that is if you get on the wrong side of them.’

‘So what’s the good news?’

‘Ah, now we come to the essential, our skull is the real McCoy. The owner, as I already informed you, is the widow of an American diplomat, an amateur collector, who had acquired the skull some years back from a worker in Solo.’

‘I thought it was in Jakarta?’

He shrugged.

‘Well he seemed to be a pretty serious individual, but he ran into difficulty on the stock market just before he died, leaving his widow in a little hard up. What she wants now is to top up her pension fund, her son is a lawyer and is using the Russian as a front man, to sell the skull and avoid any unpleasant scandal for the family.’

Back in London early that evening he told Kate of Lawford’s visit to Jimmy Fogg and they decided to return to Paris as soon as she had presented her paper at the conference.

The pleasure was gone. He wanted to get back to Paris for a few days before they flew back to Singapore.

They talked about Lawford.

‘What does it mean?’ he asked.

‘I’m not sure, but it’s very clear that Ministry of Information in Kuala Lumpur is watching things very closely. I imagine they are not at all happy and see you as cheating them out of their heritage. It’s not good for Malaysia’s image, there’s a lot of political interest in our work, just as there is in Indonesia.’

‘Do you know how Lawford is involved in all that?’

‘I don’t know the details, but you should know that Lars Olsson’s conservationists suspect Lawford of being involved in a lot of dirty work for people in the Chief Minister of Sarawak’s office and their cronies, especially some high profile locals who don’t want their names in the media.’

The next morning before leaving for the Eurostar at St Pancras, they caught the TV news showing Indonesia troops out in force across the country. Major General Sjafrie Syamsuddin had declared, ‘the last thing the country wanted was to scare away foreign companies that do business in Jakarta.’

It was clearly an attempt to reassure expatriates and investors. The general told the official Antara news agency, ‘I assure all foreigners living in Jakarta there is no need to worry about their safety.’

Chapter 42

A VISIT TO SOLO

It would have been strange not to have visited the home of *Pithecanthropus erectus*, or Java man, at the site where Eugene Dubois had made history by discovering the first fossils of *Homo erectus*, thanks to his extraordinary vision and good fortune. Together with Pierre Ross they asked Aris to organise a visit to the historic sites in East Java.

Aris not only agreed, but insisted on joining them for what was to be a small expedition, an escape from the crisis torn capital where it was becoming more and more difficult to conduct normal business. They would cover two thousand kilometres in three Landcruiser, accompanied by an armed and uniformed army Sergeant Major and of his two men, to care for their security, especially that of Aris himself, not only an ethnic Chinese, but also a rich and important figure in Indonesian business.

Fitznorman had suggested flying to Jogjakarta, but Aris would have nothing of it. 'If ever there was a moment to show my friends Java then this is it,' he told them.

His interest in anthropology was growing by the day, as was the political crisis and his need to keep a low profile, well out of the media's eye. Aris had the good fortune of being less indebted to the international banks than many of the hapless Indonesian industrialist business friends and entrepreneurs who saw bankruptcy looming if the crisis was not resolved very quickly. He also had the foresight to move a considerable part of his liquidities out of the country to Singapore and Hong Kong.

They set out equipped for a seven-day expedition in the three vehicles complete with the necessary supplies, including a significant sum of money in Dollars and Rupiahs, to cover costs, which could only be paid in cash in the villages and isolated regions of the island.

The roads of Indonesia were dangerous, congested, and badly maintained and much too risky for driving after dark. The first day they averaged not more than forty kilometres an hour, less than in Kalimantan.

On the afternoon of the second day they arrived in Bandung towards six, where Aris had booked them into the Grand Hotel, the historic site of the famous first non-aligned nation's conference, held in 1951, where Nasser, Nehru and Bung Soekarno, invented the third world.

Aris was at ease wherever he went, he was a Totok, an ethnic Chinese born in Indonesia, who no longer spoke Chinese and who had almost completely lost his Chinese culture. He was a Christian, a Roman Catholic. To Fitznorman, he was certainly one of the most inscrutable individuals that he had ever met. Each word of conversation, each expression, each gesture was full of nuance, leaving the other believe what he wanted to believe, or, conveying an idea, so subtle, that sometimes Fitznorman felt that Aris was uncertain of what he wanted himself.

He was short, flat footed, and bespectacled. Often, the remains of his last meal clung to his teeth. In spite of his unimposing physical appearance, he was remarkably precise and authoritative in giving instructions to his subordinates.

Above all other things, Aris was an Indonesian, there was no doubt in his mind about that, he had faith in his country in spite of the difficult period it was traversing. At first, it could have appeared strange, the ethnic Chinese had been frequently victims of mob violence, or government legislation. Perhaps Singapore or London would have been safer havens for his investments once he had become rich.

It was not so simple. Asia was Asia, and the Chinese had been in Indonesia for many centuries, long before the Europeans, before the Arabs and before the Indians. They had known good times as well as bad times. On closer examination it was obvious that people such as the Aris and others like him had not done too badly in Indonesia.

The towns and villages of Java were part of his home, he knew just where to find the things he wanted, above all the right place to eat and the specialities of the region. Eating was his greatest pleasure, good eating, and to be more precise eating in general. Fitznorman, knew he'd never have to worry when it came to mealtimes, Aris always found the local speciality, and the best table in the towns or villages, where they paused to eat.

Along the road at the small town Javanese eating places, Fitznorman confirmed what he already knew, Indonesians ate with their fingers and . Aris did likewise, speaking and waving his hands at the same time. When he was amused by the conversation or especially when he laughed, particles of rice flew in all directions, accompanied by the mashing sound of his chewing.

Aris also enjoyed the company of young women and Fitznorman was not surprised to discover to his greatest pleasure that Aris brightened their evenings with the presence of local beauties he invited to their table to entertain them and dance whenever a little music was available.

They crossed the chain of volcanic mountains strung across the centre of island on the south Java coast, descending to Jogjakarta, a city long known to Indonesians as the world's largest village and that had since become a large bustling city with broad tree lined avenues and a flyover where the roads from Parangtritis, Solo and Jogja met.

It was a good few years since Fitznorman had last visited Jogja, but it had not changed much with many parts of the city retaining a village-like character with its surrounding countryside little changed since the Mataram Kingdom.

A detour to Borobudur was a must, the Buddhist temple lay forty kilometres north of Jogjakarta. Taking the Jogja-Semerang road, they arrived in Muntilan, the closest town to the site.

Borobudur was built by the Kings of Central Java at the beginning of the ninth century. The temple, the world's largest stupa, was certainly one of the most surprising vestiges of Indonesians past.

The scene was extraordinary, as they climbed the grey black volcanic andesite terraces of the pyramid which led to the upper

levels of the temple. The spectacle was vast, breath taking. Through the huge bell like forms of the many Dagobs and statues of Buddha, they looked over the surrounding plain, a ragged view of fields, bamboo and palms, slowly rising towards the slopes the Merapi, the flaming mountain, and Merbabu, the two huge volcanoes to the North East.

From the uppermost terrace they looked out over the scene, awed by an almost mystical sensation of time and space, and their own insignificance inspired by the vast monument to the Lord Buddha.

‘People say that if you pray here you will have your wish!’ said Aris breaking the silence.

‘What should I wish for?’

‘That’s up to you...but it wouldn’t be a bad idea if it was for a quick end to this crisis!’

The next morning they took the road east in the direction of Solo with the sharp peak of Merapi on their left. Aris pointed out the new lava flows and the dense white clouds rising off its slopes as Merapi emitted bursts of steam and volcanic matter. It was considered one of the world’s most destructive volcanoes, killing almost two thousands people in twenty-five eruptions since 1930.

Aris told them that there six observation posts high on its slopes surveyed the volcano night and day which recalled how such volcanoes had decided the life of man and his ancestors on Java for an incredible and unimaginable two million years.

Their Sergeant Major recommended avoiding certain towns, skirting them on secondary roads. By midday they had become helplessly lost amongst the small hills and valleys, and the villagers, only speaking a Javanese dialect, could not understand their questions. They drove around in circles for more than an hour only passing buffalos and farmers working knee-deep in the rich volcanic soil of the region.

Aris told them that is was typical of Indonesians villagers when questioned, to first determine by subtle questioning precisely what the stranger really wanted. If the unfortunate stranger asked whether he was heading in the right direction or not, it would be impolite to

disappoint him by giving him the bad news. Even the Sergeant Major could not help, his uniform only intimidated the villagers who figured that the strangers were important people, who before long would ask for more than just directions.

Finally they arrived in Solo, to Pierre Rossard an almost sacred site, one where man's ancestors had trod since the dawn of humanity.

From the Toyota they saw barefooted children playing in narrow lanes shaded by leafy trees, veiled school girls in brown uniforms waiting at the sides of roads for sputtering public minivans, women carrying everything from babies to huge durian in woven baskets. The narrow streets of the city were filled with small traders and craftsmen. The markets seethed with scooters, rickshaws, horse drawn carts and bicycles, making it difficult for the Toyota to pass. There were vendors selling everything from farm tools to plants, medicines, and cosmetics. Songbirds flutter in plaited bamboo cages. In the ancient part of the city, the rivers were a dirty brown from the rich red volcanic soil.

'Solo, is said to be Jogja's sister city,' said Aris, 'it's one of Java's least Westernised and most Javanese city.'

It was an aristocratic stronghold, the original capital of the Mataram Kingdom, with its palaces and decorative street lamps, the latter a vestige from the Dutch colonial days. But things were rapidly changing as the city was invaded by shopping malls and traffic, as the sleepy feudal capital was shattered by the ever present noise of the endless streams of motorbikes.

There in 1891, the fossilised fragments of a skull and leg bone of *Pithecanthropus erectus* were unearthed at Trinil by Eugene Dubois, just a few years after Darwin had published his theory of evolution. The fossils were later classified as those of *Homo erectus*.

They headed north along the road from Solo to Kalijambe, a dusty market town where they turned east to Sangiran village, continuing through a dry, harsh country, known by geologists as the Sangiran Dome. They passed by typical Javanese houses with their red-tiled, four-sided limasan-style roofs, in one of which they saw a Brahmin bull tethered in a yard.

The soon found the Geology Museum, a long low white building built in 1928, where they left the Toyotas in the almost empty car park.

They were met by the curator who guided them past displays of fossilised pigs, tigers, turtles, alligators, bison, rhinoceros, stegodon tusks, and horns from giant deer.

He explained that the original *Homo erectus* cranium was safeguarded in Bandung's geological office and showed them a life-like scene of a hirsute family of hominids devouring flesh from scattered bones of extinct animals.

Incongruously the ape-men were doted with modern Indonesian faces.

The fossil, *Pithecanthropus erectus*, found by Dubois had only recently been accurately dated by an American scientific team to around 1.8 million years old.

'That's 90,000 generations,' said Pierre, 'if you calculate there were around 3,000 persons per generation, that is the population survival level for primates, that means about quarter of a billion individuals, lived and died here in Java over that immense period of time.'

'An eternity for man,' added Fitznorman in awe.

A million years ago the human population of the planet has been estimated at about one and a half million. The territory where hunter-gatherers could have lived, that is in Africa, Southern Europe and Southern and Eastern Asia, was just a few million square kilometres, that's excluding mountains, dense forests, lakes and isolated islands. That meant that a family group of thirty individuals needed a territory of about one hundred square kilometres to hunt and to forage for food, a piece of land ten kilometres by ten.

Java was just 48,000 square kilometres, so the population could not have been greater than about fifteen thousand individuals. Their life expectancy was twenty to thirty years with the population limited by the availability of food, that is to say game, edible fruit and plants.

'This is where Professor Murtopo made his name working at the Sangiran site,' the curator informed them. 'It's one of the richest

archaeological sites in Java with over sixty remains of prehistoric skeletons. Others were discovered in this same region at Ngandong, Sambungmacan and Trinil.'

The most important discovery at the site was a skull named 'Sangiran 10'. Later, in the seventies, a new site was found in the village of Sambungmacan, where human cranial remains, calvaria, calottes, and fragments, with other bones were found together with various human artefacts.

'Those fossils were originally thought possibly to be as old as 1.3 million years,' Pierre explained.

The problems started when scientific investigations produced a new date of 27,000 years. This work was carried out Carl Swisher and a team in 1996, who used two different dating methods, electron spin resonance and mass spectrometric U-series, which showed that they were at the most 46,000 years old and with a probable date of 27,000 old. What that meant was *Homo erectus* coexisted with modern humans long after *Homo erectus* was supposed to have become extinct.

The curator added the Solo people were considered by the scientific community as a transitional form between *Homo erectus* and modern humans.

But evidence pointing to the appearance of *Homo sapiens* about 160,000 years ago, conflicted with the Solo fossils that showed a transitional phase dating to only 27,000BP. To complicate the picture fossils were turning up in Australia from recent times, almost identical to the Solo people.

'That brings us back once again to the competing Out of Africa and Multiregional theories.'

It was a debate between the two conflicting theories, often acrimonious, with both sides accusing the other, especially Chinese who were on the side of the Multiregionalists, as being political and racist biased.

The curator told them how another Dutch anthropologist, Ralph von Koenigswald, came after Eugene Dubois, and excavated an unusually robust human mandible in the 1930s.

Then in 1995, another fossilised skull, Sangiran 17, with primitive characteristic and heavy ridges over the eyebrows, was found by a farmer while working his garden.

‘How exactly does fossilisation take place?’ asked Fitznorman.

‘Well it’s a complicated process. It normally takes place when certain conditions are present and the remains of an organism are slowly replaced by minerals. In general fossilization depends on the chemistry of the environment in which the bones were buried.’

‘You talk about bones?’

‘That’s right, forget plants and the rest as we’re interested only in the bones, normally what happens is that the soft parts of the animal rots away, leaving teeth and bones. When these are buried under layers of sediment, sand, mud or lime, which turns into sandstone, shale or limestone over vast periods of time, this is compressed by the accumulated layers above, slowly becoming hard rock. The bones gradually become saturated with minerals and undergo the chemical changes that fossilises them.’

‘I see, what is the least time needed for fossilisation to take place?’

‘Certain geochemists say fossilisation takes about 10,000 years, but it depends on precise circumstances and varies considerably.’

‘So the mummy of an ancient Egyptian or Inca, or the skeleton of a bronze age animal would not be regarded as a fossil?’

‘No, and the same goes for *Homo borneensis*!’

‘Is it possible that bones don’t under go fossilisation?’

‘No, if there is not fossilisation of some kind, then they disappear, as I’ve just said. Fossils are some kind of mineral transformation and are naturally heavier than the original bones, two or more times heavier. That’s why when you pick up a fossilised bone you can see immediately that apart from anything else it’s heavier.’

Pierre then went on to explain how bones and teeth were composed mainly of calcium phosphate, combined with fluorine, chlorine or hydroxyl. A composition related to that of the mineral apatite, all such phosphates being relatively insoluble. Fossil bones,

and especially the enamel of teeth, were likely to be stained by chemicals in the sediment which buried them which explained how many bones were black or dark brown when discovered. However, apart from staining, the minerals of bones were not altered, though sometimes calcite or silica was deposited in cavities that were empty in the living animal or occupied by soft tissue. Bone protein was sometimes replaced by minerals that strengthened fossils.

In some cases the shape of soft tissue was kept if sediments formed in a cavity. There was the example of Pompeii when people buried by volcanic ash after the eruption of Vesuvius in A.D 79, their bodies became encased and as the ash solidified, they decayed, leaving cavities in the form of those trapped under the ash.

Under natural conditions, sediment filled the brain cavity of a skull and hardened, forming a precise mould of the brain.

‘So you see Scott, burial is an essential part of the process of fossilization. A skeleton can be preserved if it gets buried soon after death, but this is very rare. Most animals are eaten by scavengers and the soft tissue decomposed whilst any other remains are trampled by animals or washed away by rain.

‘The best examples of fossilisation occurred when an animal fell into a crevice, or died in a cave like those we saw at Atapuerca in Spain, or were swept into a swamp like Mungo Man in Australia. In the Rift Valley or here in Java, bones were buried under volcanic ash.’

Chapter 43

THE HUMAN TRIBE

‘It’s the same old question,’ he laughed. ‘Who are we? Where did we come from? Where are we going?’ Lundy asked.

‘Do you have an answer?’ Kate asked half seriously.

‘Yes and no!’

‘Well!’

‘Well, human beings are by instinct social animals. We have been formed by evolution, over more than four million years of living in small groups, tribes if you like.’

‘That’s what the Bible talks about, tribes.’

‘Absolutely, but going back a little further than the Bible, when we invented fire and tools about two million years ago, our life was that of a hunter-gatherer.’

‘Like the Punans.’

‘Sure, the survival of the individual and his family, living in the wild depended entirely on the survival of the larger group or tribe.’

‘Not only the tribe but various groups within the tribe.’

‘Who?’

‘Women of course, they looked after the young and the old, looked after the camp, prepared food and foraged.’

‘Whilst the men took on the dangerous tasks bringing home meat and skins, hunting and fishing, and defending their territory.’

‘Yes and they still go fishing and hunting at weekends, it’s called leisure today, fun for the boys!’

‘No, seriously the structure of human society is the result of millions of years of evolution, which has ensured man’s survival in family groups and small tribes.’

‘It’s the same today in business, the better the organisation, the greater the chances of survival.’

‘Our organisation, language and customs form human culture, part of man’s evolutionary process, it’s not a genetic attribute even though some of it is based on instinct

‘Our primate ancestors had a form of culture, as do modern monkeys and apes with an elementary form of vocal and gestural communication. They had food gathering and sharing strategies as well as defence against predators. They cared for their young. All this was instinctive. As man developed, certain instincts were strengthened and other instincts were added.’

‘What kind of life did those early men live in the forest?’

‘They were basically small groups foragers, the reason for being small was because small groups are more efficient than large groups, look at the orangutans.’

‘What is the advantage of a small group then?’

‘Simple, if you are at the back of a large group then you will not find much in the area that the leaders have already foraged, but if the group is small they will always find enough to eat within a small radius, this also gives them security against predators.’

‘Did they hunt?’

‘Yes, they hunted and scavenged. In any case the strategies adopted by these early men were successful since they survived. If their numbers grew they separated into smaller independent groups and spread the hominid territory, gradually moving along the rivers and valleys over the mountains and into other valleys.

‘They discovered fire that meant he could cook, which meant in turn that the meat they ate was tender, the same went for roots and tubers. That sounds simple but with small teeth it was not easy to eat raw meat they had to wait for it to become half rotten.’

‘That’s what people do with game today!’

‘But that’s a question of taste. In any case meat eating was part of their culture and they did not have to forage all day. A deer or a wild pig could feed a family for a few days and provide them with skins, horns, teeth and bones to use as tools.’

‘What about their neighbours.’

‘Well we can see today that longhouses are very isolated even though they have canoes. So primitive man lived far from his neighbours and fought for food and territory.’

‘Which went on for almost a couple of million years.’

‘You’re dead right there.’

‘Until only a couple of thousand years ago, at least here.’

‘Even less, men lived in small tribes, each valley was almost a different tribe that can even be seen in Europe today, like in Alsace, near to the seat of the European Parliament.’

‘What do you mean?’

‘In Alsace, there are small dialectal variations in each valley, of course they all speak a form of German, but isolation until recent times created variations that grew with isolation.’

‘So were all tribal folk.’

‘Yes, that’s exactly what we are. The couple of million years of hominid tribal life formed us as individuals and groups. Man is a tribal animal. We are born like that and it will take another million years before we change.’

‘That explains all our problems today, we only have to look at the conflicts here in Borneo, between Malays, Dayaks, Chinese and immigrants from Java.’

‘My tribe is the best! My language is the most beautiful! My God is the true God! All the other tribes or nations on a larger scale are potential enemies. Conflict for food and food producing territory, territory rich in raw materials is a matter of survival. That’s what evolution has been all about, from the beginning.’

‘So erectus was like us, or are we like erectus?’

‘You’d better believe it if you’re going anywhere in life.’

‘Our ancestors lived a very hard life and survived!’

‘Was he as intelligent as us?’

‘He had to know a lot of things, remember he didn’t have books, he had to relearn everything generation after generation, he had to use his memory more than us, all knowledge was passed on by word of mouth.’

‘So our evolutionary prospects are now reduced to knowledge stored by Google!’

‘If you like! They’ll probably evolve faster than we do.’

‘Who?’

‘The machines!’

Chapter 44

SUPER VOLCANOES

Man's very survival is remarkable considering the destructive forces of nature. The islands that constitute Indonesia form a region that is particularly propitious to the diversity of life, but it also an extraordinarily dangerous region. Lake Toba, in Sumatra, over one hundred kilometres long and twenty-five wide, is evidence of the explosion of a super volcano and the collapse of its caldera, probably the greatest explosions that ever occurred in the existence of man and his close ancestors.

The explosion that took place about 74,000BP was classified at the highest degree of the volcanic explosivity index, at VEI 8. The explosion ejected 2,800 cubic kilometres of matter into the sky, including sulphur which was transformed in sulphuric acid and changed the climate of the planet. The consequence was a catastrophic fall in the world's atmospheric temperature, an average of 5°C. In Europe the summer temperature fell by 15°C and the climate of the northern regions of the world did not return to normal for years.

The extent of the explosion can be imagined by comparing it to the eruption of Mount St Helens in Washington State on the West Coast of the USA in 1980, which ejected 4 cubic kilometre of matter into the atmosphere. Whilst the explosion of Santorini, in the Eastern Mediterranean, in the fifteenth century BC, which wiped-out the brilliant Minoan civilisation on the Island of Crete, ejected 60 cubic kilometres of matter, or Vesuvius which destroyed Pompeii ejecting 4 cubic kilometres of matter in 79AD.

The Toba volcano destroyed or severely affected much of insular and large parts of continental Asia, spreading a thick cover of ash, polluting the surface of the Indian and Pacific oceans with floating pumice.

The eruption was a catastrophic event for all life including Homo erectus. Strangely anthropologists have given very little consideration to the effects of Toba on Homo erectus, though for volcanologists, the Toba eruption was the most powerful in the man's existence.

What is remarkable is that in spite of this terrible eruption, and the tsunami that followed, man continued to survive in Java as fossils prove at Ngandong and no doubt in the eastern parts of Borneo. It should be remembered that in those regions man lived by the sea shore and on river banks and very few would have survived the tsunami that radiated out from Sumatra.

Volcanologists estimated that the zone of the explosion could not be approach by any living creatures by less than one thousand kilometres. The explosion was of such a gigantic scale, millions of times that of the atomic bombs dropped on Japan, it would have been heard in Borneo over one thousand kilometres to the east. The sky became black with dust that obscured the sun and fell, covering the canopy of the forest.

It was an apocalyptic event with the coast dwellers of Borneo fleeing to seek refuge in the dense forest and the vast cave complexes of the island, the seasons were changed and the temperatures dropped, trees did not produce fruit, animals died and erectus was decimated by lack of food, but those who survived slowly emerged to repopulate the island as forest and cave dwellers.

Plate tectonics have played a key role in the geological history of Indonesia. Three plates meet, the Asian, Australian and Pacific plates, making the country one of the most active volcanic and earthquake zones on the planet.

Of the one hundred and thirty active volcanoes seventy of which have erupted in historic times, including Krakatoa in the Sunda Straits, between Java and Sumatra, in 1883, causing the death of 36,000 men, women and children, when tsunami caused by the collapse of the caldera sweeping over the coast and the low lying towns and villages.

Most of Borneo had on the other hand a very low volcanic or earthquake activity and as a consequence was rarely affected by the catastrophic changes that occurred in the belt of fire that ran along the south of the Indonesian archipelago.

‘Your skull here is not erectus, but rather a very evolved form of erectus, though definitely not sapiens, which proves that other species of man existed and survived, overcoming all kinds of dangers and natural disasters over hundreds of thousands of years on Borneo until very recent times,’ Lundy explained.

‘He must have been an intelligent creature to have survived.’

‘Scott, one of my scientific colleagues once said, *we think we can think, we think we are intelligent*. It is difficult to imagine that those concepts are relative and nothing more!’

‘So tell me Professor what are you getting at?’

‘Well what I trying to say is that this shows that the Multiregional theory of evolution is now a real possibility.’

‘I’m afraid you’ll have to convince the scientific world of that and not me.’

‘It’s like in Chad, where our friend Michel Brunet has made his discoveries of our ancestors of the Australopithecus type that existed before Lucy, proof that evolution was not limited to the rift valley, as my honourable colleague Yves Coppens would like to show.’

‘People ask me why do we have so many fossil remains from Africa?, the answer is easy, we have simply not looked everywhere. Borneo for example had long been believed to be an empty land before the arrival of modern human populations during the Holocene, that’s the last 10,000 years, when humans transitioned from a hunter-gatherer lifestyle to agriculture and fixed settlements, but we now know that man lived there for thousands of years. There must be caves full of human fossils that have not been discovered.

‘What we have found, and for that matter just about any other human fossil that has been found, has been by pure luck!’

‘Luck?’

‘Sure, by some accident of topography, where ancient strata have been exposed by geological shifts.’

‘People in general have difficulty in trying to imagine the world of the hunter-gatherers before agriculture was invented. Many of us see the few remaining hunter-gatherers of Africa and Australia simply as primitive peoples, but the better informed amongst us see them as ancient tribal cultures.’

‘That seems to be fairly normal.’

‘It’s not so simple as that, what we don’t realise, or cannot realise, is that the totality of human life on the planet in most of our existence, consisted of very small and very scattered family groups, whose only object in life was to find food not far from a source of drinking water.’

‘I suppose that’s all needed.’

‘Yes, remember the family group could never be further than walking distance from drinking water, and the men who hunted could never go beyond twenty or thirty kilometres from water.

‘Family groups were limited in size by the amount of food that their territory could supply them. From time to time when nature was kind and food plentiful, families groups met, but their capacity to hunt remained limited and other resources were scarce which meant that they were widely spread over distances that did not favour their meeting.

‘If you take the area of Paris inside its periferique, the circular road that runs around the City of Paris itself, its diameter is about ten kilometres, enclosing an area of seventy-five square kilometres, well that would have been territory of perhaps two family groups, each of about thirty persons, one to the north of the river and another to the south. Today there are over two million people living within that same circle.’

‘So the population of the world stagnated for hundreds of thousands of years?’

‘That’s correct, our ancestors were like the animals that we see today, bears or wolves, animals that are fairly omnivorous and range over large territories.’

‘Or herbivores?’

‘No, herbivores, such as we see in Africa, have enormous food resources on the plains and their populations can grow to huge numbers, limited only by the availability of their food, grass! When there is no grass it goes without saying that herbivores cannot exist.

‘As our ancestors learnt to hunt, they had more time to think and to improve their tools, or work the materials they found around them. The invention of fire enabled them to eat more of the animals they hunted, if an animal could be carried back to the camp and cooked almost everything could be eaten, since it was easier to chew and digest, providing them with an important source of rich food when their hunters were successful.’

‘Why did man invent agriculture then?’

‘Ah, that’s another story, but it can be summed up by the ready availability of edible grass seeds in quantities that could be easily gathered and then stored. This happened very, very, recently in man’s history, in the Middle East along the fertile crescent, from the Persian Gulf across to the Mediterranean and down into Israel. In this region the climate was more subject to greater seasonal change than in the savannah where edible plants could not be found in sufficient quantities, but where edible grass seed was abundant and varied, and most important, man had acquired the means to transform it into edible food, with fire, boiling water and advanced stone implements.’

‘So coming back to our non-agricultural man,’ said Lundy, launching into a long discussion on early hunter-gatherers in Borneo, explaining how hunter-gatherers had no need for agriculture, the abundance of edible fruits and plants saw to all their needs.

Hunter-gatherers lived by river banks, by lakes, or by the sea, using the nearby forest as their larder, filled with fruit, plants, insects, bird’s eggs, honey and animals, and with fish and shellfish from the rivers and sea. The climate remained remarkably constant over the two million years of their presence in the region and life continued peacefully in their tropical home with very little change.

Homo erectus was well adapted to his environment where the pressures were few compared with his fellow creatures in other

regions of the world, who had to accommodate variable climatic conditions varied with the coming and going of ice ages with long periods of floods and droughts.

Evolutionary pressure was low and competition almost non-existent once the island was cut off from the Asian mainland, when the ice melted in the Arctic regions and the seas rose.

Once the land bridge formed again innovations in tool making technology slowly filtered in over hundreds of thousands of years as exchanges were introduced by those who slowly spread along the coast and up rivers.

Nevertheless, *Homo erectus* evolved into a more gracile form, converging with the changes that were also occurring in hominids in other regions of the world such as China, India, the Middle East, Europe and Africa.

After the cataclysm of Toba around 74,000 BP, when the climate had returned to its previous state, Borneo man once again spread out into the nearby regions to continue his life as before.

The arrival of the first members of sapiens in about 40,000 BP changed little for *Homo erectus*, they were just as furtive, as slowly the new comers colonised their new home. They did not arrive in huge sailing vessels with superior weapons, in a Columbus style 'Arrival', rather they established their presence over thousands of years progressing one or two kilometres with each generation.

They certainly co-habited, though maintaining a safe distance, from each other over long generations. Their differences were comparable to the colonisation in modern times of New Guinea with the movement of ethnic Indonesian to its western shores. Where the confrontation was between two populations of modern man, having vastly different cultures and at the same time physically different. Though Indonesians and Papuans are of the same species, their physical appearances were as different as *Homo sapiens* and *Homo erectus*, Indonesians are of slight build, lighter skinned and straight haired, whilst the local Papuans are more robust, dark skinned, wiry haired.

As Indonesians colonised the shore line, Papuans retreated into the interior without any significant confrontation, that is until recent times and the political awakening of the both populations.

In Borneo, the real changes came with the invention of rafts and boats, more technically advanced peoples arrived by sea bringing with them agriculture and new tools around 7,000 BP.

In a small isolated community there is interbreeding and mutations occur. Weak mutations disappear rapidly in the first generation. The surviving gene pool is generally a healthy one, containing favourable mutations. Over many generations the members of isolated communities are often the offspring of one or two couples.

Some think that ancient populations followed evolutionary rhythms at constant rates and at the same time in all populations.

‘So,’ concluded Lundy, ‘according to the latest analysis of the mitochondrial genome by a Swedish gentleman at the University of Uppsala in Sweden, whose name I can’t remember off hand, we all have the same common origin, which he tells us dates back to some fifty thousand years ago in Africa, which I personally find hard to accept.

‘If we look at the present day populations of the planet there are wide variations, these differences are relatively superficial, but are clearly visible, unless you’re as blind as some of our politically correct friends, just look at our Indonesians and Papuans. There are of course other differences, less visible to the eye, like immunity to certain diseases, intestinal flora and so on.’

‘So over a much longer period of time than fifty thousand years there are greater changes?’ Fitznorman postulated.

‘Naturally, if we multiply these fifty thousand years by twenty, that is a period of one million years, then these superficial differences are considerably multiplied by other mutations as populations adapted to their local environments.’

‘Does retro-evolution exist?’

‘Well, manlike creatures have been around for six million years and have been transformed into modern man by a great number of

random mutations, which were adopted in response to environment change.

‘The orangutan here in Borneo is a perfect example of a retrograde mutation, in this case the mutations readapted it orangutan for an arboreal life. The same thing could have happened for erectus in South East Asia, going back to the trees, since he lived in dense tropical forests. That didn’t happen he became gracile adapting to a life on the edge of rivers lakes and the sea, using the forest as a larder but not as tree home. He developed a tool set, used fire and invented a basic language. There was no turning back, he lived in equilibrium with his environment and the pressures were too weak to bring about any significant evolution, the advantages of being a hunter-gatherer were greater, he could defend himself rather climbing up the nearest tree.’

They laughed.

‘Never forget that we and the animals on this planet were not created in a final immutable form, maybe that’s going against religion and certainly against the creationists, but that’s the way it is.

‘Myself I’m a non-believer, as far as I’m concerned life is part of the universe.’

‘Yes, it’s this chemistry that constantly recreates life via the genetic code producing continual mutations, some of which are retained giving the owners of those genes a greater survival potential in a changing environment.’

‘It’s amusing when the media and ecologists talk of the environment.’

‘Yes these changes in our planet’s environment have succeeded each other since the dawn of time, to a greater or lesser degree, the slow force of tectonic change, or rapid climatic changes, due to volcanic or stellar events. Whatever the cause, the change effected all plants and creatures and their respective food chains. All man can do is add his tiny grain of salt, in the overall plan we will change nothing, we are just a brief passing moment in our planet’s history.’

Jean Barhomeuf had taken small samples from the bone of borneensis for analysis in his Paris laboratory. The tests were carried out in the greatest secrecy since the results would be of enormous scientific value, unveiling for the first time the link between modern man and one of his ancestors, declared extinct for at least thirty thousand years and had now made a sudden and dramatic reappearance.

The results would cause a sensation not only in the world's scientific circles and their dry arcane journals, but also across popular media reaching the furthest corners of the planet.

The DNA was of good quality leaving the door open to the possibility of future cloning, but what was more surprising was the shared similarities with modern humans and present day Asian populations.

In, other words a closer link between Borneensis, a gracile erectus, and present populations, which turned the Out of Africa theory on its head.

Erectus had transformed slowly into a gracile form which was no less than an archaic Homo sapiens, absorbing and mixing with other populations arriving in his territory as was the case of Europeans and local populations when they arrived in the Americas or in Australia.

The oldest evidence of man in South America dated back 22,000 years, since that time successive waves of immigrants entered the continent from north-west Asia, and the north-east from Europe along the edge of the icecaps. The last wave introduced agriculture in the Andes around 8,000 BP. The separation in time between the populations of Spain and Portugal and those of the Incas was therefore around 7,000 years, who were in fact genetic siblings.

The fossils of Australia and Indonesia were separated by a much greater period of time, tens of thousands of years, sufficient time for evolutionary differences to have developed, differences that would have nevertheless been suppressed by mixing of those populations. It was therefore possible that there were different streams of populations converging to give birth to modern Homo sapiens.

However, surviving pockets of ancient populations would have no doubt occurred in remote regions, such as Borneo. Those populations were slowly absorbed into the mainstream or simply disappeared, weakened by disease and climatic change, or geological upheaval and catastrophic events such as the explosion of Mount Toba.

The Indonesian Government had had, unfortunately, little interest in anthropology and the sites that had been discovered in their country. Professor Murtopo had a miniscule budget and did not possess the scientific means to carry out the necessary work to corroborate dating and undertake other research. But rather than let others do it, he preferred to procrastinate, blocking further research in the narrowest of personal interests.

Chapter 45

THE STORY OF A HOAX

‘It’s normal that people suspect finds that do not slot into scientific common sense. Are you familiar with Piltdown man?’ Lundy asked Fitznorman.

‘I’ve heard of it, but don’t know the details.’

‘Well it’s a good tale. About a century ago a man called Charles Dawson, a lawyer, reported how walking down a farm road close to Piltdown Common, in England, he noticed that the road had been repaired with some unusual brown gravel. He made enquiries and found out that the gravel had been dug from a nearby gravel pit.

‘Well, Dawson visited the gravel pit, where he found a couple of men digging gravel and asked them if they’d found any bones or other fossils. The reply was no so he asked them to keep an eye open and inform him of any interesting finds.

‘Not long after, a workman told him that he had found part of a skull in the gravel. Dawson announced that it was a small portion of an unusually thick skull bone that looked as if it might be human and that it was about 300,000 years old!

‘Then, in the autumn of 1911, on another visit to the gravel pit, Dawson found another and larger piece of bone, part of the frontal region of a skull lying there partly exposed on the surface. Does that remind you of something?’ Lundy said with a laugh.

Soon after in the presence of Arthur Smith Woodward, head of the Department of Geology of the British Museum of Natural History, Dawson found a jawbone.

It was an extraordinary discovery since fossil human bones had been dug up in other places abroad, like at Neanderthal in Germany, but they were much more recent and without any doubt human.

What was needed by scientists was solid evidence to demonstrate their evolutionary theory related to human beings was an ancient fossil that clearly showed the link between apes and men. And that was what Dawson’s skull and jawbone did and very conveniently in England.

With the help of Arthur Keith, an anatomist, and highly respected scientist, Fellow of the Royal College of Surgeons, Fellow of the Royal Society, President of the Royal Anthropological Institute, and Grafton Elliot Smith, a renowned brain specialist, they studied the bones and came to their conclusion.

The problem however was that key parts were missing such as the upper jaw, part of the lower jaw and the lower canine teeth not forgetting the lower jaw articulation. As a result the size of the braincase could not be easily determined. The various pieces could have been made to fit either a larger braincase or a small one. There were different opinions, with Keith opting for 1,500 cubic centimetres as the volume of the braincase, whilst Woodward estimated it at 1,070 cubic centimetres, which is between an ape and a human. Keith’s opinion was based on the size of the jaw bone which ran against the opinion of the others.

It was then the French Jesuit evolutionist, Teilhard de Chardin, found an apelike canine tooth in the same gravel pit, changing Keith’s opinion, so that finally the scientists agreed on a brain capacity of 1,200 cubic centimetres.

They publicly announced the long awaited missing link and presented the head of Piltdown Man based on the bones and suitably assembled. It was named *Eoanthropus dawsoni*, which meant Dawson's Dawn Man, presenting it at the Geological Society in December 1912. It was a sensation.

In August 1913, Teilhard de Chardon joined Dawson to visit the Piltdown gravel pit and discovered what was declared to be the two missing canine teeth together with a *Stegodon* tooth, evidence that the Piltdown man was indeed very ancient.

That *Stegodon* teeth no doubt came from Ichkeul, in Tunisia, near where Teilhard de Chardon had lived in North Africa, and where *Stegodon* fossils were found in abundance.

Certain scientists argued that the jaw and skull did not belong together. The skull pieces could be arranged in any number of shapes and forms to suit the discoverers theories.

All objections were dismissed by scientific societies and the bones were placed in the British Museum, who dispatched plaster casts of the ape-man to museums all over the world.

It was in 1953, that Kenneth Oakley, a British Museum geologist, together with Joseph Weiner, an Oxford University anthropologist, and Le Gros Clark, professor of anatomy at Oxford, with a new technique for determining the relative age of bones by their fluorine content, revealed the bones to be modern.

Piltdown Man was a hoax, a farce that transformed the scientific world and the British Museum into fools. Even such authorities as Louis Leakey had only been allowed to examine the plaster casts of the bones.

As the story unfolded it turned out that a couple of amateur palaeontologists had reported they had surprised Dawson in his office staining bones a dark colour so as to make them look ancient, which was confirmed since close examination revealed that the bones had been carefully stained with bichromate.

The canine tooth was found to have been filed and also stained brown with potassium bichromate and packed with grains of sand.

‘It’s amusing as the jaw-bone came from a modern orangutan,’ Lundy said laughing.

‘Where did that come from then?’

‘Probably from a collector, or a dealer in ethnographical objects, somebody like you,’ he said pointing his finger. ‘You know that the Dayaks have been known to keep orangutan skulls as fetishes or trophies in their longhouses for many generations.’

‘That’s right,’ Fitznorman said sheepishly, ‘I’ve bought them myself...in the past of course today it’s against the law. Some have been kept for generations. In fact one orangutan skull with its mandible was in a Dayak long-house seventy miles from Kuching and said to be twenty generations old, about four hundred years.’

‘A nice little story of scientific skulduggery!’

‘And a lesson in prudence.’

Chapter 46

MELT DOWN IN JAVA

Things were getting very dangerous, the interim president’s government seemed to have lost control. It was time to leave Java and leave fast. It was evident that from the moment the first rock was thrown and car set ablaze, the riots were more than a spontaneous uprising against a president who had overstayed his time.

The country had a history of violence instigated by shadowy figures that were rarely identified. Extremists had launched their call to thousands of reckless young men, many of them members of paramilitary and religious organizations, youth groups, as well as thugs, gangsters.

Aris announced his departure to Singapore for urgent business. The hotel was quiet. On the hot, steamy Saturday morning in the middle of May, the parking lot, usually filled with SUVs, pickup’s

and cars, was empty. Outside of the Grand Mosque, across the park from the hotel, students had gathered for their march.

They sat waiting on the grass or kerbside, made speeches, sang the national anthem, refused to retreat. No politician or military leader was prepared to meet them. Standing on an improvised rostrum, a table forcibly requisitioned from a hawker, between students and police, one of their leaders appealed to the disappointed students not to provoke violence.

At about three the situation seemed to have calmed down. The hotel travel agent called to announce all flights to Singapore were full. Fitznorman decided to quit the country fast taking advantage of the lull asking them to book him a flight to Bali where the situation was calm, then take a connection to Singapore.

Lines of police faced the students with shields, body protectors and batons, behind was a second line with stun guns and truncheons, and then a third line of soldiers armed with rubber bullets and tear gas. To one side were more soldiers and police on motorbikes and manning armoured vehicles with water cannons.

An hour later the police announced that all negotiations were halted giving the students fifteen minutes to get off the streets. Then a shot was fired in the air. The police charged, lobbing tear gas into the crowd, swinging their batons and then opening fire. The students ran through the clouds of tear gas towards the hotel with the police behind them. Fitznorman watched from his hotel window as more shots rang out.

Some of them managed to get into the lower lobby, fighting back, hurling bottles and rocks at the police, as though the bullets aimed at them were all rubber. The hotel doors were closed and the mob fled to the north.

They heard sporadic shooting that continued for an hour, it was clear that Fitznorman could not leave the hotel before some kind of calm returned. He took to the bar with Pierre Rossard and the few remaining guests who had not left the hotel or who were not barricaded in their rooms. News filtered in of banks being looted, cars burned. A gold store was cleaned out, a food market destroyed.

In the early hours there was news of a fire in a nearby shopping plaza, someone had fired tear gas into the plaza's lower floor and a man was seen splashing petrol in the entrance and then setting it on fire. Seventy people, many of whom worked in the stores, mostly owned by Chinese, were reported to have been killed in the fire.

Glodok Plaza, in the centre of Jakarta's commercial district, Chinatown, was burnt and looted. The police fired in the air, but the mob ignored them. People carted off computers, refrigerators and television sets.

The next day the smoke over the city had thickened. The international airport was still open but there were road blocks everywhere. Fitznorman ventured out into the city to check the situation himself, it was impossible to go by car, he tried to make his way by foot accompanied by two uniformed security guards from Aris's organisation. They had heard that the military controlled the situation. But the absence of security forces on the streets prompted many embassies to issue evacuation orders. Thousands of foreigners, as well as many ethnic Chinese, began fleeing Jakarta.

The midday television news reported mobs attacking and damaging buildings linked to firms controlled by the family and their cronies, as the army stood by watching.

Then the US Embassy in Jakarta said it was organising the departure of the dependants of its staff, whilst the Australian embassy issued a notice advising its nationals residing in Jakarta to stay clear of demonstrations or large crowds.

The television reported the former president's family had left the country. Soon after, the first Scorpion tanks rolled into the city centre, where the pungent smell of the fires filled the air and a haze hung over the city. Shattered glass, blackened cars, smashed televisions and much more littered the streets. Banks, businesses, government offices and schools were closed, as fire-fighters extinguished blazes at malls, the death toll rose. Fathers looking for their children, wives searching for their husbands arrived at hospitals to identify victims. In most cases the bodies were unrecognisable, and hundreds were buried in mass graves.

The exodus was gathering pace. Thousands of ethnic Chinese Indonesians and foreigners left by air and by sea as the president's former allies started looking for a face-saving way to switch camps.

Hundreds of troops armed with assault rifles and backed by light tanks and armoured personnel carriers patrolled Jakarta.

Late that same night, according to a senior military official, an opportunist general had appeared at the presidential palace in full battle gear, armed with an automatic pistol and accompanied by truckloads of special Kostrad troops who had stripped off their regimental markings.

Chapter 47

AUSTRALIANS

They arrived in for the Melbourne conference in a turmoil of accusations and counter accusations concerning Mungo Man compounded by the announcement of a new species, *Homo floresiensis*.

The world of anthropology had been thrown into disarray by Australian discoveries in a region that had at the best been a curious backwater of the science.

The conference would be the centre stage for a battle of scientists who had been scorned by many of their colleagues who had discredited their work.

The question was focused on when had man appeared in his present day territory and what form had he when he arrived from Indonesia.

To the east of the Wallace Line the greater Australian land mass with its continental shelf had not changed much in the last couple of million years. During that time, and the climatic cycles that regularly took place, the sea rose and fell transforming the region into a vast island continent of Greater Australia, or Sahul, composed of New Guinea, Australia and Tasmania.

Homo sapiens had arrived from the Asian mainland from Sundaland, island hopping, between seventy and one hundred thousand years ago according to archaeological and fossil evidence.

But what kind of man? Had a relic population of a much earlier human ancestor, Homo erectus, lived in Australia. It was a question that burned in the minds of many Australian palaeoanthropologists.

Modern Homo sapiens appeared in Borneo some 45,000 years ago, which corresponded very approximately with the appearance of their fossils in Australia. But in Java their contemporaries, more ancient forms such as Ngandong man continued to exist until ten or twelve thousand years ago.

Did they also reach Australia? The question remained open since no such fossils had yet been found on the southern continent.

Many researchers speculated that Homo erectus might even have reached Australia a million years ago. How did they arrive? Like their successors on rafts or even in simple boats that could have been steered across one hundred kilometres of open sea from Timor.

Today the coastal sites of that period have disappeared, inundated by the sea that has risen to a level of one hundred and twenty metres above the level of that time, when during the most recent Ice Age a vast quantity of the earth's water was trapped, frozen into vast polar ice caps that stretched down towards the tropics.

When those first explorers arrived they found a strange land with plants and huge animals unlike anything they had known before. There were giant carnivorous reptiles, huge flightless birds and grazing marsupial wombats the size of a family car. It was the closest encounter that man had ever known with the Hollywood's imaginary world of men and dinosaurs.

Australian researchers calculated that if modern men arrived in Australia forty thousand years ago, then two thousand generations of continuous human occupation survived and learned to live with the many changes that occurred in the environment over that long period of time. A time when sea levels rose and fell, with droughts causing rivers and lakes to disappear, then long periods of extreme heat, or cold with glaciers in the southern part of Sahuland.

Certain anthropologists have put forward the hypothesis that separate waves of immigrants, with distinctly different physical characteristics, arrived in Australia over time, co-existing and interbreeding, based on the knowledge certain robust fossil skeletons found in some areas were thousands of years younger than more gracile and ancient human remains.

The story began when a young Australian scientist, Greg Adcock, recovered DNA from Mungo Man's bones, which were estimated to be 60,000 years old. At that time the oldest DNA ever extracted was about 5,000 years old, however, Adcock succeeded in extracting and sequencing mtDNA from the bones.

Based on the Out of Africa model Mungo Man should have had a gene like present day humans, this was not the case and the findings resulted in international uproar.

Several eminent scientists disputed the dating and the quality of the mtDNA throwing the scientific community into disarray.

With the discoveries in Flores, the dispute intensified with cries of 'Bullshit!' and 'Nonsense!', the discoveries discredited as the work of mavericks seeking fame and glory.

For Multiregionalists, each of the modern races descended from one of the archaic regional forms. Mongoloids differed from other modern people, in the same manner that *Homo pekinensis* differed from its contemporary archaics, while Australoids bore a similitude with Java's *Homo erectus*.

At the same time, the model contended that gene flow existed between different regional populations, with humanity evolving as a whole, whilst each geographic kept its own specific racial characteristics.

'The problem is that modern *Homo sapiens* populations had reached even the most remote islands of Australasia about twenty thousand years ago,' said Lundy.

'So?'

'Well he seems to have replaced all the other types of man on the way,' Pierre added to enlighten Fitznorman

‘Island hopping?’

‘Yes, that’s one of the questions that has been getting a lot of attention in recent years, the spread of man into Australia. Were the first men who arrived there *Homo sapiens* or something older? Remember it’s a big continent and even bigger when it was Sahuland. Some of the discoveries are very interesting and surprising, and no doubt they’re only the beginning. For example on island of Aru in the Muaku group off the west coast of Irian Jaya.’

‘Indonesia then.’

‘Yes, a burial site was discovered from a period when those islands weren’t islands. They were part of the continent we call Sahuland, or the greater Australian land mass, that included New Guinea, Australia and Tasmania. The continents of Sunda and Sahul were at their greatest about 18,000 years ago, when sea levels were between one and two hundred metres lower than today.’

‘The skeleton of a young female was found in a limestone cave at a place called, Lemdubu. It has been dated at around 18,000 years old, that was a time when that continent was much colder and drier than now, and sea levels were at their lowest.’

‘So it was during the ice age.’

‘Yes and no, I mean there was no ice there. It began about 120,000 years ago followed by cycles of warming and cooling. The polar ice caps extended southwards or northwards here below the equator reaching their maximum somewhere between 28,000 and 19,000 years ago. After that they retreated and the climate became more stable about 10,000 years ago and the sea levels stabilised about 6,000 years back at today’s level.’

‘Was it cold here then?’

‘No, but temperatures may have been five to ten degrees lower than they are today, remembering the Lemdubu Cave is now surrounded by rainforests. What’s interesting is that the temperatures rose and fell rapidly sometimes climbing five degrees in less than a century with a huge effect on the ecological system of the whole region.’

‘This Lemdubu woman, did she belong to the Homo erectus species?’

‘No in fact she already possessed the distinctive features of the Australoid populations.’

‘But that doesn’t necessarily mean that all the previous populations disappeared. Though early human populations became extinct around the same time as the Neanderthals, they were archaic Homo sapiens.’

‘No, but the evidence is that they were gradually replaced, for example in China, where there is one of the greatest collections of fossil though those who adhere to the multi-region theory have other ideas such as Wolpoff.’

‘Who?’ asked Fitznorman.

‘Wolpoff, an American anthropologist, and also a keen supporter of the Multiregional theory. His idea is something to the effect that ancient humans shared genes across wide regions of the world, and were not made extinct by one “lucky group” that later evolved into modern man. He remarked that the fossils clearly shows that more than one ancient group survived into relatively recent times.

‘The evidence that a small group originating in a single geographic region, like Awash River region in northern Ethiopia, replaced the world’s entire population of early humans, has not been proved for the moment, though many believe that all living humans have descended from such a small group around 160,000 years ago,’ said Lundy.

‘Perhaps but that means that all other early human groups, whose fossils date from this time back a couple of million years, became extinct, some kind of prehistoric genocide, or something like that.’

‘Well some geneticists have suggested that modern man evolved from a mixture of ancient African immigrants and primitive humans that lived in parallel in other regions, who had also come from Africa but at a very much earlier date. In other words it’s thought that there were at least two such migrations, one about 600,000 years ago and the other about 95,000 years ago, which seems to be confirmed by genetic data,’ explained Lundy

Chapter 48

NEWS BREAKS

The publication in Nature of Professor Lundy's analysis of *Homo borneensis*, was planned to coincide with the 4th Asian Anthropological Conference being held in Beijing which they calculated would have the effect of a bomb shell on the unsuspecting delegates.

Fitznorman made his way towards the transfer lounge in Hongkong airport where he had an hour to spend before joining his connecting flight to Beijing.

He paused to inspect the latest international press at a news stand. There was the usual assortment of English language papers, The New York Times, Financial Times, The South China Post and others. But it was the Singapore Straits Times that caught his eye.

He slowly picked it off the rack and held it before his astonished eyes, examining and re-examining the large black headlines:

Yeti Discovered in Borneo

French scientists are believed to have discovered the remains of a 'Yeti-like' creature on the Indonesian island of Borneo. It is reported that they are studying a skull which has baffled scientists.

Our correspondent in Kuala Lumpur reports that the Malaysian authorities have made an official demand to the Indonesian government concerning the remains of what is believed to be those of an Orang Pendek, or Little Man of the Forest, a hitherto unknown type of gibbon. According to the Malaysian authorities illegal excavations have been made by foreigners in the

Sarawak border region that adjoins the Indonesian province of West Kalimantan.

He paid quickly folding the paper under his arm and headed to the nearby bar ordering a beer then spreading the pages on the bar continued to read the story.

Australian specialists at the University of Melbourne have recently studied samples of hair of such a yeti-like creature found by a team of explorers who discovered traces of an ape-like animal in Kalimantan and part of the ancient folklore of the tribes' people in the heart of Borneo. See page 7

He looked at his watch he had time, he gulped back his beer and ordered another whilst turning to page 7.

The DNA analysis in Oxford showed that there was no resemblance with orang-utans or other animals of Borneo like sun bears, red leaf monkeys, pigtail macaques or man.

The Orang Pendek is said by those who have seen it to be a 5ft tall creature with brownish-orange hair. It walks with an upright stance on its back legs and lives mainly on the ground. First mentioned of such an animal goes back to Marco Polo when he visited the island in 1292.

Is this the same creature that the French have discovered? If the existence of such a creature is proved it could cause a sensation in anthropological circles as the possible 'missing link' between apes and humans.

If the Orang Pendek exists it could be a new genus of ape, along with the gibbon, orangutan, chimp and gorilla. The other possibility is that it is the 'missing link'

between apes and humans which could throw into doubt evolutionary theories linking human evolution to Africa.

The Orang Pendek could also be a new species of ape, the discovery of fossilised giant gibbons from the late Pleistocene could support this theory.

This new evidence as to the existence of the Orang Pendek shows that the local population has co-existed with these over centuries. The major question is can the Indonesian authorities in the present economic and political provide protection for the creature from the unscrupulous. It is not difficult to imagine what might happen to the Orang Pendek if it were not protected from the media and the threat of tourism.

The human population of Kalimantan is growing at an ever increasing rate with loss of the islands primary forest. Indeed, gold mining projects and illegal logging have already destroyed some of the region where evidence of the Orang Pendek's existence was first discovered in the early nineties. Today drought and the fires that are raging out of control are a further menace with the air filled with smoke making it almost unbreathable and destroying much of the vegetation.

The affect on the fragile habitat of the Orang Pendek is disastrous. Science and mankind will have to act quickly to save this creature from extinction.

The Malaysian Times's lead story reported a serious diplomatic incident had broken out with France and Indonesia concerning the intrusion into Malaysian territory of their nationals with the intent to remove cultural objects of national interest. The Malaysians accused the scientists of having stolen fossils and have undertaken excavation

work without permission from the authorities in Kuala Lumpur and Sarawak.

They accused Fitznorman of being a maverick, using illegal methods, which was not totally untrue, though he was far from being the head of the expedition, in which he participated, technically, as a guest of the Indonesian government.

It was unacceptable that the scientific community announce such a discovery through the general press, without having first published in a recognised scientific publication.

The discovery of archaic sapiens would create a sensation in the world of science, without prior consultation with renowned scientists, or giving them the possibility to study the new discoveries and revise their theories, which had guided thinking up to that dramatic discovery.

They would be accused of being unethical, forgetting conveniently that Donald Johansson had presented Lucy to the world in 1974, before publication of the find or even attributing a scientific name to the creature.

It was reminiscent of the battles that the Leakey family had led in Kenya, trying to preserve a dynastic right to search for fossils in the country, accused of imposing his views on the world of anthropology in a dictatorial fashion.

The search for fossils, whether they be dinosaurs or the ancestors of man, had become the terrain of not only scientific battles, but also for money when the world's media was prepared to pay fortunes for the exclusivity of photographs, books and films on the find, information consumed by a growing public that was better educated and better informed with almost instant access to news.

The Malaysian Times also reported that the Office of the Prime Minister and the Minister of Justice had instructed police and customs departments to arrest Fitznorman, or Lundy, if found on Malaysian soil and to search and confiscate any materials related to Malaysian national scientific interests in their possession, such as fossils and scientific materials in their possession.

It added that Lundy had illegally exported the fossils from Malaysia to France and if apprehended they would be formally charged and tried with the bandits who had assisted them.

Malaysian para-military had reported incidents with foreigners near the border area where the foreigners had set up a camp and accused bandits in their employ of having fired shots across the border.

Further an Israeli scientist, specialised in radio carbon dating techniques, had been arrested by the Malaysian police and accused of spying for Israel and illegally crossing the border into Malaysia. Citizens of Israel were forbidden to enter Malaysia.

The accused, Jacques Weinstein, of the CNRS, was in fact a French citizen, and was being held in the Kuching prison awaiting transfer to Kuala Lumpur.

Fitznorman took a seat in the nearby passenger lounge to recover from the shock at seeing the story spread across the headlines, it was even worse to know that he was probably a wanted man, the Malaysians were clearly after his skin, as he knew they would be. It was also laughable to read the journalists interpretation of the discovery, clearly they ignored the complete story. It would be just a question of time before they got to the truth.

The expression on his face was about to hit the fan, was truer than it had ever been. Scott gathered the newspaper and headed towards the boarding gate for his connecting flight to Beijing.

Chapter 49

ZHOUKOUDIAN - CHINA

During the flight up to Beijing he pondered the consequences of the discovery now that it was public knowledge. What would be the reaction? What would that mean for future excavation campaigns? How would the Indonesians react to the Malaysian accusations and how would it affect him personally?

To his astonishment he got part of the answer in the media's reaction immediately he left the passport control and baggage arrivals area at Beijing International Airport.

The automatic doors slide opened and a crowd surged forward with flashes of cameras and hand held spots from TV cameramen and reporters.

'Mr Fitznorman! Mr Fitznorman! When are you going to make a declaration? Is the missing link Asian? Do you have the bones with you?'

The police forced their way through the throng with an official and a small man whom he recognised as Professor Wei from the Beijing Institute of Anthropology.

'Welcome to Beijing Mr Fitznorman, I'm sorry about the reception, but you are now a celebrity,' said Professor Wei with a wry smile.

They were jostled and bombarded with questions as the police made a path to the exit and a waiting car.

'First we go to your hotel, the Grand Hotel, you are a guest of our government!'

It took ten minutes or more for Fitznorman to gather his senses as they entered the inner suburbs of the Chinese capital.

'How did the press learn so quickly about our work?'

'Ah, that's a question only you can answer Mr Fitznorman.'

'But we have not communicated anything to the media!'

'No, but somebody in your team must have done so.'

'Has Mr Pierre Rossard arrived?'

'Yes, he arrived yesterday morning from Paris.'

'Does he know about this situation?'

'I suppose you mean the media. He learnt about it this morning, on the TV news.'

'How did they know I was arriving here?'

'Well the conference is followed by the press, specialists from all over the world will be present, so when the news broke they guessed

you may be coming here to make some announcement. You know they check out the airline passenger lists with their contacts in the airlines. Is Fitznorman a common name?’

At the hotel he barely had time to greet Pierre Rossard who was waiting in the lobby when they were swamped by a crowd including the hotel director, his staff and a gaggle of press reporters.

It was a quarter of an hour before he made it to his room accompanied by the hotel director with Pierre hot on his tail.

‘Mr Fitznorman, this is your suite’, he announced beaming with pleasure as he opened the door to a spacious suite on the twenty-fifth floor. After the formalities of handing over the keys and an inspection of the rooms the director left them to themselves.

Fitznorman flopped into an armchair, picking up the remote control and zapping at the large TV in a cabinet that the director had already opened for him.

‘Where’s Professor Wei disappeared to?’ asked Pierre.

‘He’ll be back at seven to take us to diner.’

‘So the shit’s really has hit the fan,’ Fitznorman half said to himself.

‘Is there any news from Aris?’

‘No, what about you?’

‘Nothing.’

China was perhaps the most important site for prehistoric man in Asia and its palaeoanthropologists amongst the world’s greatest specialists. Zhoukoudian was the site where *Homo erectus* had been discovered for the second time.

In 1921, Gunnar Anderson uncovered an important source of ‘dragon bones’ in northern China, at an abandoned limestone quarry near the village of Zhoukoudian, not far from Beijing. Soon after work commenced in 1921, the first hominid remains were unearthed, first a molar tooth, then a skull cap, found by Pei Wenzhong in 1929. These were followed by the remains of at least fourteen other individuals during the period that led up to World War II.

As the Japanese forces approached Beijing in 1941, it was decided to ship the fossils to the USA in a desperate effort to save them, but the day they reached the Chinese port of embarkation on December 7, 1941, the Japanese launched their attack on Pearl Harbour.

The ship on which the fossils were to be transported was sunk, and the American marine detachment, in whose luggage they were being carried, was captured by Japanese soldiers. The fossils disappeared and were never been seen again.

Fortunately the German anatomist Franz Weidenreich had made highly detailed casts and very detailed scientific descriptions of the fossils.

After WWII work continued on the site and more teeth, bones and skull fragments were found. Thirteen different levels were indentified containing not only bones but also stone artefacts and evidence of fire.

These were dated using the most modern scientific techniques including Electron Spin Resonance, Thermoluminescence, Paleomagnetism and Fission Track. The results indicated that the layers containing hominid fossils dated to between 400,000 and 250,000 years BP.

The dinner in a private dining room in one of the hotels many restaurants gathered at least thirty persons on four round tables. It was a traditional Chinese style dinner with many toasts, followed by speeches, welcoming 'Professor' Fitznorman, and to international scientific cooperation.

Fitznorman was especially struck by the words of a renowned specialist from the Chinese Academy of Science who questioned the Out of Africa theory, suggesting that modern man had evolved in several regions of the world and more specifically in China. Pierre Rossard nudged him under the table in case he had not grasped the significance of the speech, which ended with a toast to the 'Professor' and his team.

The next day's programme started with them sneaking out by the hotels underground car park for a visit to Zhoukoudian in the company of Professor Wei.

Zhoukoudian was a small village situated about fifty kilometres to southwest of Beijing, situated in a chain of low mountains and rolling hills that opened out to the plains of Huabei Province.

The celebrated Peking Man Site lay on the west side of the village, where a series of limestone caves had long been known by the local inhabitants as a source of Dragon Bones often found in the nearby hills. It was there at a place called Chicken-bone hill that work was first started by fossil collectors in the early 1920's. But it was at Dragon Bone Hill human-like teeth were discovered.

One of them was an upper molar. Another one was an unerrupted lower premolar. They were the first discoveries of any ancient human fossils in China and the Asian mainland.

Dr. Davidson Black, a Canadian anthropologist and Dean of the Anatomy Department of Peiping Union Medical College, named the new discovery as *Sinanthropus pekinensis*, now renamed *Homo erectus pekinensis*, and generally known as 'Peking Man'.

The most important discovery of all was made in a cave where the first and almost complete skull cap of Peking Man was found in the red sandy clay of level 10. The skull cap was remarkably similar to that of Eugene Dubois's discovery in Java, and Peking Man was accepted as the irrefutable proof of the existence of an intermediate stage in human evolution between apes and man.

The tour commenced with an official photographer who bobbed in and about the group trying to catch Fitznorman who had become an instant celebrity.

'So Scott what's it like to be famous?' said Pierre laughing.

'I don't know, but I hope it helps my business!'

That morning the hotel had delivered a pile of messages to Fitznorman's room with requests for interviews from local and international news agencies. He had been joined by Pierre for breakfast in his suite, a little concerned about being swamped by a crowd of journalists. It had been difficult to sort the important

messages from the rest. There were messages from Aris, asking Fitznorman to call urgently and another informing them that Lundy would be in Beijing the next day for the opening of the conference.

They stopped and Professor Wei made a sign for the presentation to commence.

‘It is an honour to welcome Professor Fitznorman,’ said the site director, who then launched into his story. ‘Excavation work here started again after the War of Resistance, and many new discoveries were made. By 1966 the number of fossils found included six crania or skull caps, 19 large fragments of skulls, many small fragments of skulls, 15 mandibles, 157 isolated teeth, three pieces of humerus, one clavicular, one lunate, and a tibia.’

They looked across the low hills that had been worked by three quarters of a century of excavations.

‘As you can see many thousands of cubic metres have been moved, this is one of the greatest excavations ever undertaking in the history of palaeoanthropology. Some of these deposits total fifty metres of accumulated debris and are up to one million years old.’

‘From an archaeological point of view, were there many artefacts discovered here?’

‘Oh yes Professor, our excavation have turned up not only fossils, but great quantities of stone tools and raw materials for making tools from quartz, flint, and sandstones, much of which was transported here. There are also many thousands of bones from animals that Peking man hunted including deer.’

The caves were occupied for hundreds of thousands of years and though initially very spacious, they were gradually filled with debris until they were finally abandoned as uninhabitable.

Another important discovery was the use of fire. Several layers of ash layers have been found on the limestone floor of the caves that had been the home of Peking Man.

The layers were up to six metres deep and filled with large quantities of stone tools and charred animal bones. Did Peking Man discover how to make fire? That is uncertain as at the outset they

could have found natural fire and brought it back to the cave where it was kept alive over a very long period of time.

To Fitznorman there was little doubt Peking Man was like his counterparts in Spain, a cave dweller, tool maker, fire user, and a hunter-gatherer. He and his clan would have had a similar social structure living in groups, working together and going about their daily tasks, hunting and carrying their kill back to share it with their families in their caves.

Life was hard, not unlike that of animals, nasty and short, most dying before the age of fourteen and only one in twenty reaching fifty, as fossils have shown.

In the upper levels of the site, bones were found of early and late Homo sapiens, the most recent of which dated to about twenty seven thousand years before present.

Back at the hotel Professor Wei informed them that an interview had been arranged with CCTV, the main Chinese news channel, for a report on the opening of the International Anthropological Congress.

They agreed to participate, but informed Wei that they could not go into details about their discovery as it was the prerogative of Professor Lundy to make an official statement. Their protestations had little effect as they were hustled from the lift to a nearby meeting room which was packed full of journalists and TV cameras.

They took a seat before an array of microphones at a table set on a podium before the crowd. Professor Wei sat in the middle and they were joined by another person who Wei introduced as a director from the Ministry of Science and Culture.

The man from the ministry raised his hands for silence and then spoke into the microphones.

‘Ladies and gentlemen, on behalf of our government, I am pleased to welcome Professor Fitznorman, whose extraordinary discovery in Borneo will be officially presented at the Conference of Palaeoanthropology here in Beijing on Monday.’

There was a movement of excitement and applause from the crowd as they pressed for to see Fitznorman accompanied by the flashing of cameras.

‘Also let me introduce Professor Pierre Rossard, from the Musée de l’Homme in Paris, who is directing the excavations in Borneo.’

Fitznorman looked at Rossard who lifted his eyes to the ceiling.

‘Now, Professor Wei, will answer your questions.’

Wei looked a little bewildered in spite of being used to talking in public.

‘Professor Wei, Professor Fitznorman, have you really found a Yeti?’

There was a faint laugh from the assembly.

Wei looked towards Fitznorman for a response.

‘No,’ said Fitznorman clearing his voice. There was a sigh of disappointment. ‘We have found something much more important.’

There was a renewed buzz of excitement.

‘Unfortunately I cannot make an official statement before Professor Lundy is here, he arrives from Paris tomorrow.’

‘Professor, professor,’ shouted a woman reporter with a French accent. ‘We have heard that you have a new Homo erectus!’

‘As I said...’

‘Is it true that primitive man lived in Borneo until recent times?’ an American questioned.

‘Is Asia the birth place of modern man?’ another shouted.

Fitznorman stood up lifting his hands. ‘Gentlemen, I’m sorry, but I cannot make a statement before tomorrow, let us meet again at the Conference Centre here in the hotel tomorrow afternoon.’

Pandemonium broke out as disappointed journalists crowded around them as they struggled to make their way out to the lifts, followed by Wei and the man from the ministry.

Chapter 50

THE PRESS CONFERENCE

In a statement issued by the scientific review *Nature*, which published a paper on the discovery in its July issue, Professor Lundy, anthropologist and head of the Musée de l'Homme in Paris, said the new find 'will have the effect of an atomic bomb in anthropological circles.'

'One of the most important things this skull tells us is how much we don't know,' he had said in a phone interview. 'It suggests that diverse hominids had survived until historical times.'

Lundy, when he first saw the skull, like some other observers, was particularly intrigued by the unusual mix of both primitive and advanced traits.

'What's most astonishing is that the general features are like those that we see in *Homo erectus*, but attenuated to a point that they approach early *Homo sapiens*. It is more sapiens than erectus,' he said.

'So, is the new skull fossil a hominid – perhaps one of our ancestor?'

'Certainly not!'

Lundy presented the fossils, a partial skull cap, two teeth and a femur to the press.

'We have compared the skull with the fossils of many other known hominids from nearby Java. Based on characteristics such as the tooth type and the thickness of the enamel, the shape and positioning of the head, and the facial features, we have concluded that the creature represented a new genus and species of hominid.'

He announced the official name of *Homo borneensis*, after the Island of Borneo, avoiding the politically sensitive names Kalimantan or Sarawak and hoping to assuage Malaysian sensibilities.

Since the skull had been found, it had been kept secret until after the findings underwent scientific review. But rumours and hazy news reports about the discovery in European newspapers set off a buzz of excitement in the scientific community.

Nonetheless, he told them that the skull found in Borneo stood apart as remarkable for a sole and unique reason - its young age.

‘It’s the only complete skull of this species that we have for the present,’ he said. ‘Naturally we are hoping to find others.’

A murmur of excitement spread through the room. A renowned anthropologist from the British Museum and its Department of Human Origins shouted ‘charlatan’, his theories and life work had been destroyed by the discovery.

Was the history of Rift Valley, which had long been regarded as the cradle of humanity, because of the abundant hominid fossils recovered there, about to be upended.

‘This incredible discovery makes us realize how limited a view we have of human evolution because until now we’ve concentrated on East Africa,’ he said.

Despite the detailed analysis and published claims, the question of identity remained open-ended. Was it actually a new hominid, or a variation of some other previously identified species, or perhaps even an ape?

Some observers had suggested it may be a female orangutan.

A leading British anthropologist said such questions in the world of palaeontology were always complex as evidence was usually incomplete and there was little agreement amongst scientists about what key features characterize a distinct human ancestor.

‘We each have a favourite model of what identifies early members of the human line, it’s a question of interpretation,’ he said. ‘This creature is not our missing ancestor, but it could redraw the human line of evolution. But I think we can safely say that it’s a human cousin.’

Lundy and his colleagues argued that the age and primitive anatomical features of *Homo borneensis* suggested it could be closely linked to the last common ancestor of modern humans.

A young journalist raised his hand to ask a question.

‘Yes,’ said Lundy pointing at him.

‘I understand that you have extracted samples of DNA?’

‘That’s correct.’

‘What does this show?’

He had patiently waited for this moment and announced the results of the Molecular and DNA analysis, which showed the close relationship between *Homo borneensis* and *Homo sapiens*, which was distinct from the only other DNA in ancient hominids, the Neanderthals.

‘This new “fossil” discovery is different from but at the same time closer than we could have ever imagined to modern humans. The skull is three thousand years old, and how it’s owner had related to *Homo sapiens* as a contemporary remains to be discovered. But with our find, we have the beginnings of new knowledge. This is nearer to the end than the beginning of our knowledge of the human lineage.’

In his view, the chief significance of *Homo borneensis* was not the issue of whether it was a human ancestor, but the unsuspected diversity of ancient hominids in recent times. ‘One of the real surprises,’ he said, ‘is the extraordinary mix of anatomy of our only modern contemporary, because that is what it is.’

Chapter 51

ERECTUS! OUR ANCESTOR?

The conclusion suggested that *borneensis* had gone off on an evolutionary tangent of its own, developing distinct features not shared by modern humans. The populations of Borneo became progressively more isolated from other Asian *erectus* populations.

‘There is a possibility that modern humans could have been descendants of Asian *Homo erectus*,’ said Pierre.

‘There’s no way modern humans could be direct descendants of *Homo erectus*,’ protested Etxeberri. ‘The *Borneensis* material suggests that *sapiens* and *erectus* overlapped in time. *Erectus* can’t resemble what you have found and be our ancestor at the same time,’ he said. ‘It’s possible that *borneensis* is a side branch of *erectus*.’

‘The lack of other data from Borneo makes things complicated. Fossils found at Trinil and Sangiran sites in Java range in age from about 1.8 million years old to maybe as young as 780,000 years old, whilst others found at Ngandong have been dated to just 50,000 years old.’

‘*Borneensis* is so much more recent!’

‘Like that of Ngandong, it’s contemporary with *Homo sapiens*,’ said Pierre.

‘The question is, are *borneensis* and Ngandong different species or sub-species?’

‘Based on variations in skull shape, I would think that *Borneensis* is a transitional form, bringing *borneensis* closer to classical *Homo erectus* than those found at Trinil and Sangiran.’

‘Ngandong looks like a lot of the other material found in Java, but *borneensis* shows clear evolutionary traits.’

‘Sure there are some features though it’s not clear whether these are taxonomically significant or useful as species indicators,’ countered Etxeberri. ‘My opinion is that they are part of the normal variability seen in any species.’

‘I don’t really agree with that,’ retorted Pierre, ‘there are clear difference that show *borneensis* is much closer to *sapiens* than Ngandong!’

‘Pierre, don’t get me wrong, but I think they’re grasping at straws to suggest that *borneensis* is an evolved form, another species.’

‘Why not, I don’t have to tell you that evolution is much more rapid than we think. Take us today, or in recent times, it’s a matter of scientific fact that there are real differences in the human race today,

anybody who has travelled can see that, in fact just look around you in here. Do you resemble typical Indonesians, do typical Indonesians resemble Papuans?’

‘Come off it Pierre!’

‘No, it’s a question of political correctness, intellectuals in their ignorance claim that race differences are minimal, unimportant, or non-existent. In reality they are minimal, but scientifically speaking real in genetic terms, something which is vital for the search of human origins.’

‘The problem lies in the definition of the term “race”,’ said Paul Cathary. ‘anybody can tell the difference between an Eskimo and a Khoisan hunter-gatherer from southern Africa or still again Suede. The intellectual political correct Parisian refuses to see the difference. But we molecular biologists can, we can determine from a person’s DNA his “racial” origin or his ancestral mixture. In forensic medicine DNA polymorphisms is uses this with precision.’

‘Changes have been continuous in human populations and our present day evolved during the past 15,000 years for example,’ said Jaros. ‘Europeans before 10,000 to 20,000 years ago did not yet show the characteristic features we see today, which means that populations can evolve fast by adapting genetically to the local ecology.’

‘Quite, the 100,000 years or so since the exodus from Africa has been sufficient for natural selection to create non-overlapping differences for skin colour and hair texture. The revolution in molecular population genetics did not show that race differences are small or nonexistent. It only showed that evolution works much faster than most people had thought!’

‘Just take Africans and Papuans. These two races are similar in appearance, with dark skin and frizzy hair. However, molecular studies show that Papuans and Africans are as distant genetically as you can get in our species. The evident reason for their relatively great genetic distance is that the Papuans are descended from an early wave of migrants out of Africa, and the reason for their

physical resemblance is that both races never left the tropics and were therefore subject to the same environmental-driven selection.'

'The problem with the Out of Africa theory,' said Pierre, 'is that it has been so widely acknowledged that it has become an accepted truth which in effect stifles any other vision concerning the development and dispersal of humanity. The Out of Africa scenario is a tale that shows man surviving and conquering the world against all adversity. As a result any discovery that does not conform to this image is immediately put down.'

Pierre liked to point to fossils and stone tools in the Riwat and Pabbi Hills regions in Pakistan where stone tools have been found dating to more than two million years of age by a distinguished scientist, Professor Dennell, who served as Director of the British Archaeological Mission to Pakistan.

However, Professor Wei told them how they had discovered what now appeared oldest stone tools outside Africa on the Loess Plateau in China, at a place called Shangchen in the Province of Shaanxi.

Nearly a hundred stone tools found at the site put back the date men had arrived in Asia more than a quarter million years after scientists had studied and dated a sequence of ancient soils and deposits of Loess, that is wind-blown dust.

Palaeomagnetism, changes in the Earth's magnetic field, and the pattern of polarity reversals, was used to date magnetic minerals, which act like small compasses that register the polarity, locked in the sediments at Shangchen, showed the site had been occupied over a period of 2.1 million years ago over of a period 800,000 years.

It was 300,000 years older than Dmanisi in Georgia where the remains of *Homo habilis* were discovered.

But as there were no fossils found at the Shangchen site, it was difficult to say what kind of man had made the tools. However, in 2015, a skull indentified as *Homo erectus* was found not far from Shangchen which was dated to 1.6 million years old.

In addition stone tools of about the same age were found in the Nihewan Basin about 150 kilometres to the west of Beijing.

‘It is almost certain that *Homo erectus* occupied China at that time, but considering the age of the site, we believe the tools were made by another member of the genus *Homo*, such as a *Homo habilis* or a near relative,’ said Wei. ‘It’s quite remarkable to think such early, small-brained humans made it from Africa to China two million years ago.’

Pebble Culture tools are difficult to identify, but scientists ruled out natural processes, as the features of the tools found corresponded to other confirmed archaeological records associated with *Homo habilis*, a species that dated from between 2.4 million to 1.4 million years ago, or even *Australopithecines*, ancestors of a very much greater age, which are currently believed to have existed uniquely in Africa.

Shangchen was 14,000 kilometres from comparable sites in East Africa, where other early humans of a comparable age have been found, this meant they moved over vast distances and without doubt over the course of countless generations across the African and Asian continents.

‘The problem is popular science likes to imagine our distant ancestors setting out on a transcontinental treks, rather like a biblical Hollywoodian scene, led by Moses, out Africa towards Europe and Asia. It’s a colourful image,’ Pierre explained, ‘but we don’t think of animals doing the same thing, they simply existed on different continents.’

‘We forget man is an animal and his more distant ancestors not very different from apes, gibbons and monkeys, that moved with their forests over vast time periods, not from homes loaded with their tents, spears, pots and pans into unknown territories.

‘In any case the movement certainly occurred under the pressure of climatic change and population pressures, when the weather in neighbouring regions became warmer, wetter and more attractive for Palaeolithic families.

‘With five or ten kilometres a year, a the daily foraging range of modern hunter-gatherers, the 14,000 kilometres could have been

covered in anything from 1,000 to 3,000 years, depending on the availability of food and competition.'

Chapter 52

AN UNEXPECTED GUEST

Aris was wearing a grin, the kind of silly grin he wore when he was embarrassed or surprised by something. He blinked and pushed his glasses up his nose.

'Look, the Australians have found a new species of man!'

Fitznorman and Pierre Rossard looked up suspiciously from their discussion on a planned trip to Beijing.

'Where?' said Pierre the first to find words.

'Here!'

'Here! You mean in Kalimantan?'

'No, in Flores.'

Aris waved a print-out.

'It's in today's Jakarta Post, an article in Nature,' he handed it to Fitznorman.

The print-out was a report on an article in the scientific revue Nature announcing that a team of archaeologists had found a new species of tiny humans in the Liang Bua limestone cave on the Island of Flores to the east of Java and Bali. The paper had baptised them 'Hobbits' as they were no taller than one metre. The report said that they had lived about 18,000 years ago and may have survived until just 500 years ago on the east Indonesian island of Flores. The new species had been given the scientific name of *Homo floresiensis*.

Fitznorman looked up at Aris and handed the paper to Pierre Rossard.

'It's a joke?' asked Aris.

'No idea,' said Fitznorman with a worried look on his face.

‘Call Murtopo,’ said Pierre.

Aris looked at his watch then turned to his satellite phone and put in a call to Murtopo’s office at Gadjah Mada University. After a few moments he started speaking in Indonesian. The conversation lasted almost ten minutes before he clicked off.

‘Murtopo says that the specimen has now moved to his own lab from the Centre for Archaeology.’

‘What else did he say?’ asked Fitznorman impatiently.

‘Bak Murtopo said it’s an ordinary human being, just like us. It’s not a new species.’

‘What is it then?’

‘He said it’s a sub-species of *Homo sapiens* classified under the Austrolo...something group, in other words just a fossil of a modern human that’s undergone pygmization. The Australian claim that the skeleton was the ancestor of the Indonesian people is pure nonsense.’

They all laughed, it had been a close shave, the last thing they wanted was to be beaten at the post by a new competing discovery.

A few days later they watched Murtopo in a TV interview stating that the Flores discovery was nothing more than microcephalic members of the modern human species. Then news came from the Australian leader of the team that discovered the skeleton, who announced that the skeleton was not a pathological case and the proof was they had uncovered the remains of at least seven individuals, all of them tiny, and belonging to the species *Homo floresiensis*.

To the dismay of the Kalimantan expedition all the beginnings of a full scale academic row were on the horizon which could only overshadow and discredit their own work. Pierre Rossard pointed out that the chances against of finding an adult microcephalic prehistoric individual were extremely low and finding seven others who all shared the same features was astronomic.

The creature had a brain size of only 380 cubic centimetres, one-third less than the average brain size for a modern human and much smaller even than those of the *habilis* type skulls found in Dmanisi.

The skeletons were buried under a six meter thick layer of volcanic ash about 12,000-year-old in the Liang Bua cave with dates ranging from 95,000 to 13,000 years ago.

‘We have to reconcile ourselves to the idea that we have possible been upstaged. On the other hand it unequivocally supports our hypothesis. The question is should we go to press?’

‘What do you think Scott?’ asked Lundy.

‘I don’t know Professor, you’re the scientist, you know the ropes better than I do.’

‘I think it’s time, do you agree Pierre?’

‘Yes, in Beijing, at the conference, before the papers on the Flores discovery are discussed.’

‘What about Murtopo?’

‘I’m sorry to say he’s getting on in years and of course there’s probably quite a bit of professional jealousy involved. It would have been better if the Australians had worked more closely with Murtopo to make a joint announcement. It’s not the first time that Murtopo has agreed with foreign scientists, there was already a disagreement on dating the Solo skulls.’

‘Yes,’ said Aris, ‘it was exactly what we wanted to avoid here. The risk now is that Murtopo will go ahead with an announcement about our work here to get back his lost face. Murtopo criticized the announcement of the discovery without the consent of the Indonesian archaeologists, notably R. P. Soejono of the Indonesian Centre for Archaeology in Jakarta, who participated in the work, and said it was unethical.’

‘Murtopo was probably unhappy about the fact that the Australians scientists were there before him, publishing their discovery in Nature without consulting him.’

‘Quite right, they’ve worked for years and years on several sites in the Soa Basin of central Flores that have shown hominids were on the island by 840,000 years ago.’

‘It’s not in our interest to upset Murtopo. So, no remarks to the press about floresiensis!’

‘Borneensis will end up in cabinet in Murtopo’s office in Jakarta at the National Centre for Archaeology.’

‘Whatever happens now our discovery and the Flores discovery are going to put the Out of Africa and Multiregional theories out into the open. A lot of smug people are going to have to revise their ideas, people such as our friend Etzeberri.’

They all laughed at the thought of Etzeberri and one or two other prima donnas having to back pedal and revise their theories.

Until the discovery in Kalimantan and Flores the broad pattern of human palaeontology had been focused on Africa and to a much lesser extent Asia. The new discoveries would attract very much increased attention on the islands of Southeast Asia and cave deposits on the Asian mainland. The distribution of the human species was much more complex than had been previously thought by science and as a consequence Asia could play a much more significant role than that imagined by the adherents of the Out of Africa hypothesis with evidence of early modern humans in Asia as early as any of the African evidence.

The ancestors of floresiensis, probably a form of *Homo erectus*, could have reached Flores eight hundred thousand years ago as stone tools on the island suggest probably by some kind of boat or raft.

The problem about palaeoanthropology was that its theories were only as good as the latest discovery and since more and more fossils pointing to contradictory evidence turn up the family tree becomes more and more difficult to interpret. The discoveries in Asia from Dmanisi serve to put African fossils into better focus.

In the case of borneensis and floresiensis the family tree simply adds more branches with a greater variety of the erectus family with broader skills than previously suspected. The tools found were made by borneensis or borneensis learned to make the stone tools from *Homo sapiens*. Personally I think borneensis was making stone tools. We have found the same tools from 40,000 years ago until 3000 years ago with no evident change in technology or materials.

There’s little in common with the stone tools we have found in Kalimantan and those found in other erectus sites in Asia. However,

the link between the tools and the skeletal remains we have found is quite clear. *Homo borneensis* was a toolmaker and used fire, did he learn this from his *Homo sapien* neighbours? I think he did, I think the cross flow of knowledge and genes was probably greater than has been imagined up to this point.

‘So let me explain it this way,’ said Pierre. ‘Hominoidea is the superfamily of primates that includes all the apes, including humans. Now there are two families of hominoids, first the gibbons, or lesser apes, in the family Hylobatidae, and then the greater apes and hominids in the family Hominidae.’

‘So we are Hominidae?’

‘Yes, Homininae is a subfamily of Hominidae, that includes *Homo sapiens*, some extinct relatives, and the gorillas and the chimpanzees. It comprises all those hominids, such as *Australopithecus*, that arose after the split from the other great apes.’

‘Confusing.’

‘You’ll get the hang of it,’ he said laughing.

Chapter 53

MEETING OLD FRIENDS

Fitznorman opened the safe that was hidden from view by a sliding panel in the Empire style bookcase behind his desk. He inserted the key the lock and turning it to the code then pulled the heavy door open and took out a box.

He then took the Metro to the Gare d’Austerlitz, where he had a meeting in that non-descript Irish pub with Pierre Rossard, next to the Institut de Paléontologie Humaine.

He was sitting alone at a table in the almost empty pub, it was not yet happy hour.

‘Voilà!’ said Fitznorman placing a rather solid looking box, in polished wood, about half the size of a hatbox, on the table.

Pierre raised his eyebrows and reclined slightly.

‘A bit early for a Christmas present?’

‘No, on the contrary something much more interesting, something that will help us defuse a problem,’ Fitznorman said slowly removing the cover.

Pierre raised himself and peeked into the box. He whistled softly.

‘Where did you get it?’

‘Delivered from London yesterday morning, by hand no less, personally by my good friend Jimmy Fogg.’

‘The missing skull!’

‘Yes it will put Murtopo firmly on our side.’

After examining the photos Professor Murtopo had no doubt that it was the same cranium that had been found in a sand bank on Solo River in the Sambungmachan District of East Java. It had been bought from a workman for a few dollars by a local small time fossil dealer who had then sold it to the American businessman in the antique market in Jakarta. It has then been illegally brought out of the country. The skull was one of three fossils found at the site and had disappeared before the University could intervene.

The cranium had resemblances to those of the Ngandong skulls, and at the same time different. It had certain *Homo erectus* characteristics with a thick cranial bone and a pronounced browridge but a high forehead and rounded braincase that were more common with archaic *Homo sapiens*.

However, the cranial capacity was low, around 1,000cc compared to with 1,200cc in archaic *Homo sapiens* but what was interesting was the brain imprint showed evidence of Broca’s Cap, a sign that indicated the possibility of speech. From the little evidence available Murtopo had, he estimated it to be around 40 or 50,000 years old.

‘My dear Mister Fitznorman, what an extraordinary surprise, what a gift!’

‘Yes Professor.’

‘How can I thank you?’

‘Just add your name to our article to be published in Nature.’

‘I would be delighted to.’

EPILOGUE

The bones of a hybrid girl were discovered in a limestone cave above the Anuy River in the Altai Mountains of southern Siberia, daughter of a Neanderthal mother and a Denisovan father.

The bones were so fragmented it is thought they had been eaten by hyenas, passing through its stomach before being dejected into the cave’s sediments.

The analysis of the DNA extracted by researchers at the Max Planck Institute for Evolutionary Anthropology, revealed that the bones were those of a thirteen year old girl, whose recent ancestors included at least one Neanderthal, indicating multiple instances of interbreeding within this one family.

The discovering points to interbreeding between the two different species.

Professor Chris Stringer, a renowned anthropologist specialised in human origins at the Natural History Museum in London, commented, ‘To find an actual hybrid of such a mating in a still sparse fossil record must surely indicate that these matings could not have been rare events, at least when the populations met each other, under whatever circumstances’.

‘Neanderthals and Denisovans may not have had many opportunities to meet,’ said Professor Svante Pääbo, a renowned geneticist and director of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. ‘But when they did, they must have mated frequently, much more so than we previously thought.’

About five per cent of DNA in some populations, particularly those from Papua New Guinea, is thought to be Denisovan in origin, as well as in East Asians and Aboriginal Australians.

‘Maybe Neanderthals and Denisovans were absorbed into the modern human populations,’ suggested Dr. Pääbo.

This contradicts the idea that Neanderthals and Denisovans were replaced with the arrival of modern humans in Eurasia 60,000 years ago. Meaning they may have been simply have been absorbed into the population.

Chris Stringer and a number of other scientists published a paper in Science Direct in which they declared:

Quote

We challenge the view that our species, *Homo sapiens*, evolved within a single population and/or region of Africa. The chronology and physical diversity of Pleistocene human fossils suggest that morphologically varied populations pertaining to the *H. sapiens* clade lived throughout Africa. Similarly, the African archaeological record demonstrates the polycentric origin and persistence of regionally distinct Pleistocene material culture in a variety of palaeoecological settings. Genetic studies also indicate that present-day population structure within Africa extends to deep times, paralleling a palaeoenvironmental record of shifting and fractured habitable zones. We argue that these fields support an emerging view of a highly structured African prehistory that should be considered in human evolutionary inferences, prompting new interpretations, questions, and interdisciplinary research directions.

Unquote

THE END



This is an authorised free edition from
www.obooko.com

Although you do not have to pay for this e-book, the author's intellectual property rights remain fully protected by international Copyright law. You are licensed to use this digital copy strictly for your personal enjoyment only: it must not be redistributed commercially or offered for sale in any form. If you paid for this free edition, or to gain access to it, we suggest you demand an immediate refund and report the transaction to the author.