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# THE BIRTH OF SYDNEY

EDITED AND INTRODUCED BY

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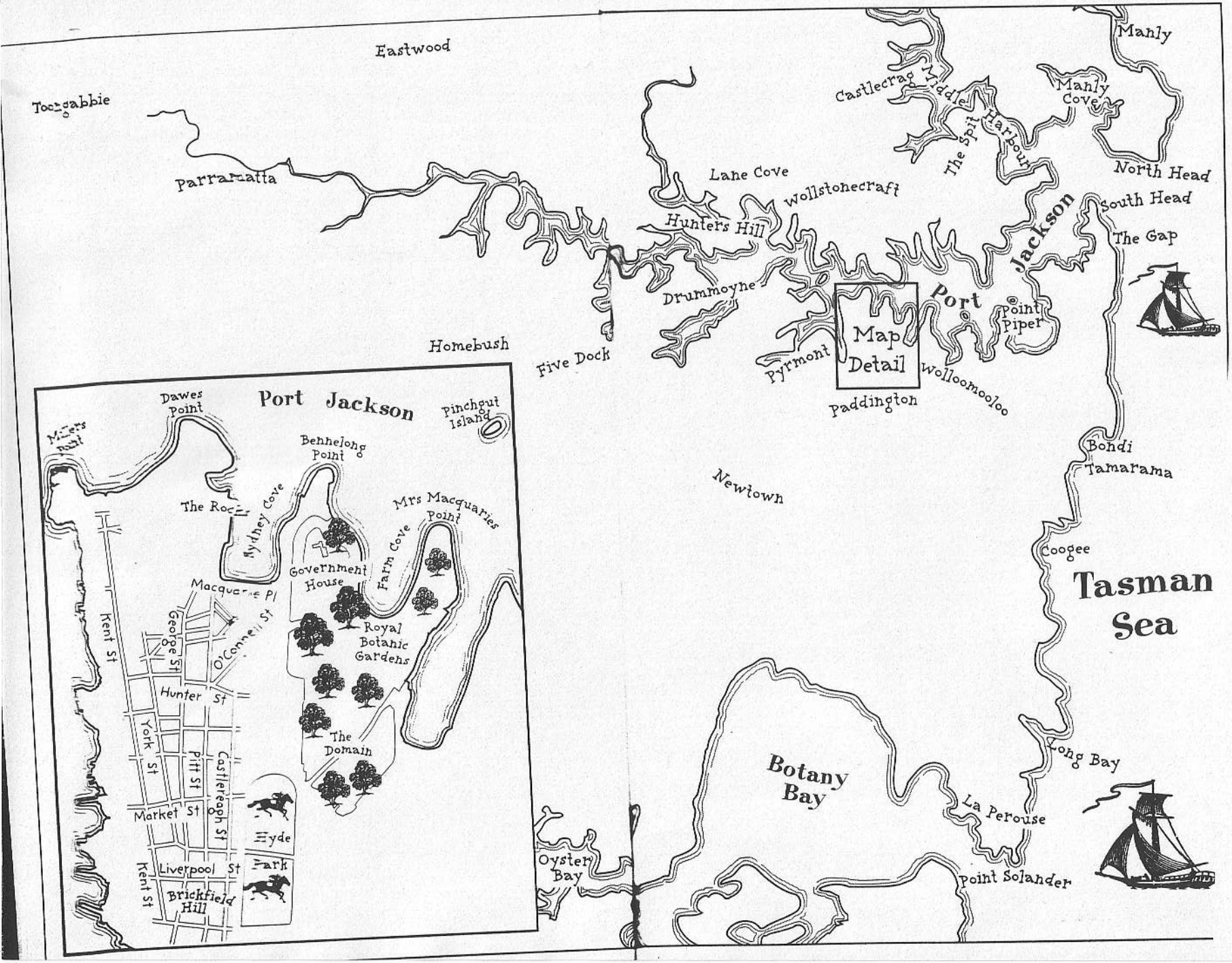
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North Head
South Head
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Pinchgut Island
Millers Point
Benhelong Point
The Rocks
Sydney Cove
Mrs Macquaries Point
Farm Cove
Government House
Macquarie Pl
O'Connell St
George St
Kent St
Royal Botanic Gardens
Hunter St
York St
Pitt St
Castlereagh St
The Domain
Market St
Hyde Park
Liverpool St
Brickfield Hill
Kent St

orders seized the moment. The sailors of the *Lady Penrhyn* obtained a double ration of rum to celebrate the offloading of the women convicts, and fortified with the ardent spirit they soon found amusement singing, fighting and fucking.

A few days later the prudish Lieutenant Ralph Clark lamented at what he had seen, presumably intermittently as lightning struck the various unfortunates: 'Good God what a Seen of Whordome is going on there in the women's camp...I would call it by the name Sodom for there is more sin committed in it, than in any other part of the world.' Clark's comparison with Sodom soon proved more accurate than he imagined.

The tempests continued for several days, but the mornings were tranquil, steamy and sodden, as is so often the case after the passing of a summer storm in Sydney. The record of what happened on one such morning is incomplete, but from the evidence I can imagine the scene that unfolded. In the dawn light a party of marines is trudging through the mud towards the women's camp. They search tent after tent, evicting scrawny, rag-clad convicts and poxy sailors nursing hangovers. Sometimes one, perhaps two or three emerge from a tent, holding their heads as a convict moll screams at the soldiers, 'You can kiss my c...' Grim-faced the marines continue with their task until out of one tent is dragged a ship's carpenter. 'You're for it, mate,' whispers a marine through clenched teeth to the malefactor, whose transgression is all the worse because he is supposed to be one of the few figures of respectability in the settlement. The carpenter's paramour follows, but then to everyone's surprise a third figure emerges. It's the cabin boy from the *Prince of Wales* transport.

An exasperated Arthur Phillip, governor of the colony, seems to have been as uncertain of the appropriate punishment as he was of the nature of the crime, so he ordered the cabin boy and the carpenter paraded out of camp to that sprightly, sardonic tune 'The Rogue's March'. The fife-players probably gave a fine



rendition, for they were doubtless well practised; the ceremonial salute in reverse was heard more often than any tune in the early days of the colony, except perhaps 'God Save the King'.

The scene that followed was a sort of prototype for Sydney's Gay and Lesbian Mardi Gras. The hungover convicts, scurvy-plagued sailors and red-coated marines were assembled into files, through which the curious procession of miscreants marched. First came the fifes, playing the mocking air with all the vigour they could muster. Close behind came the disgraced carpenter, his hands bound behind him, while bringing up the rear was the cabin boy, arraigned in petticoats and heartily jeered by the crowd. When the motley procession reached the camp boundary there must have been a moment of hesitation, for beyond the rough clearing there was nothing—no European settlement for thousands of kilometres. Their punishment over, the cabin boy and the carpenter straggled back into camp. There was simply nowhere else to go.

After that first night of debauchery, Governor Phillip desperately needed to restore law and order. He held a formal parade, adding to the agony of the revellers' hangovers with a reading of his 'letters patent' establishing his own authority and the various courts. He further assured them 'that if they attempted to get into the women's tents of a night there were positive orders for firing upon them'. The order did little good, for the party continued.

And so passed Sydney's first weeks, its first crimes and its official founding. It was a salty, saucy and insolent affair full of irony, colour and sex. It was as if the constraints of old Europe had been irrevocably left behind in this vast island prison, and the unbuttoned nature of the town, which remains characteristic, was stamped indelibly on it from the first.

It's hard for us to imagine the excitement and furore created when the destination of the First Fleet was announced, for the enterprise was breathtaking in its audacity. Eleven ships carrying

about 1500 souls (roughly half of whom were convicts) would be launched on an eight-month journey halfway around the globe. Once at Botany Bay they would establish a beachhead settlement on the last of the habitable continents to be drawn into the realm of European imperialism. In its breadth and ambition, the announcement of the English expedition was every bit as monumental as the mission to land a man on the moon.

Soon the words 'Botany Bay' were on everybody's lips and the great publishing houses of London rushed to the principals in the endeavour. John Stockdale of Piccadilly signed up Governor Phillip and Captain John Hunter to produce accounts, while Cadell and Davies in The Strand got Judge-Advocate David Collins, and Debrett of Piccadilly retained chief surgeon John White. Botany Bay ballads were forming on the lips of singers, and broadsheets everywhere carried factual as well as fanciful accounts of the antipodes. From the very beginning the history of Sydney would be recorded in detail.

Some sense of the strength of the impression made by the expedition can be seen in the persistence of the name 'Botany Bay' for the new settlement. Botany Bay, in which James Cook had sheltered for a week in 1770, never was settled, for it had insufficient water and soil. The First Fleet stayed there a few days only before moving on to the more suitable Port Jackson; apart from the First Fleeters, no convict was ever sent to Botany Bay. The bay, however, has played an important role in Sydney's history. It was there, on the very day the First Fleet chose to abandon the place, that the ill-fated La Perouse Expedition, already years at sea, sailed into view. The French stayed six weeks, walking overland to visit Governor Phillip at Sydney Cove, but then sailed into oblivion. Decades later it was discovered that La Perouse's ships had foundered on a reef in what is now Vanuatu. Botany Bay, of course, is once again the gateway to the city, for with the passing of the great passenger liners that brought tens of thousands



in through Sydney Heads, most visitors now step ashore beside Botany Bay at Sydney's Mascot Airport.

Unlike modern visitors, those sailing on the First Fleet were launching themselves into a great void, an isolation unimaginable today. While they were away the United States of America would ratify its constitution, France would have its revolution, King George III would go insane and then recover and Mozart would stage the first performance of *Don Giovanni*. Those lucky few destined to return from Sydney Cove would find a dramatically changed Europe, just as they themselves would irrevocably change Australia.

For half a century Sydney Cove was synonymous with European settlement in Australia in the European imagination, and because the settlement had such unusual beginnings it was under the microscope from the start. Enlightenment Europe was vitally interested in the moral and philosophical questions posed by the establishment of the colony. Could transportation redeem socially degraded felons? Could fallen women be made fertile and bounteous by the change of clime? Could the Aborigines be brought into the European fold, and could Europe itself be transplanted successfully into this strange antipodean world? Visitor after visitor penned opinions on these matters in everything from secret reports to popular books, while official documentation, letters, diaries and newspapers recorded how the city's inhabitants saw these issues. This book covers the first hundred-odd years of Sydney's life when such questions were urgent and the answers elusive. By the end of the nineteenth century, when Mark Twain made his triumphant visit to the city, and the journalist Nat Gould discovered that Sydney was the place to be on New Year's Eve, the character of the modern metropolis was largely formed.

Sydney thus represents the great experiment of the Enlightenment—the proving ground in which new philosophies and ideas were to be tested. What the savants of the Enlightenment did not

have, however, was knowledge of the deep history of the region in which their experiment was being carried out, for geology is one of the newest of the natural sciences. This was a critical lack, for it was to be the mix of earth, water and people that was to determine the shape of the city.

One might imagine that Sydney was a purely British creation, but that would be quite wrong. Quite apart from the Aborigines who had been there for 50,000 years, the Maoris and Pacific Islanders, West Indians and Americans, Malays and Greeks put in early appearances, just to name a few. Within a few years, Muslim sailors would be constructing extravagant temples and filling the streets of the town with exotic Eastern festivals. It's important to remember that this great social experiment was taking place in a strange natural environment whose impact was to be profound, for the timeless interplay between earth, water, air and fire that helps shape all cities was felt in Sydney from the very first day. To understand how this interplay developed we need to see the world in a very different way.

Imagine if you can an utterly upside-down and inverted Sydney. The atmosphere is water and the sea is air. You are sitting in a boat afloat in the harbour, but you are on the wrong side of the line between air and water. Yes, you are a creature of the briny, approaching the land, fishing-line in hand, in hope of a meal. You cast your line out of the water and into the air, directing it to the bushes growing at the water's edge. What do you think will happen? How long will you wait for a meat-eating creature to come and seize the bait, and how long before you are snagged on some vegetation?

If you think about it you will see that this imagining reveals a great biological truth—that the ecosystems of the land and sea in the Sydney region are utter opposites, organised as mirror images of each other. The land forms a food pyramid whose broad base is made of plants. Feeding on these are fewer herbivores, and feeding



on them in turn are even fewer carnivores. That's why you will get snagged land-fishing long before anything takes your bait. The seas are different because their food pyramid stands on a tiny base of plant life, which supports carnivores in huge numbers. Thus there is relatively little phytoplankton, algae and kelp existing at any one time. Balanced on this pinprick of plant life is a moderate number of marine herbivores, many of which are microscopic, though a few such as oysters and blackfish reach an edible size. On top of these herbivores in the theoretical food pyramid is balanced a vast number of carnivores. These include most of the fish recreational fishermen are familiar with—from jewfish to flathead and bream. Were it otherwise, fishing as we know it simply would not exist.

Sydney's sandstone region is an extreme kind of land environment, for it supports a plethora of plant species—indeed it stands in the top dozen or so environments on the planet for plant biodiversity—yet it supports fewer animals than most. Thus its food web structure is as different from the sea as any land ecosystem gets. Its soil is so poor that even the miserly koala has a hard time making a living, for most of the eucalypts growing on the sandstone produce leaves that are not nutritious enough to sustain it. Sydney's harbours and bays, in contrast, are relatively rich, for there fresh and salt waters meet, and rocky refuges abound. This difference between land and sea has meant that for as long as people have lived in the sandstone region they have looked to the sea for sustenance. The people of Sydney are and always have been a maritime people who do not fear to go to sea in their craft.

A very strange stone indeed lies in Sydney basements. The story of its origin and properties is an intriguing one. Imagine standing on a vast floodplain, bigger than any you've ever seen before. From horizon to horizon stretch meandering channels filled with ripples

up to a metre high, testimony to the vast volume of water that sometimes flows here. The date is about 230 million years ago. The place—Bennelong Point, where Sydney's Opera House now stands. The significance? We are looking at the Hawkesbury sandstone in the making. It's the rock that will in turn make a city.

No city has been as profoundly influenced by its rocky foundation as Sydney, for its sandstone has given form and colour to its finest buildings, shaped its economy, guided its spread and protected its natural jewels—the rainforest gullies, coves and beaches made inaccessible to builders by its steep bluffs.

Sydney lies atop six kilometres of sandstone and shale, and all of it was laid down at a time when the world's first dinosaurs, mammals, ginkgos and pine trees were coming into existence. It was a temperate, wet world, a time when leafy swamps flourished. One day their debris would give the Sydney basin its coal mines.

Two hundred and thirty million years ago the Sydney area was hundreds of kilometres inland—as far from the coast as Broken Hill is today. It then lay in a vast valley, while to the east the highlands of what are now New Zealand and New Caledonia rose out of a prototypical Pacific Ocean. The entire continent lay well south of its present position and was firmly attached to Antarctica.

One of the enduring mysteries of the Sydney sandstone is just where the tiny grains of sand that constitute it came from. Geologists employ a handy trick in determining in which direction ancient rivers flowed (and thus from where they brought their sediment). They look for the remains of ancient ripple marks. These marks are very distinctive and are readily seen almost anywhere in the Sydney sandstone. They look like closely spaced lines running through the rock at an angle, something like this: \\\\\\\. These marks are left behind when the ripples move forward, just as waves do in water. Each ripple has a gentle slope (which faces upstream) and a steep side (downstream). The sand



grains are pushed up the gentle slope and then fall down the steep side one by one. The lines in the rock are the steep faces, each covered by succeeding falls of sand.

Once you understand this you can never get lost in Sydney as long as you can see the rock. That's because the highest part of the lines you'll see always face approximately south, and the steeper the lines are the closer they are to facing true south. Even underground these ripples of the ancient river will guide you.

The ripples tell geologists that Sydney's sandstone must have originated in the south, but just how far south no-one quite realised until a sophisticated means of determining the ages and origins of sand grains became available. Dr Keith Sircombe, a geologist working at the Australian National University, has examined hundreds of grains from the Sydney sandstone using a technique called SHRIMP (Sensitive High Resolution Ion MicroProbe). Sircombe has discovered that most of the grains are derived from rocks that formed between 500 and 700 million years ago, far to the south of Australia in what is now the eastern Antarctic.

We can only imagine the river that brought these grains to rest, for it is long vanished. Its vast fossilised floodplain, however, indicates that it was the size of the Ganges or larger and its headwaters lay in the high mountains of Antarctica. As it flowed north along what is now the east coast of Australia it lost velocity. By the time it reached the Sydney area it was too feeble to transport sand grains more than a few millimetres in diameter, so the stone is composed of remarkably uniform grains of about that size.

David Roots, a geologist, explained to me that parts of the sandstone are such pure silica that were it not for iron stains it would be virtually clear. Imagine being able to see from the Harbour Bridge to Parramatta through crystal-clear rock. Several hundred million years ago the sands were buried deep in the earth's crust, where they were compressed and heated until they formed the solid stone we see today.

By 150 million years ago the great Antarctic river had stopped flowing past Sydney and the region was watered by streams whose headwaters lay in what is now New Zealand and New Caledonia. As they flowed past the Sydney area towards Australia's great inland sea (which then occupied the continent's heart) these ancient rivers cut into the sandstone to form channels, some of which are probably still occupied by waterways today.

These west-flowing rivers were also fated to be interrupted, for ninety million years ago the Pacific Ocean would finally come to Sydney as New Zealand and New Caledonia were torn from eastern Australia. Continents are broken up by a process called rifting. Heat from deep within the earth boils up along the line of the rift, causing a ribbon-like bulge in the land. Then the bulge collapses at its centre, forming a series of vast, rocky steps leading down to a central valley. As the land on either side pulls apart, this valley is eventually filled by the sea. In the Sydney area the remains of the steps formed during this process can still be seen today, along the Lapstone escarpment where the Blue Mountains jump up from the Cumberland Plain, and along the coast itself.

This process of bulging and collapse reversed the flow of the region's rivers (which now flowed east towards the newly created Tasman Sea), and cracked the sandstone in ways that dictated the position of harbours, coves, ridges and creeks. In essence, it laid Sydney out on a primitive, natural grid system that was profoundly to affect the city's development.

The Hawkesbury River, about forty-five kilometres from the harbour itself, is a most curious waterway, for its course describes a large semicircle that encloses the Sydney region. It follows this peculiar path in part because the direction of flow of the river has been in places reversed. Some of its headwaters still run westward, but its lower section now drains to the east, probably in a valley cut by west-flowing rivers over ninety million years ago.

The peculiar course of the Hawkesbury has deprived Port



Hacking, Botany Bay and Sydney Harbour of significant catchments, for all are hemmed between the sea and the narrow arc of the Hawkesbury's flow. Because of this, very little silt flows into the harbour and it remains remarkably clear and deep, even close to shore. It was a feature that was important to Aboriginal fishermen, who speared fish in the clear water, and it also attracted the attention of the first European settlers, who could anchor their ships metres from the land.

One other exceedingly peculiar characteristic of Sydney Harbour is that as one goes further downstream the cliffs become higher and the topography more rugged. Thus the land around Parramatta is formed of relatively gentle and rounded hills, while North Head forms a startling precipice. This is exactly the reverse of the common pattern for waterways, which usually originate in rugged mountains and terminate on plains. This peculiar characteristic of Sydney Harbour is probably due to the ancient tilting of blocks of the continent as they subsided during the rifting process.

Sydney Harbour's principal catchment is the insignificant Parramatta River, and geologists have long wondered how this tiny stream could have cut such a vast harbour out of the solid sandstone. The answer is time, for the stream has been on the job for tens of millions of years, removing the sandstone grain by grain until a huge chasm was created. Parts of the harbour are quite deep, and as streams can only cut into the rock at sea level or above, some of the cutting must have been done when the oceans were much lower, such as during the last ice age.

From this it is clear that Sydney Harbour has not always held seawater. The last time it was dry was just 15,000 years ago when so much water was frozen into ice at the poles. Then the ocean was 140 metres lower than at present and the sea lay thirty kilometres to the east of the heads. The harbour would have looked like a valley in the Blue Mountains or the wetlands of Kakadu. By then Aboriginal people had already occupied Australia for 30,000

years or more and they doubtless hunted on the grassy flats as the sea withdrew, then fished over them as it flooded back in again.

We owe the construction of Sydney's Harbour Bridge, at least in part, to ignorance of this ice-age history. In 1890 the commissioners charged with examining the options for linking the north and south shores rejected a tunnel because 'so little is known as to what the waters of the harbour hide from view'. Likewise they rejected the option of placing piers in the water to support a series of shorter and lower spans with a swing bridge in the middle, because they lacked geological data on the nature of the seabed. What worried the commissioners in both cases was the depth and distribution of the ice-age sediments that filled the old valley cut by the Parramatta River. And so they set about the seemingly impossible task of constructing a single span bridge tall enough to allow a ship with a sixty-metre mast to pass underneath.

The Sydney Harbour Bridge appeared in the mind's eye long before it was made a reality. Erasmus Darwin, Charles' grandfather, was so moved by the potential of Port Jackson that in 1789 he wrote a poem eulogising the future bridge to adorn the future city. Darwin (who, unlike his grandson, never visited Australia) prophesied of the infant Sydney Cove:

> There, rayed from cities o'er the cultured land,
> Shall bright canals and solid roads expand.
> There the proud arch, Colossus-like, bestride
> Yon glittering streams, and bound the chafing tide;
> Embellished villas crown the landscape scene,
> Farms wave with gold, and orchards blush between.

It was not until 1923 that work commenced on the gargantuan task of construction. The arch was finally closed on 30 August 1930 and the bridge opened for traffic on 19 March 1932, in the midst of the deepest economic depression Australia has ever known. In 1961 the structure was floodlit, and today Sydney is unimaginable without it.



Why did the harbour it spans form where it did, and not a few kilometres to the north or south? To answer this puzzle we must study cracks. Look at any flat, weathered surface of Sydney sandstone and you'll notice a series of narrow fissures in it. One curious feature of these hairlines is that they run predominantly in two directions; one lot paralleling the coast and running roughly northeast–southwest, the other crossing these at 90 degrees. These cracks sometimes form a pavement full of little squares, like a mosaic, a fine example of which can be seen below The Gap at South Head. This pattern is also repeated at a gigantic scale, and it is these very large cracks that have guided the flow of rivers and creeks. Warragamba Dam, west of Sydney, occupies one great coast-paralleling crack while its many tributaries, which meet it at 90-degree angles, fill the other set of fissures. The watercourses that followed such cracks eventually dug the harbour and its tributaries, giving the waterway the complexity that even twentieth-century development is forced to follow.

The vegetation the early Europeans found growing on the Sydney sandstone both delighted and appalled them. In 1770 Joseph Banks was amazed by its diversity, and James Cook changed the name of his new discovery from Stingray Bay to Botany Bay to celebrate the discoveries made there. Eighteen years later, however, when the First Fleet arrived, the hungry settlers realised in despair that this magnificent vegetation offered little sustenance. They found no significant fruits, roots or berries growing amidst the botanical profusion, and they never learned to suck the honey-filled flowers as did the Aborigines. To the First Fleeters the sandstone flora seemed to gratify all the senses but taste. It was a wet desert that left a man starving in a visual garden

of Eden. Sandstone was even to figure in the vocabulary of these first European inhabitants, as the term was applied to convicts who could not endure their treatment in this harsh and weird environment.

Sydney gets about a metre of rain per year, yet the soils of its sandstone are often parched, for the water drains away almost as soon as it falls to ground. Where a layer of humus builds up the runoff is retarded, but here another factor comes into play. Rock beats water, but so does fire, for fire burns humus. For millions of years the infertile, rapidly draining sandstone has promoted the evolution of a hardy flora, which comprises one of the most intriguing botanic realms on the planet. There are 1500 species of plants growing within a 150-kilometre radius of the city, including the brilliant red waratah and gymea lily, whose blooms have been the pride of the bush since Aboriginal times. It's a region full of biological mysteries. Why, for example, should the gymea lily be absent from the area bounded by the harbour's north shore and the Hawkesbury, while it flourishes elsewhere? How did the wollemi pine survive its five-million-year seclusion, hidden in a single canyon in the region's northwest, and why do waratahs grow as patchily as they do? Tragically, given the present rate of development, changes in burning and the effect of introduced species, much of Sydney's flora will be dramatically altered before it becomes well studied.

The region's floral diversity and spectacular blooms have been nurtured by the sandstone's curious chemistry, for the soil it produces is so poor that it cannot support rapidly growing, dominant species. Instead, myriad specialists co-exist. Some grow only on ridges, some in slopes, some in wet gullies and some only on shale lenses. Some grow for only a few years after a fire, while others will disappear if a hot fire comes more than once a decade. In short, the flora is adapted to exploit a thousand ecological opportunities, each partitioned by time or space.



The Sydney sandstone is the heartland of those most characteristic of Australian trees, the eucalypts. One of the strongest arguments for the recent World Heritage nomination of the Blue Mountains area is the fact that over 140 species of eucalypt occur in the Sydney region, and they include representatives of all the major divisions of the genus. Some botanists take this as evidence that the sandstone was the cradle of this most emblematic group of Australian plants.

Where nutrients are scarce, plants can't afford to lose leaves to herbivores. As a result they defend their foliage with a deadly cocktail of toxins and it's these toxins that give the bush its distinctive smell—the antiseptic aroma of the eucalypts and the pungent scent of the mint bush. When the leaves of such plants fall to the ground the decomposers in the soil often find it difficult to digest them, for they are still laden with poisons. The dead leaves thus lie on the rapidly draining sand until a very hot spell. Then, fanned by searing north winds, there is fire.

Although fire is the one great natural terror the city must face today, it has not always been so. In 1790 the First Fleeters experienced the kind of summer that strikes fear into the heart of twentieth-century Australians. Temperatures rose into the forties and the wind blew from the north-west as if out of an oven. The heat was so extreme that birds fell dead into the streets and the Europeans succumbed to heat prostration. At one stage a great mob of flying foxes passed by, dropping from the air as they died. For all this, there is not one mention in the early journals of the threat of fire. The reason seems to be that the Aborigines' firestick farming, where they regularly burnt the bush to create pasture lands for the animals they hunted, had kept fuel loads down. Despite the tinder-dry conditions there was little to burn. Without these burning practices, there is every chance that the infant Sydney would have perished in flames. Given the difficulties with starvation and sickness the inhabitants of the settlement were

experiencing it is unlikely that another attempt would have been made to settle Port Jackson for a long time.

Sydney has been repeatedly threatened by far less extreme conditions in the twentieth century. The most recent major fire occurred in January 1994 when hundreds of houses burned, principally in the southern suburbs of Como and Jannali. The risk has been made all the greater by appalling town planning. Many suburbs are laid out along the ridges, while the gullies are densely forested. Given current management of these gullies, it's probably best to think of the houses perched above them as temporary structures. Sooner or later they will find themselves sitting atop thousands of tonnes of fuel, with a fire raging their way. No-one has found a solution to this problem. No-one knows how to implement Aboriginal fire policy any more, and some botanists fear that frequent burning will lead to a decline in biodiversity.

Despite the supreme role fire plays on the sandstone, there are a few sheltered places around Sydney where water has beaten fire, and it is here that we find patches of rainforest. Sometimes the balance has been tipped by a slightly richer soil, and sometimes just by the shelter granted by a grand old Port Jackson fig. These figs are a signature plant for the city, for it is about the harbour that they reach their finest form. Growing along the water's edge, their twisted grey trunks support a dense canopy of leaves that are dark green on the upper side and a fiery rust colour underneath. The figs often start life on a bare rock where they are safe from fire, but as they grow they throw a dense shade and their basket-like roots hold humus. In the cool shade provided by the tree, and protected from fire, the humus rots to a rich soil. Then a stately red ash (or *murrung* to the Aboriginal people) might grow, its intricately mottled grey bark supporting orchids, moss and ferns. On the rocks below will spring up elkhorns, birds-nest ferns, cabbage palms and rock orchids with their spectacular yellow sprays, and there you have it—a rainforest in miniature.





Such places are true jewels in the botanical crown of Sydney. There are myriad coves around the harbour where you can sit in the shade of such a mini-rainforest, listening to the call of the whip bird or wonga pigeon while looking out over the impossibly blue waters of a tiny bay with its white sand beaches and sparkling waves.

When the *Endeavour* first sailed into Botany Bay in 1770 nothing amazed Captain James Cook as much as the stingrays he found basking in its shallows. What astonished him most was their abundance and size. Some were as broad across as a church pew, and these giants were not afraid to laze about right under the *Endeavour*'s keel. Ridiculously easy to hunt, they provided a free meal for the entire crew. The sailors harpooned the rays as they lay about the vessel, but found them so heavy that they had to be gutted before being hauled aboard with block and tackle. The largest, even without guts, weighed 200 kilograms! It doubtless took decades, perhaps centuries, for stingrays to grow to such prodigious proportions. Cook noted that stingray barbs were not used by the Aborigines for spear points and he mused, presciently as it turned out, that stingrays might be sacred to the people of the bay.

The First Fleeters knew the Aborigines of the region as the Eora. Their culture was rapidly altered after 1788, and today we know little of the beliefs and ways of these people before European contact. All that I have been able to gather about their feelings toward stingrays is that the Eora believed that it was death to eat one. Why, and what significance it had for the ecology of the region, remains unknown. It does seem possible though, given the Aborigines' frequent fights, that spears tipped with stingray barbs were just too dangerous to have about. An implicit policy of mutual deterrence may have outlawed the exploitation of these extraordinary marine creatures. Whatever

the case the giants were eliminated by European hunting almost as quickly as Eora culture was changed by the settlement.

Ever since the end of the last ice age the waters of Botany Bay and Sydney Harbour have provided a living to Aboriginal people. When the British arrived its bays and coves were dotted with Eora canoes, and the smoke of Eora campfires filtered from its caves and rock shelters. Women paddling fragile canoes even ventured outside the Heads on fishing expeditions. Governor Phillip estimated that about 1500 Eora lived in the area between Botany Bay and Broken Bay. Some of those living on the northern shores of Sydney Harbour called themselves Cadigaleans, for *Cadi* was their name for Sydney Harbour, and *galeans* means 'the people of'.

The Eora spoke a language that formed part of the Pama–Nyungan language family, thought to have originated about 5000 years ago somewhere in eastern Arnhem Land. By the time of European settlement it had spread over all of mainland Australia except for parts of the north and west. Because of this, some individual words spoken by the Eora would have been recognisable right across the continent. Consequently it may yet be possible to reconstruct the now vanished Eora language. A handful of its words survive in English: *dingo*, *gin* (for Aboriginal woman) and the cry *coo-ee* are all of Eora origin.

The Cadigaleans and adjacent clans were a truly maritime people. Fish were their mainstay and they developed remarkable methods to catch them. They were one of very few Aboriginal groups to manufacture fishhooks, which they made by grinding down the shells of mud oysters. In late winter they journeyed into the bush to find suitable casuarina trees whose bark they used to build canoes up to five metres long. These they managed with astonishing dexterity. Mothers fished from them balancing infants on their shoulders, while men hunted with spears, their heads totally immersed in the water, as a friend counterbalanced the



unstable craft. Often they would cook their meal at sea on a pad of clay, atop which sat a fire.

Another favourite fishing technique was to stand in the lee of a point with a spear poised over the still water, spitting chewed-up mussels into the water as berley. The fish of the harbour have been hunted in these ways for 15,000 years. Many have become well attuned to the human predator, especially the harbour bream. It has acute vision and immediately recognises the human shape. It is as crafty as a fish can get, and its sheer intelligence is a source of wonder.

In summer the waters of the harbour teem with life, and then it's easy even for an inexperienced angler to catch a meal. In winter, however, the fish leave for the ocean or retire to the deeper reaches, and commercial fishermen sometimes have difficulty making ends meet. Winter must have been a trial for the Aborigines, and early accounts indicate that starvation was routine during this lean period. It seems likely that by May many Eora left the harbour to find food elsewhere. Some probably travelled into rugged areas such as the Lower Hawkesbury. It was not easy to spear fish in its murky waters (making it an undesirable location in summer), but rock oysters abounded there. These shellfish, along with whatever could be gathered, sustained life until the fish returned in spring.

*Cadi* is a snug name for a snug harbour, so it's a pity that Captain Cook casually dropped the name Port Jackson on the map. Still, Sir George Jackson, a secretary of the Admiralty who lived to be ninety-three, seems not to have been a bad old stick. A worse fate befell the cove Governor Phillip chose to settle in, for in an act of political brown-nosing that is hard to forgive he named it after his next-door neighbour and patron, Viscount Sydney. Sydney had been a 'dissolute and philandering youth'. As secretary of state for the Home Department he was an incompetent bureaucrat, unequal to the most ordinary duties of his office.

I find it an embarrassment to live in a city named after such an eminently forgettable personage, and even Phillip appears to have had second thoughts, for at one stage he inclined to the name Albion, which would have doubtless pleased the Irish convicts no end. I suppose that Phillip, as the son of an immigrant, needed all the patrons he could get, despite their shortcomings. Yet I dearly wish that Phillip had asked the dignified old Eora man he met on his reconnaissance of Port Jackson what the cove was called. If he had, we might now be the proud inhabitants of Warran, or Werrong.

I have often wondered what the Eora thought about Werrong. It was clearly a strikingly beautiful location, for it was one of only a few places around the harbour with a permanent stream of water. Judge-Advocate Collins noted that a dense forest grew by the shore. This was probably composed of fire-sensitive rain-forest species such as Port Jackson figs, cheese trees and red ash. This, along with the exceptionally large size of the trees growing on the site and the fact that the freshwater brook, later to be known as the Tank Stream, flowed all year, suggests to me that the cove experienced a different fire regime, or had different soils from the surrounding areas.

Despite its beauty there is little mention of the Aborigines frequenting the place in the accounts of the First Fleeters. There may have been few if any shell middens there, for when oyster shells were required for mortar they had to be brought from adjacent coves. This apparent lack of use stands in striking contrast with nearby Farm Cove and Wallamola, now known as Woolloomooloo Bay, both of which were important gathering places for Eora initiation rituals and other purposes.

In some of these attributes Werrong bears a close resemblance to Aboriginal sacred sites recorded in other parts of Australia. These often had permanent water and were carefully burned around to exclude fire. Despite their being highly desirable



locations, Aborigines rarely ventured into them and never camped in them, although important ritual sites might be found nearby. Was Werrong a sacred site, its margins burned around in spring by the Eora to prevent summer fires destroying the soil humus that fed the Tank Stream and the rainforest? Was it a place of spirits, and so an appropriate site for the apparently unearthly European invaders, whom the Eora may have believed to be their ghostly ancestors, to settle? We will probably never know the answers to these tantalising questions.

The harbour acted as a sort of dividing line between two Aboriginal groups, the Camerigal who lived between Botany Bay and the south shore, and the Cadigal, who largely dwelt between the north shore and Broken Bay. As with most neighbours, relations between the groups seem to have alternated between feasting and fighting. The opportunity for a feast came only rarely to the Eora, for it was difficult to find sufficient food to satisfy a large group for any length of time. A gift from the sea in the form of a stranded whale seems to have offered the most common opportunity. The discoverers of a stranded whale would light fires to broadcast news of the discovery, and then people would converge for days of feasting.

Young Cadigalean men were initiated during a ceremony known as *Yoo-lahng Erah-ba-daihng*. Surprisingly it was not held on their own land, but on Camerigal territory at Wallamola. There the tribes would gather and, after days of ceremony, the highlight came when the initiates had an upper incisor knocked out with a stone. The teeth were carefully kept by their Camerigal hosts, who returned them to the Cadigal at a ceremony some years later.

This practice of knocking out a front incisor, incidentally, was to have some significance for the Europeans, for Governor Phillip was lacking just such a tooth. The Aborigines clearly viewed him as an important person, perhaps as an initiated elder who had returned from the dead. They called him *Beeàna*—father.