

DOLPHINS, WHALES & ME



MIKE BOSSLEY

Praise for Mike Bossley's Dolphins, Whales & Me

“This is a book which opens up a new world of human nature relationships.”

- *Emeritus Prof. Val Brown, AO.*

“Dr Mike Bossley is a dedicated researcher and world renown Whale and Dolphin expert. This book is a brilliant read about a man with a vision and purpose.”

- *John Gitsam, former Adelaide Dolphin Sanctuary Senior Ranger and Chair of Whale & Dolphin Conservation Society.*

“Mike Bossley has dedicated his life to the cause of cetacean conservation with intellect, persistence and love - and has made the difference on many occasions. Passion exudes from these pages and will inspire the reader as it inspired me”.

- *Giuseppe Notarbartolo di Sciara, Founder of the Tethys Research Institute, Italy*

“This is not just a history lesson and a voyage through the many issues facing whales and dolphins today but is a reflective campaigning handbook that many of us will benefit from reading and re-reading now and in the years to come.”

- *Chris Butler-Stroud, Chief Executive Whale & Dolphin Conservation, UK*

About Mike Bossley

Dr Mike Bossley has been active in research, activism, and environmental education nationally and internationally for fifty years. He taught at university for many years and has held senior positions in organisations such as *Greenpeace* and *Whale & Dolphin Conservation*. His research has featured in numerous international TV documentaries, newspaper, and magazine stories, and in various books. His thirty-year (and ongoing) research project on dolphins in Adelaide's Port River estuary led to the establishment of the *Adelaide Dolphin Sanctuary*. He has worked on many other marine conservation issues, including commercial whaling; the protection of Antarctica; and the plight of critically endangered Maui dolphins in New Zealand. He is an advocate for marine protected areas and maintains an involvement in education. He was awarded the Centennial Medal in 2000, Australian of the Year (South Australia) in 2005, and the Order of Australia in 2006 for his work in marine conservation.



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*For
Claire and Miki*

*The two women without whose love and support
none of this would have been possible.*

*And for my grandsons
Alex and Jamie*

*In the fervent hope that their grandchildren
will inherit a world which still has
dolphins and whales living in the oceans.*

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To Jane Goodall, David McTaggart, Paul Spong and Sidney Holt who were my unwitting mentors in cetacean conservation a special thank you.

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None of you will agree with everything I have said but I hope that most of you will agree with most of it.

*They say the sea is loveless, that in the sea
love cannot live, but only bare, salt splinters
of loveless life.
But from the sea
the dolphins leap ...*

D H Lawrence

Foreword

Mike Bossley's love affair with dolphins and whales, the cetaceans, spans the entire era of whale conservation from the save-the-whale 1970s to the present. He has brainstormed with the leaders of cetacean science and conservation over that long period, and he has some great stories to tell. He has worked on the front lines of international whale conservation, attending endless meetings, some of them landmark. He has jumped on his boat at the crack of dawn to witness rare cetacean social behaviour and, when needed, has got his hands bloody on the dissection table. He has been privileged to work in places where whales were coming back from heavy whaling along the Australian coasts and in places there where dolphins were still around, but suffering from coastal pollution. He has had that ideal experience of discovering and then living amidst an extended family group of dolphins and been able to get to know them as individuals day after day, year after year. That would be plenty for some scientists but then he managed to come to the realisation that these dolphins needed healthy habitat and that he might just have a solution — despite these dolphins living in what had become an urban wilderness, or as Mike says, “an ecological slum”.

Mike is exceedingly modest, and often shy about his own contributions, so I encourage you not only to believe everything you read here but to extrapolate somewhat and realize that probably Mike's role was greater than he says. Most of all, I invite you wholeheartedly to enjoy the ride with this first-hand account of a life devoted to our dolphin and whale friends, and to enjoy the valuable science and conservation lessons that mark the path of one of the grand defenders and best friends of the cetacea.

Erich Hoyt

*Author of Orca: The Whale Called Killer;
Encyclopedia of Whales, Dolphins and Porpoises; Whale Rescue; and
Marine Protected Areas for Whales, Dolphins and Porpoises*

Preface

We are poisoning our rivers, lakes, and oceans, burning our forests and ripping life from the seas. Climate change is cooking the planet. Abuse of animals brings plagues for us and untold suffering for them. Wildness is everywhere in retreat and all lives are diminished.

This melancholic scenario impacts us all, regardless of religion, geography, or ideology. Reversing our onslaught on nature will require a fundamental change to the way we perceive our place in the world. We must begin to see ourselves as part of the natural world, not as separate or above it. Appreciating that other beings have intelligence, consciousness, culture, and emotions can help us recognise the continuum that exists between us and the rest of nature.

Dolphins, with a brain as large and as sophisticated as our own, are living proof that humans are not unique in having mental lives. Learning about them can awaken us to our true place in nature, and in doing so, urge us toward protecting our planet and thus ourselves.

Everyone can make a difference; everyone can help make the world a better place. No matter how small or insignificant each effort seems to be, it all adds up.

Mike Bossley

Black Fish

When I was fourteen years old, I tried to kill a dolphin. I grew up in the Fiji Islands. Each year our family took holidays at a house on lovely Cuvu Beach. Every evening the family would gather in the beach side hut to enjoy the cooling sea breeze and the sound of waves sighing on to the beach. Dad would be drinking his overproof rum with a little water, mum a sherry and us kids with lemonades.

One summer afternoon we were stunned to see several black fins cruising the bay. My father, an enthusiastic but incompetent angler, was excited. “Black Fish,” he said. “They are amazing fish with red flesh, just like beef.” I knew no better. Dad immediately prepared his heaviest line and largest hook, baited with a hunk of steak that had been destined for his dinner. The fins were cruising about fifty metres from shore, much further than my father could hurl the heavy line and hook. I was deputised to swim the line and hook as far out as I dared go. I swam halfway toward the cruising fins, dropped the hook, then sprinted fearfully back to shore. I know now that the fins almost certainly belonged to Pilot Whales (despite the name, they are a species of large dolphin) and do not attack humans. They ignored the bait and eventually swam off unharmed through the gap in the reef and into the azure of open water.

It was an inauspicious experience for someone who has spent most of his adult life trying to understand and protect whales and dolphins, collectively known as cetaceans.



*Mike at boarding school, age 13, 1957,
New Plymouth, NZ.*

I had left Fiji aged 13 years to attend boarding school in New Zealand. I cannot forget my first night at the new school, two thousand kilometres from home and surrounded by strange boys with alien accents. They had already been at the school for a year when I arrived so knew the rules. I was desperately homesick and silently cried myself to sleep that first night. The next morning, timid and bewildered, I stood to attention like the other boys in the dormitory beside our

freshly made beds. The housemaster, a stooped apparition in a baggy suit, every bit as frightening as a character from a Grimm's fairy tale, stalked around the room inspecting our bed making until he came to my bed, which he peered at with his watery eyes. He called me out in front of the rest of the boys and beat me four times on the bum with his cane. I was numb with confused terror. I discovered later that the crime I had been punished for was making my bed with the open end of the pillowcase facing the door. The purpose of this beating was presumably to instil 'discipline' and 'respect' in the new boy. Instead, it gave me a deep disrespect of authority figures and a hatred for arbitrary rules. Sixty-five years after that morning beating, I still defiantly make my bed with the open end of the pillowcase facing the door.

Academic success at school was at best modest but good enough to get me into university. I enrolled in a science degree at Auckland University in New Zealand. I was fascinated by biology, but literature, poetry and art were my real loves. Why didn't I study Arts at university? I was pathologically shy, and I knew that in the

Arts subjects I would have to attend tutorials and speak in front of a group, and I just could not face that prospect. Zoology, botany, and chemistry laboratory sessions required minimal social interaction so that is where I went. Shyness had been with me since childhood and, growing up, I redirected my social interactions to animals, our pet dogs, and cats but also to wildlife. I remember spending many hours crouched in the musty gloom underneath our house watching a colony of rats. It was there I learned patience and the art of empathetic observation. From time to time my father would set a rat trap. He never caught any. I had a long stick hidden under a ledge and as soon as possible after he had set the trap, I would trigger it with the stick. The rats eventually became so habituated to my presence they would approach to within touching distance. I thought of them as my friends.

Given my shyness, it still perplexes me that I ended up as a university lecturer spending much of my life standing in front of hundreds of students, and later performing frequently in the media for my conservation work.

My motivation for going to university was quite different to that of my friends. I had no interest whatsoever in getting a ‘good job.’ My secret ambition had always been to be a beachcomber, a lifestyle I yearn for still. Perhaps fortunately, my lazy lack of career ambition was stacked against a passion to find my place in nature. Eventually, it was the academic no man’s land between biology and psychology which fascinated me the most.

At university, I was fortunate to study marine biology under Professor John Morton, an enthusiastic, iconoclastic, and sometimes terrifying man who inspired my scientific interest in protecting the marine environment. My enthusiasm for marine biology was reinforced by the lovely cadences of the Latin binomials (scientific names) of the organisms we studied. I loved whispering the Latin names to myself, such as the barnacles *Elminius modestus* and *Chamaesipho columna*, or the serpulid tube worm *Pomatoceros caeruleus*. Such names still sing to me. I eventually came to appreciate the seductiveness of the ‘nominal fallacy’, that

just naming an organism does not mean you understand it, but I have never lost my affection for the poetry of Latin binomials.

In my first year at university, I discovered alcohol and girls and found I liked both far too much. I failed chemistry and botany in that first year. Guilt ridden because my parents had made a considerable sacrifice to fund me with a stipend in that first year, I decided to get a job and study part time. During my studies I worked variously as a laboratory technician, a newspaper proof-reader, a biology tutor, an abattoir labourer, a probation officer, and in personnel recruitment. I enjoyed the day work/night study approach even though it meant routinely working hundred-hour weeks.

Apart from rare field trips, the marine biology I studied in my undergraduate days was all about the structure of dead plants and animals, what biologists call comparative anatomy. I quickly became disenchanted with endlessly dissecting the formalin drenched carcasses of dead fish, snails, and sea stars. It was behaviour and ecology that fascinated me, and I felt frustrated studying nothing but dead bodies. To make up the quota of subjects needed for a degree an extra subject was required and geography looked like an easy option, and it seemed to have the prettiest girls! The enrolment line at the geography desk was long. Standing in queues has never been my strong point. The adjacent queue for psychology was much shorter, so I went there. Psychology turned out to be mostly about the behaviour of animals so had instant appeal, even though the behaviour was that of rats performing in cages. In lieu of anything better, I gradually shifted my allegiance to animal psychology.

For my Master's thesis I wanted to return to marine biology and study the homing behaviour of limpets. These small, Chinese hat shaped relatives of land snails live on rocks between high and low tide. The individuals of some species occupy a specific spot on a rock. As the tide rises above them, they glide over the rock, using their raspy tongues to scrape off the minute algae which is their food. When the tide begins to ebb, they move back across the rock to their 'home' base, where they hunker down and wait for the rise

of the next tide. How they find their way back to their home was a fascinating mystery. I thought it would be interesting to try and work out how they managed to find their way back. Limpets have a brain the size of a sand grain, but I thought that maybe they memorised environmental features of their home range and used those to find their way back to their starting point.

I collected several of the local limpet species known to show homing behaviour (*Cellana ornata*) and kept them in an aquarium in my bedroom. I had hoped I could induce them to move around under controlled conditions but living in an aquarium just did not work. They stayed put and eventually died. It was my first direct experience of the flaws inherent in trying to understand the behaviour of animals kept in captivity.

Clearly it would be better to study the limpets in their natural environment, but it was just too impractical to continue the project while still employed in a full-time job. Extremely disappointed, I was forced to abandon the study. (Fifty years later the mystery of how they find their way home is at least partly solved: they mostly follow the chemicals in their mucous trail back to their base). I gave up on my limpets in frustration and reluctantly reverted to psychology's experimental animal of choice, *Rattus norvegicus*, the white rat. **I eventually graduated with a Master of Science degree with First Class Honours with a thesis on social learning. It was a topic I was to return to fifty years later when investigating the basis of dolphin culture.**

My disappointment over the limpet study soon dissipated into utter insignificance because about then I met Claire, the woman who would become my wife. We both shared a love of folk music and met in a smoky folk dive called *The Poles Apart* at a concert by a drunken band of boisterous Irish musicians called *The Dubliners*. Drunk they may have been, but they made magical music. Between songs I learned Claire had read every Steinbeck novel, was highly intelligent and had a quiet dignity to her. Even in the smoky haze, I could see she was stunningly beautiful. We were married within a year.

As I was finishing my degree, I came across a book which had

an immediate and powerful impact on my thinking. Jane Goodall's *In the Shadow of Man*,¹ described her studies of wild chimpanzees. Despite no formal training or experience, the young Englishwoman had made some amazing discoveries, chief of which was that chimpanzees could make and use tools! I was also impressed she gave individual chimps names, rather than the scientific convention of giving them numbers. In addition, she had no qualms about expressing her emotional involvement with the chimps and, importantly, her respect for them. Biologists are 'meant' to be above such things and are taught to think and write in dry, unemotional language. It is, of course, a lie. After a few beers, almost every field biologist I have met in the past fifty years will speak with passion and emotion about the animals they study.

In 1972 Claire and I moved to Australia so I could undertake research toward a PhD at the Australian National University in Canberra, while at the same time working as a tutor in the Psychology Department. My specialties were animal behaviour and environmental psychology. The main text for the latter course was Paul and Anne Ehrlich's 1970 seminal text *Population, Resources, Environments*. The book included reference to the continued depletion by hunting of the Great Whales. The largest species of all, in fact the largest animal ever to live on the planet, is the Blue Whale and it had been driven almost to extinction by whaling. Other large whales like the Sei, Humpback and Sperm Whales were also headed for extinction under the pressure of whaling. It was clear that if this hunting continued the whales were doomed. When we discussed this issue in seminars the students were horrified. "Why doesn't someone do something?" they always asked, and I could provide no explanation. Neither the students nor I realised that soon I would be one of the people to 'do something'.

In 1973 Claire and I were holidaying for the weekend at Moruya, on the NSW south coast. We had risen early and were walking along the beach. As we walked, we came upon some board surfers riding steep, glassy waves to within a few metres of the shore, before dropping off to paddle back out for the next set.

Dolphins suddenly appeared in the waves next to the board riders, body surfed beside them to the shore, then wheeled back over the breaking wave to return out with the human surfers. Again, and again, dolphins and humans surfed the transparent Pacific swell almost onto the beach. The grey torpedo bodies of the surfing dolphins were utterly different in every visual respect from the wet suited young men crouched on their fibreglass boards, but it seemed obvious to me that both species were sharing the same joy as the surge of ocean energy lifted each up and sped them towards the shore. I cannot remember how long we stayed watching this remarkable scene, but it remains crystalline in my memory. In many respects it was a kind of epiphany.

We moved to Adelaide in 1977 when I won a job teaching at the Murray Park College of Advanced Education (later to become part of the University of South Australia). Not long after starting there, a notice from a group called Project Jonah appeared on our staff room notice board. Project Jonah wanted someone to prepare a submission on ‘why whales should not be killed’ for presentation to a national government enquiry into Australia’s sperm whaling operation operating out of Albany in West Australia.

I was intrigued. I could see that my background in marine biology and animal behaviour meant I should be able to make a useful contribution. I read up on the limited literature available on whale ecology and behaviour and prepared a paper outlining the ecological significance of whales and, in more detail, described their large brains and probable psychological sophistication. I duly submitted a paper to the enquiry, which was chaired by Judge Sir Sydney Frost.² The weight of evidence submitted to the enquiry by me and others on the mental sophistication of cetaceans and the cruel way they were killed resulted in Frost concluding that Australia should ban all whaling in this country and, furthermore, should work to ban whaling wherever it occurred world-wide. I like to think my submission played a small part in Frost’s decision.

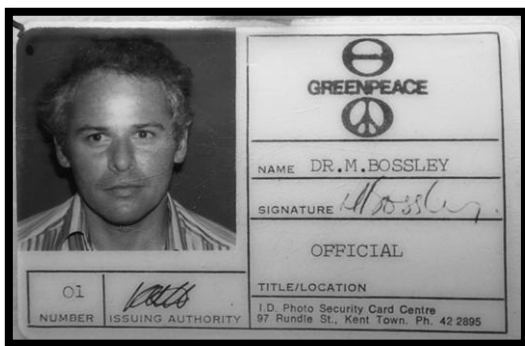
In the interval between the submission to the Frost enquiry and the release of its decision I joined *Project Jonah* and soon after found

myself President of the Adelaide Branch of only six people. I wrote letters, organised small demonstrations, and sold anti-whaling merchandise.

The de facto head of Project Jonah Australia at that time was a tiny but indomitable woman called Henrietta Kaye. She was of grandmotherly age with a ‘butter wouldn’t melt in her mouth’ demeanour but was as fierce an advocate for whales as I ever met. She was the power behind the establishment of the Frost Enquiry (no doubt assisted by her husband, who was a distinguished judge) and led the charge for many years after that. If you had to choose one Australian who did the most for whales it would surely be Henrietta. I used to dread the regular evening phone calls from her. “Hello Mike, this is Henri. I just need you to write this report and have it into the government by lunchtime tomorrow” was a not untypical start to a conversation. Despite the ridiculous deadlines none of us in the anti-whaling movement dared not meet them. Anti-whaling heroes come in many guises.

An early iteration of *Greenpeace* Australia made the road trip from Sydney thousands of kilometres across the Nullarbor Plain to protest the Albany whaling.

The idea was to drive an inflatable boat out to where the whales were being killed in the hazardous waters offshore. Their bravery in being present in the whaling town and going out to sea to try and save the whales did not stop the killing but it did help raise the profile of the issue. The whaling operation in Albany closed a few months before the government



*Mike's Greenpeace
ID, 1981*



Claire and Mikaela 1984

implemented the Frost Enquiry's recommendations in late 1978. The last whale was killed on November 20, 1978.

By then I was committed to the anti-whaling movement. I had seen the media stories about *Greenpeace* using direct action to protect whales in West Australia, the North Pacific and more widely. With naïve optimism and not a little hubris, I thought that since we had stopped whaling in Australia, I should continue the work and have whaling banned worldwide. I started a *Greenpeace* branch in Adelaide. By the following year I was President of *Greenpeace* in Australia, while still working full-time at the

university.

I studied part-time for all my degrees. I was the first student in my department to ever complete a Master's degree part-time and was one of the very few to successfully complete a PhD the same way. I was thus no stranger to working long hours. Holding down a full-time position at the university, as well as being a full-time cetacean campaigner meant working 80 plus hours a week, a regime I maintained for most of my adult life. I am slowing down now, though still probably average a sixty-hour work week. My recipe for success is quite simple: work harder and for longer than everyone else. And do not watch television.

Our daughter Mikaela was born in 1981 and, as in all families, she changed our lives totally. As someone once said, a child fills a hole in your life you did not know you had. She is, of course, the most beautiful, charming, and intelligent young woman in the world. She did not follow in my career footsteps but has a deep love of the ocean and worked for a few years on the square rigger *One and All*. Her time on the ship gave her remarkable maturity and leadership skills. When she was only just nineteen, she was elected the leader of a jury in a criminal trial, the rest of whom were mature adults. Like me, her academic achievements were slow in coming but when she did go to university as an adult she performed brilliantly. I will not be at all surprised if she finds herself in high office.



For most people whales and dolphins are a source of wonder and delight. Dolphins fire our imagination with their grace and beauty. **Some people believe dolphins possess a special form of consciousness, perhaps even more advanced than our own.** For many, I suspect, there is a tinge of envy. Dolphins seem to have a joyful, uninhibited, and utterly fulfilled life, a life full of play, beauty, and freedom. There are stories of dolphins coming to the aid of people adrift in the ocean. Many believe dolphins feel

a kinship towards us humans, that they want to make friends with us.

My own fascination with dolphins is not without elements of all the above but personal experience, science and a deep love of the ocean have also played their part. I secretly harboured a dream to emulate Jane Goodall and study these enigmatic animals in the wild.

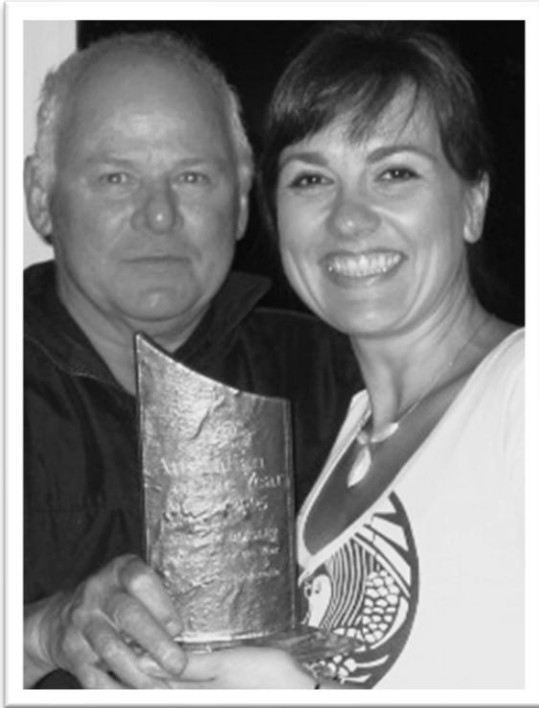
Goodall struggled through the jungle to make observations of her chimpanzees. I dreamed about trailing after the dolphins in mask, snorkel, fins, and wet suit, and having them accept me into their lives as the chimps had done for Goodall. I admit to being surprised and almost hurt that the dolphins showed no interest in my joining them in the water. In fact, they clearly wanted nothing of it and swam away as soon as I entered the water. So long as I stayed in my boat though, they were tolerant of my presence.

Most scientists fund their research via grants, and how to apply for grants is an important part of a graduate student's education. Chasing grants is a time consuming and frustrating exercise and usually means having to tailor the design of a study to the granting body's requirements. It also invariably means the study is for a finite period, seldom more than a year or two.

I wanted to follow Jane Goodall's approach to simply go out and watch and see what I could learn, without too many preconceptions, without an end date, and without direction from elsewhere. As the proverb goes – *'Whose bread you eat, their song you sing.'* I did not want to sing anyone's song but my own. This meant Claire and I have funded almost the entire research project, as well as my conservation work, out of our own pockets. Boats, fuel, cameras, attending conferences, etc., are not cheap. The money spent over the years on research could, in total, easily buy a small house. This was no small sacrifice for our family to make and I am so grateful that Claire and Mikaela never questioned the expenditure. We were able to spend this money while I was being paid for my teaching role by the university but, disillusioned with the way universities were going, I took early retirement in 1995. The financial situation for my research began to look grim.

Melody Horrill came to the rescue. She was (and still is) a smart, sometimes sassy young woman with an incandescent smile and deep brown eyes. She was also practical, energetic, and damned good fun. She and Steve Vines had been working with me as volunteer research assistants for a couple of years. I had gotten to know Steve and 'Melo' well when they had participated in a wilderness experience camp I had run in the Coorong as part of a university environmental course. It has been my good fortune to teach many wonderful students over the years and many of them became involved in the dolphin research to some extent. With Steve and Melo, I was particularly fortunate.

Steve has dark hair, penetratingly astute eyes, and a sharp wit he aims most at the pompous, the egotistical and the foolish. Within a couple of hours of joining me on the boat the two of them were transformed from students/research assistants into irreplaceable friends. Research trips with them were both productive and fun.



Mike with Melody, 2005, Port Adelaide

Two more capable, committed, ethical but irreverent people would be hard to find anywhere. Both have since gone on to succeed in related careers and remain treasured friends.

Melody was determined to organise money, so the research could continue. She masterminded and built from scratch the *Australian Dolphin Research Foundation*. It was just a small group of my friends so

sounds more impressive than it really was, but it did the job. The idea was to run a dolphin ‘adoption’ scheme by offering people the opportunity to find out about the local dolphins. With nothing but her enthusiasm, charm and drive she got the scheme up and running, despite having a full-time job in television. The *Australian Dolphin Research Foundation* was also the vehicle we used to push for the establishment of the Adelaide Dolphin Sanctuary (not a concrete pool) aimed at protecting the environment Port Adelaide’s wild dolphins call home.

The *Australian Dolphin Research Foundation* no longer operates but it played a hugely significant role at a crucial time in the story of Adelaide’s Port River dolphins.



Billie

The first day I saw 'Billie' is engraved deep in my memory. I had left home in the dark to drive forty minutes through the streets of Adelaide to the head of the Port River. I parked beside the riverbank and watched the dawn edge through light cloud over the Adelaide Hills, with the river before me mirroring it in silver and gold. I remember recalling the words of the old Joni Mitchell song *Chelsea Morning*: "...and the sun came out like butterscotch and stuck to all my senses..."³

A fin sliced through deep shadow close to the far side of the river. Puffs of vapour and untidy ripples followed the dolphin as it blew three times, then dived. I sat hunched against a stunted gum on the western shore taking notes, too distant or too unknowing to hear the huff of the blow.

Close by, a solidly built man in blue overalls stood beside a beat-up wooden punt, its bow pulled onto the steep beach. He ambled over to a tall, blonde woman holding a skittish thoroughbred. The man took the halter with practiced ease and led the horse toward the boat. The horse pulled back on the lead, then reluctantly followed him into the shallow water as he stepped into the old punt. The antique outboard was still chugging. He knocked it into gear with a casual flick and eased the boat off the beach. A fox terrier stood stiffly at the bow, peering out across the water. The boat, with the man and dog inside and the horse swimming alongside, nosed out towards deeper water. The fin appeared again, this time aimed at the boat and the dog began an excited,

high-pitched yelp.

My memory then goes into freeze frame. There is blue paint peeling off the side of the boat. The man is attempting to look casual, with a crumpled cigarette hanging from the corner of his mouth but he knows I am there, watching. The dog's piercing yelps echo across the still water. The young bottlenose dolphin's silver back arches easily out of the water beside the startled horse.

The day was March 25, 1988, and it was my first close look at the Port River dolphins. The man driving the boat was Sandy Sandford and his dog was 'Bip.' Judging by its size, the dolphin was about three years old.

Martin Jacka, a fine photographer with the local daily newspaper, had captured images of the dolphin swimming with the horses back in October 1987. Sometimes there was a golden Labrador as well. A photo and brief story had appeared in the newspaper, but the location of the event was vague. Later the photo was to appear in newspapers and magazines around the world.

A few weeks after the newspaper story a letter arrived from my



Port River 1987. Photo by Martin Jacka courtesy The Advertiser

New Zealand friend Wade Doak, a pioneer marine naturalist, underwater photographer, and cetacean enthusiast with a special interest in human cetacean relationships. Martin had sent Wade some photos of the dolphin/horse duo and Wade had written to me saying I should check it out. I met Martin over a coffee. He was a tall, bearded Cornishman with a Mr Spock (of *Star Trek* fame) like appearance. He had trained in the English police force but abandoned that career for photography. He showed me his photos and where he had taken them, close to the top of the Port River and out from the Birkenhead Hotel. Martin was an excitable and enthusiastic person, and he made no attempt to hide his deep fascination for the dolphin.

Next morning, I was sitting on the bank of the Port River at daybreak.

Sandy, also a retired cop, supplemented his pension by exercising racehorses in the Port River. At first, he was gruff and cautious with me, clearly suspicious of a scientist's intrusion into his early morning dolphin experiences. After a few days he relaxed somewhat and began to accept me into the small group who knew of the dolphin. He was concerned that publicising the story would turn it into an uncontrollable tourist event. He had agreed to participating in a local television documentary segment about the dolphin and the horses only if the location was kept secret. It was also clear he had developed proprietorial attitudes toward the dolphin, something I was to quickly develop myself.

Later in the week he invited me to meet him at his favourite pub, *The Clubhouse*, since demolished. We talked in the shabby dining room over schnitzels, mashed potatoes, and peas, plus a couple of beers. Weak sunshine filtered through grimy windows. Sandy spoke quietly, not much more than a whisper, as if worried someone might overhear our conversation, but we were alone in the room. I diligently recorded the conversation in longhand in my notebook.

About a year earlier, he said, the mother dolphin had given birth beside his boat, and he had lent over and helped the infant dolphin stay afloat and a bond formed between them. After a few months,

the baby left its mother and started the habit of swimming alongside Sandy's boat. It was clear from the way Sandy told the story that he thought the dolphin was more interested in him than in the horses. He felt he had a kind-of telepathic communication with the young dolphin.

The notion of telepathy with dolphins is widespread among 'alternative' people but sounded strange coming from the sixty something, gruffly spoken, stubble faced ex-cop sitting across the table from me.

I let his story pass without comment. Later versions of the story became more plausible.

The dolphin, who he called Billy, stayed in the area for several months and could often be seen swimming with a large and somewhat-aloof adult dolphin. He called this adult Big Mama, assuming it was Billy's mother.

On Boxing Day, 1987 Billy disappeared. This disappearance coincided with the departure from the Port River of a fleet of tall ships circling the country as part of Australia's bicentennial celebrations. Almost every boat in Adelaide crowded into the river to watch the spectacle of their departure. Sandy assumed the noise and confusion had driven the dolphin away from his haven. Billy never returned.

Strangely, a few weeks after Billy's disappearance another young dolphin appeared at the top of the river and began swimming with the horses. To Sandy this dolphin appeared to be smaller and skinnier compared to Billy and had a white '3' on each side of its dorsal fin. Martin had photographed *Marineland* staff capturing the young female dolphin in the Patawalonga creek, then considered one of the most polluted waterways in Australia, and taking it back to one of their pools. The newspaper had sent him to cover the story of the capture, so he knew that *Marineland* had branded each side of its dorsal fin with a '3' and later released it into the ocean at West Beach, an 'as the dolphin swims' distance of about 30kms from the Port River.

Sandy and Martin called this new dolphin Pat in recognition of its time trapped in the Patawalonga. Although Sandy and Martin

still pined for Billy, the young female Pat captured their hearts as well.

It seemed unlikely to me that two different dolphins would both engage in the same unusual behaviour and in the same place. I suggested that perhaps Pat and Billy were the same dolphin but neither Sandy nor Martin would accept the idea. Pat was too small they said and was a female. Why they had concluded Billy was a male was never clear. They had never seen evidence of his gender, but they were adamant this was the case.

The established scientific method for identifying individual dolphins is to use the nicks they naturally acquire on the trailing edge of their dorsal fins as they mature. I began taking photographs of Pat's fin with the idea of comparing them to those Martin had taken of Billy. Unfortunately, none of the photographs Martin gave me provided a clear, side on image of his fin. I could not make the proper comparison of Pat's and Billy's fins. A year or so later, Martin found an old photo of Billy's fin that did allow me to compare his fin with Pat's. It was patently clear that Pat was indeed Billy, and therefore a female. I immediately changed the spelling of her name to Billie to reflect her gender.

Martin was prepared to accept this after a few days, but Sandy never did and became quite angry when I tried to convince him of it. Despite the formal name change for many years I still thought of her as Pat.

Determining the gender of a wild bottlenose dolphin is no easy task. Males and females are the same size and show minimal external differences: no horns, tusks, breasts, or whiskers to help establish gender. In order to maintain a streamlined shape their reproductive organs are normally tucked away in their bodies. Both males and females have two slits on their bellies, an anal slit, and a genital slit. In females the two slits almost join but in males they are separated by a few centimetres. Only the females care for the young, so if an adult is seen with a calf that provides one means of determining gender. A male erection is unmistakable. Fortunately, dolphins frequently swim in the bow wave of boats and if they roll on to their backs their gender can usually be

recognised. However, despite my many years of practice observing wild dolphins there are some whose genders remain unknown.

I continued to make the drive from my home in Adelaide's suburbs to the Port River every few days to watch Billie's interaction with Sandy and the horses. Sometimes Billie and Big Mama did not appear for several weeks and then, unaccountably, returned. My notebook began filling and I had a growing pile of colour slides. There was no doubt Billie's behaviour was fascinating to observe and well worth documenting but wider questions also posed themselves with some insistency: where did Billie and Big Mama go when they were not at the top of the river? What made them leave sometimes? Were there other dolphins further downstream? It was clear I had to buy a boat, so I could follow them and find out.

In early 1989 I bought my first boat, a cheap 3.6m red inflatable with an 18HP motor and, by trial and error, learned to drive it. At the same time, aged 46, and without any training in dolphin research whatsoever, I taught myself how to do dolphin photo identification and became an instant dolphin researcher. In this respect, if no other, I emulated one of my scientific heroes, Jane Goodall, who had taught herself how to study chimpanzees in Tanzania's Gombe Stream Reserve in the 1960s.

Only Billie and Big Mama, and very occasionally one other unidentified dolphin, were seen in the upper reaches of the Port River. They both made regular trips down as far as a branch of the river called the North Arm. Every Sunday morning market gardeners would set up stalls and sell their produce on the banks of the North Arm. A few commercial fishers also pulled their boats in alongside the market to sell their catch. One Italian fishing family had trained Big Mama to take fish out of their hands. They could get her to rise up so that the top half of her body was vertically out of the water before providing the fish. Big Mama had a long healed but large gash in one of her tail flukes which must have impaired her swimming ability, so it was surprising that she was still able to get so much of her body out of the water with no apparent effort.

One day I asked the fishing family how they had trained Big Mama to take the fish. With a straight face one of them told me she had become entangled in their net when they were fishing out at sea. They had hauled her up onto the deck of the boat and taken her back to port. They released her there and she was so grateful to be free again, they said, that she became their friend and had been taking fish from their hands ever since. There is something about dolphins which makes people tell the most implausible stories.

The story of identity and gender confusion was still not complete. One day Big Mama rolled over and, much to my surprise, I could see that Big Mama was actually 'Big Papa.' I was beginning to feel the dolphins were leading me through a gender confused version of Shakespeare's *Twelfth Night*. I thought of changing his name to reflect his gender but, somehow, he remained Big Mama.

Over time his fish taking performances became quite famous. Once the fishers discovered Big Mama would take fish from anybody, they started promoting it. **Eventually they were selling as many fish to people who wanted to feed Big Mama as they were to people who were taking the fish home to cook.**

Big Mama would often take a fish, sink down into the water for a minute or two and then rise up to take another, with the first fish still uneaten in his mouth. I suspected he was stashing them on the river bottom for later consumption, but the water was too murky to establish this for certain.

None of us watching these performances realised people were doing Big Mama no favours by providing fish. Billie watched on from close by but never came in to take a fish herself. This may confirm the information Martin provided saying *Marineland* only released her because she refused to eat the dead fish she was given. Years later we were to discover that she had indeed taken note that humans could be a source of food.

Big Mama died in September 1989. At the same time, a Blue Whale stranded dead on a sand bank in the Barker Inlet which

meets the Port River at the Gulf of St Vincent with both waterways wrapping back around Torrens and Garden Islands. With the focus on the whale no one got around to informing the Museum or me about Big Mama. His body was unceremoniously thrown onto the nearby municipal garbage dump on Garden Island and was quickly buried under tonnes of rubbish. Fortunately, someone had taken a photo of the body, the damaged fluke clearly shown, so I knew it was him. We never got to do a necropsy. He may have died from old age, or it might have been something to do with being fed.



In 1982 two American graduate students had travelled halfway round the world to study the dolphins at Shark Bay, a remote site about a thousand kilometres north of Perth. In those days there was a lonely caravan park at a location called Monkey Mia and they based themselves there. They, or their students, have been returning ever since. One of the original researchers was the brilliant Richard Connor. Richard spent a few days staying with us on his way back to the United States of America (USA) after one of his early trips. We shared some fascinating conversations about the paper he had recently published with his thesis supervisor, a famous cetacean biologist called Ken Norris. They called the paper “Are Dolphins Reciprocal Altruists?”⁴ Reciprocal altruism is one of the more interesting concepts in modern evolutionary biology. Despite the fancy name, it is a phenomenon we all know well as: ‘You scratch my back and I’ll scratch your back’. It was the first scientific paper to seriously address the issue of dolphin intelligence.

In evolutionary terms reciprocal altruism appears to violate the basic principle of natural selection, for it involves one organism assisting another organism and so incurring a ‘fitness cost.’ However, if the other organism reciprocates the assistance, the cost is negated. Altruism will only persist, according to the

biological rules, if reciprocity does indeed occur. There is scope for cheating in such a relationship and it requires the participant to have a memory of the past, a sense of the future and, more importantly, what is called ‘a theory of mind’: appreciating that another organism also has a conscious mind that can make decisions. It is obvious that, to have a theory of mind, one must first have a mind!

After reviewing the limited available evidence Connor and Norris concluded that the evidence suggested “the existence of a system based to a considerable degree on reciprocal altruism” in dolphins.

The Monkey Mia team has been responsible for some of the world’s most interesting studies of dolphin behaviour. Richard Connor identified and described the way male dolphins form social bonds, usually in twos or threes. These pairs usually stay together for life and cooperate in almost everything they do, including mating. Remarkably, he later discovered that these alliances may come together to form even larger aggregations as a kind of army to fight intruding dolphins. In 2018 Stephanie King and her colleagues⁵ published a paper showing that even in these large coalitions individual dolphins retain their own ‘names’, whistles which identify them as individuals. My research in the Port River eventually revealed that the dolphins there also formed alliances, though I have never seen the ‘super alliances’ that have been described in Shark Bay. Dolphin behaviour appears to be quite variable from place to place, just as it is with humans. This is probably due to different behaviours being appropriate for different environments.



In April 1995, I was excited to see Billie with a newborn baby. I decided to call it Sandy, in honour of Sandy Sandford. But the calf was not swimming well, and we feared for its future. We undertook another survey a couple of days later and were

distressed to find Billie without her calf.

Almost exactly a year later we observed Billie swimming alone and with blood around her genital area. It seemed she had suffered a miscarriage.

In late 1998 I learned that Sandy Sandford had been diagnosed with cancer and was critically sick in hospital. A couple of weeks after I heard of Sandy's illness, I located Billie with another new baby. The calf, a male, looked healthy so I decided to call it 'Rosso', Sandy's childhood nickname. I printed off a nice photograph, put it in a frame, and organised to visit him in hospital the next day to tell him the good news. I was a day too late. Sandy had died the night before.

Rosso had no clear identifying features and when he was weaned three years later and left Billie's side, I was no longer able to identify him with any certainty. There are several adult males of the right age in the area these days, any of which could be him. Years later colleagues identified a dolphin we had called Inquis (he was very inquisitive) as almost certainly Rosso.

Two more calves were born to Billie, one in late 2002 and one in 2004. Both died in infancy, the earlier one having been killed by a boat propeller.

The most dedicated dolphin enthusiast I know is Marianna Boorman. She first approached me about getting involved with the dolphins when she was a fourteen-year-old school student. When she left school, she became a nurse, but her passion remained with dolphins. Years later, married and heavily pregnant she was still actively involved. On the precise day her first baby was due to be born, Marianna was down at the river watching over dolphin Wave, who was grieving her dead calf. Now a mother with three young children, Marianna's enthusiasm and commitment remains undimmed. She can often be found sitting on a bank of the river with one or more of her children playing beside her as she takes photos. Her dedication and superb photography have done much to improve the lives of Adelaide's dolphins. Sharon Sharp is a similarly dedicated dolphin enthusiast. She gave up her day job to stack

supermarket shelves at night just so she could spend the days prowling the banks of the Port River photographing dolphins. Both these women have contributed enormously to dolphin welfare in Adelaide, as have several other passionate dolphin watchers.



Billie's next calf was born in February 2005. I try to avoid giving names to young calves unless they look healthy but this one looked fit and strong. Marianna had been the first to report the birth, so I named it after her. It can take many months, sometimes even years, before we can get a look at a young dolphin's belly to determine its gender. There was a 50/50 chance I had got the gender right with Marianna (the dolphin) but I got it wrong. Some months later



Marianna comforts Billie, North Arm, 2009.

I got an excited, if somewhat embarrassed call, from Marianna saying “Mike, Marianna has got a dangly thing!” So, Marianna was a boy, and like most boys, he occasionally got himself into trouble.

When he was less than a year old, he had a piece sliced off the top of his dorsal fin, probably by being hit by a boat propeller. It was not a life-threatening injury and would not have compromised his swimming ability, but it was almost certainly painful. It was yet another illustration of the dangers lurking in the Port River environment. It was not always thus.



The Adelaide plains is the province of the Kurna people and has been for thousands of years before the arrival of Europeans. The Port River estuary has always been a special place for them. Even until the middle of the 20th century there were people who could trace their connections to the river. Esteemed Ngarrindjeri-Kurna elder Veronica Brodie’s grandmother, Lartelare, was born on the banks of the river and spent much of her life attempting to get her stolen land returned. I met Veronica in 2002 when she had just published her memoir, *My Side of the Bridge: The Life Story of Veronica Brodie as Told to Mary-Anne Gale*.⁶ She was still justifiably angry about the theft of her land and remained hopeful her grandmother’s dream would be fulfilled. Alas, it was not to be. The general area, once the site of a sugar refinery, is now irretrievably occupied by a large and ugly block of apartments. Alongside the apartments is a small reserve, called Lartelare Park in memory of the original owner. It is as sad a token to the dreams of the departed as it is possible to imagine but it won design and landscape awards in 2009 and 2012. The following is excerpted from the *AILA National Landscape Architecture Award* jury citation which accompanied the award:

The project presents an exemplary consultation process (which) underpins the creation of a culturally meaningful design...the jury sincerely compliments all involved—the landscape architects,

local council and developers—for their commitment to this dimension of the project. Interpretation of the site's heritage and local significance, selection of endemic plantings, design and crafting of specific site elements, and the skilful sculpting of landform, planting masses and circulation have generated a space of noteworthy sensitivity and gentleness...⁷

I hate to imagine what Auntie Veronika's grandmother would have thought of that description.

Plans to colonise South Australia were hatched in England in the 1830s. Settlers sailed from England in 1836 and the state was formally proclaimed at the now seaside suburb of Glenelg on December 28, 1836. To succeed as a colony, it would need an all-weather port and the Port River was the obvious option. Perceptions of it varied, as noted by local historian Ronald Parsons. He quotes from Dr William Wyatt's diary description of sailing up the river in 1837 thus:

Enjoying the inexpressible luxury of witnessing our course through some of the most beautiful scenery I ever beheld...I wished you were all here to view with me the paradise like scene....⁸

At about the same time a T. Horton James described his voyage up the river in very different terms:

Sailing up a narrow, dirty ditch fringed on both sides with odious mangrove trees, and nothing to be seen on either of the low swampy shores but the dwarf tea trees or melaleuca...This is Port Adelaide! Port Misery would be a better name; for nothing in any other part of the world can surpass it in everything that is wretched and inconvenient.⁹

Such diametrically opposed views still exist in Adelaide to this day. The people who live in Port Adelaide are fiercely proud of their maritime history and working-class origins. They lament the impact that shipping containerisation has had on dockside employment and resent the gradual gentrification of the area. The rest of Adelaide seemingly has little affection for the Port's industrial landscape and insular attitudes. I am proud that the local, national, and international publicity my research now accords the

Port River dolphins has helped build a bridge between Port Adelaide people and the rest of the city.



About a year after dolphin Marianna's narrow escape from a boat propeller I got a phone call while I was in the middle of packing my bags to fly to New Zealand to visit my daughter. The call was to say a dolphin had become trapped at a local factory which produced soda ash and sodium bicarbonate.

Grey, dreary, and belching smoke and steam, the factory loomed over the Port River with Dickensian gloom. It discharged liquid ammonia by-products into the river, adding excess nutrients, heat, and sediment to the already polluted river. Water was required for the Solvay process of turning salt into sodium carbonate, which is used in the glass industry. The water was pumped out of the Port River into a sunken pit then on into the factory. The top of the pit, about the size of an average bathroom, was normally covered with heavy wooden planks but on this day the planks had been pulled away to enable routine maintenance. As the workers pulled off the last plank, they were stunned to see a dolphin circling in the gloom below. The pipe leading from the river into the pit had no barrier at its entrance. There was nothing to stop a dolphin putting its head in the mouth of the pipe, then getting sucked in. Dolphins are amazing swimmers, but they are unable to swim backwards. Once in the tank it was trapped.

I rushed down to the factory and joined the group standing around the open pit. **I lay on the ground and peered down into the murky pit. I could make out the young dolphin swimming in tight circles in the cramped hole.** Looking hard, I could just see a sliced off part at the top of the dorsal fin. I was appalled to recognise the dolphin was Marianna. I was determined we would rescue him.

Being trapped in that pit must have been a young dolphin's version of hell: echoing concrete walls; loud thumping noise from

the factory; putrid air; and without its mother. We have no idea how long Marianna was trapped. He was still dependent on his mum Billie, and it is doubtful he would have survived more than a day or two.

A team of us gathered around the pit to work out how to undertake the rescue. The factory had a mobile crane we could use to haul Marianna up out of the pit if we could manoeuvre him into a sling. We were concerned being in the sling might squash the young dolphin, so I volunteered to lie in the sling to check this out. The crane's cable lifted the sling a couple of metres off the ground, and it closed firmly but not painfully around me. That part of the rescue plan appeared to be safe. I wanted to go down into the pit to catch Marianna, but the government officer called in the water police. The expertise of the police divers was such that, despite never having had to rescue a dolphin before, they had Marianna secured within minutes. They eased him into the canvas sling, the crane lifted him carefully out of the pit, moved to the side of the pier, and lowered him down to water level. He struggled out of the sling, swam a few meters under water, then surged into the air in a spectacular leap, crashed back into the water and disappeared. The factory workers, management, government officials, water police and I erupted in a spontaneous cheer.

I succeeded in making my flight to New Zealand and Marianna was back with Billie the next day. The factory was ordered to install a grill over the pipe's entrance to ensure no dolphin would ever be trapped in there again. **I have no way of knowing if Marianna was the first and only dolphin to be trapped in that hellish pit.** In 2014 the factory went bankrupt and is now being broken up for scrap. I hope that the steel will be recycled into something positive.

Billie had one more calf in 2009 but it too died aged only a couple of months. That made seven calves, with only two surviving past weaning. The death of Billie's calf Chelsea in 2009 seemed to trigger a decline in Billie's health. She developed painful looking abscesses on her body and became lethargic. She must have remembered the many occasions she had watched Big Mama



Dolphin Marianna was trapped in sump at bottom of picture, 2007.

being fed at the fish wharves and began taking fish from several local people in the very same location.

Billie's condition continued to deteriorate, and she became emaciated. The decision was taken to catch her so a veterinarian could assess her health. As she lay on the pier with the vet checking her over it was clear to all who knew dolphins that Billie was doomed. The vet's diagnosis quickly confirmed the worst. She was suffering from advanced kidney failure and euthanasia was the only option. Billie died quickly after the injection with her human friend Marianna, tears streaming down her cheeks, soothing her in her last moments.

It was a melancholy day for Marianna and me. Billie's death signalled the end of an era.

Marianna died in 2020 at the age of only 15. His body was found at the top of the Port River, just near where Billie swam with the racehorses. His stomach had been sliced open, his intestines were spilled out and he was extensively bruised. Although that area has a 7-knot speed limit it would seem he was struck by a boat. He was well fed and showed no sign of illness.

Rosso, Billie's calf born at the end of 1998 is now the last of the line.



To read more about Dr Mike Bossley's incredible career and life with Dolphins and Whales and his role in the conservation of our oceans, and in particular his role in researching South Australia's Port River Dolphins, you can purchase the EBOOK in PDF, EPUB, AZW3 or MOBI versions. Available from Moonglow Publishing Online Bookshop - Copy the link below

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