

**BEFORE AND AFTER *JAWS*: CHANGING REPRESENTATIONS OF SHARK
ATTACKS**

BERYL FRANCIS
STUDENT NUMBER: 19820117

THIS THESIS IS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS OF THE BACHELOR OF HISTORY WITH HONOURS AT
MURDOCH UNIVERSITY

OCTOBER 2011

I DECLARE THAT THIS THESIS IS A TRUE ACCOUNT OF MY OWN WORK,
UNLESS OTHERWISE INDICATED

.....

BERYL FRANCIS

OCTOBER 2011

COPYRIGHT ACKNOWLEDGEMENT

I acknowledge that a copy of this thesis will be held at the Murdoch University Library.

I understand that, under the provisions of s51.2 of the Copyright Act 1968, all or part of this thesis may be copied without infringement of copyright where such a reproduction is for the purposes of study and research.

This statement does not signal any transfer of copyright away from the author.

Signed:

Full Name of Degree: Bachelor of History with Honours in History.

Thesis Title: **BEFORE AND AFTER JAWS: CHANGING REPRESENTATIONS OF SHARK ATTACKS.**

.....

Author: BERYL FRANCIS.....

Year: 2011.....

ABSTRACT

When the film *Jaws* (1975), about a rogue shark that terrorised a small seaside island community was released, it had an unprecedented paranoia effect on its audience that became entrenched into the psyche of bathers around the world; a fear that media hyperbole exploited. At the same time, the film was also responsible for a surge in scientific interest in sharks and the media responded by giving more attention to the important role of sharks in the marine ecology. In the long term, social perceptions of sharks, changed from fear to conservation, influencing local, national and international government conservation and management policies. Nevertheless, there persists the initial media frenzy after any shark attack and *Jaws* remains the touchstone for media reporting.

CONTENTS

Copyright Acknowledgment.....	i
Abstract.....	ii
Contents.....	iii
Acknowledgments.....	iv
Abbreviations.....	v
Introduction.....	1
Chapter One: History of shark attacks pre <i>Jaws</i>	7
Chapter Two: <i>Jaws</i> the movie.....	20
Chapter Three: Shark attacks post <i>Jaws</i>	33
Chapter Four: Case study of media hype: Ken Crew, the day it all changed?.....	50
Chapter Five: Shark conservation post <i>Jaws</i>	69
Conclusion.....	87
Bibliography.....	90

I would like to acknowledge the help given by the following people.

My Supervisor, Professor Michael Sturma, History and General Arts, Chair of Murdoch University, for the encouragement and assistance in bringing this thesis together.

Dr Helen Brash, Lecturer in History, for her support, and instilling in me the confidence to undertake Honours.

The Library and staff of the Department of Fisheries, Government of Western Australia.

Vicki Gouteff of the Library of the Department of Fisheries WA for her support and help.

Dr Rory McAuley, Senior Research Scientist, Department of Fisheries, Government of Western Australia for his time and expertise.

Ian Butcher for his patience and grammatical observations.

Abbreviations

ADTIC	Arctic, Desert, Tropic Information Centre
AMCS	Australian Marine Conservation Society
ASAF	Australian Shark Attack File
CSFOP	Commercial Shark Fishery Observer Program
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CITES	Convention on International Trade in Endangered Species
GHOF	Guy Harvey Ocean Foundation
HSUS	Humane Society of the United States
IUCN	International Union of Conservation for Nature
SHC	Shark Hazard Committee
SMAC	Shark Menace Advisory Committee
SMP	Shark Meshing Program
SSG	Shark Specialist Group
SSC	Species Survival Commission

Introduction

History shows us that little was known about sharks. However, the prospect of falling overboard or being shipwrecked and eaten alive by sea monsters loomed large in the minds of ancient mariners. Old-world maps portray illustrations of fearsome creatures, many of which have a striking similarity to the sharks we recognise today. Sailors told terrifying tales, and the stories and superstitions were passed down through the ages. As swimming gradually became an acceptable form of recreation, the average bather knew or cared little about sharks and the tales became accepted as simply sailors' lore and legends.¹ Yet both Australia and the U.S. had their share of shark attacks. Xavier Maniguet explains in his book *Jaws of Death* (1992) that the sharks left 'the realm of myth and legend,' when in 1916, off the coast of New Jersey, there were five attacks in ten days with four fatalities forcing authorities to question their attitudes.² According to journalist and photographer Mac McDiarmid in his book *Shark Attack* (1996), U.S shark experts continued to deny sharks attacked human beings in American waters as late as the 1930s. He claims that it took an attack by a 2.4 metre hammerhead shark on a woman bather at Palm Beach, Florida, to establish the U.S.A. as leaders in research into sharks and their behaviour.³

Writing in 1940, Gilbert P. Whitley, who at the time was the ichthyologist at the Australian Museum, commented in his book, *The Fishes of Australia, Part 1, Sharks &c.*, that apart from Australians, there were many people in the world who did not believe that sharks attacked people.⁴ He concluded that in Australia, 'we have very little to fear from sharks,' and observed that the larger and more dangerous species of shark, (one could assume that he was referring to the great white *Carcharodon carcharias*), do not frequent Australian beaches as a rule.⁵ He

¹ Victor M. Coppleson, *Shark Attack*, (Sydney, London, Melbourne, Wellington: Angus & Robertson, 1958), 5.

² Xavier Maniguet, *The Jaws of Death*, Trans. David Christie (London: HarperCollins Publishers Ltd., 1992), 35-6.

³ Mac McDiarmid, *Shark Attack*, (Sydney: THE BOOK COMPANY INTERNATIONAL PTY. LTD., 1996), 50.

⁴ Gilbert P. Whitley, *The Fishes of Australia Part 1, The Sharks &c.*, (Sydney: Royal Zoological Society of New South Wales, 1940), 13.

⁵ Whitley, *The Fishes of Australia*, 12.

was joined in this view by shark expert Dr. Copleston, who claimed in his 1958 book *Shark Attack* that despite the evidence of sharks attacking people going back more than 2000 years, there was still an overwhelming number of disbelieving people, especially in the United States. He cites an article that was published in the American magazine *Collier* in 1944. It was during WWII and the author was possibly trying to assuage American servicemen's fears during operations in shark infested water when he wrote, advising anyone who found themselves facing a shark, not to worry, but to grab the pectoral fin, swim with the shark, hold their breath and slit the sharks underbelly so that the water could fill its body and it would die.⁶

It would appear that in Western Australia there was a similar feeling of complacency in earlier days. Victor Courtney in his book *Perth and all this!* (1962), wrote that the majority of people in Western Australia believed that sharks in their part of the country were not dangerous. Regardless of an incident in 1925, when a man was attacked and died at Cottesloe beach one hot summer day and a fatality occurred in the Swan river in 1923, Courtney contends that as there had been no further attacks since 1925, sharks were not considered dangerous in that part of Australia unlike on the east coast. He gives credit to the many safety measures carried out each summer by the city's lifesaving groups, but said that the fact that there were many ocean races even as far as Rottnest island and no sharks had ever been encountered, proved that with reasonable precautions, Perth beaches were safe. But he does admit that in 1962, 'there were frequent shark alarms on metropolitan beaches' and that spear fishermen had seen many sharks cruising off the coast. So he concludes that while our beaches are 'pretty safe', there is always the possibility that some of the sharks, given the opportunity, could prove dangerous to human beings.⁷

⁶ Copleston, *Shark Attack*, 5.

⁷ Victor Courtney, *Perth and all this!*, (Sydney: Halstead Press, 1962), 252.

McDiarmid claims that all this changed in 1974 with *Jaws*,⁸ Peter Benchley's best-selling book about a large rogue shark that terrorised a fictitious small island community off Long Island. When the book first appeared in the bookstores, it thrilled the public with the idea that sharks could attack people. But, says McDiarmid, the subsequent film of the same name released the following year, had an even more sensational impact and broke all Hollywood box-office records. Shark hysteria gripped people around the world and the fear was reflected on shores and beaches in reality, just as it was depicted in the movie; bathers were afraid of the potential terror lurking below. As McDiarmid quite rightly states, the media were quick to exploit the public's reaction and fed the paranoia that the film and its subsequent spin-offs generated; awareness of sharks was raised to unprecedented levels.⁹ Following the film's release, *Time* magazine carried a terrifying picture of an opened mouthed shark across its front page with the caption, 'The Super Shark'¹⁰ and its main feature was an in-depth article titled 'The Summer of the Shark'. In a quote from the article, *Time* declared, 'If the great white shark that terrorises the beaches of an island summer colony is one of nature's most efficient killing machines, *Jaws* is an efficient entertainment machine'.¹¹

But is the '*Jaws*¹² effect' still working? Have the media continued to exploit the public's fear? Is the public still afraid to go into the water? Are they still afraid of what may lurk below or did *Jaws* raise the profile and understanding of sharks? In November 2000, *The West Australian* newspaper dramatically headlined a fatal shark attack at North Cottesloe Beach, continuing the sensational reporting within the paper, including a sombre article titled 'The Day it All Changed' in the accompanying magazine.¹³ A year later, *The West Australian* revived the memory

⁸ Peter Benchley, *Jaws*, (London: Andre Deutsch Ltd., 1974).

⁹ McDiarmid, *Shark Attack*, 88.

¹⁰ 'Summer of the Shark', *Time*, 23 June, 1975, Vol. 105, No. 26, web page, <http://www.time.com/time/magazine/article/0,9171,913189,00htm1> accessed 17/09/2010.

¹¹ 'Summer of the Shark', *Time*.

¹² *Jaws*, DVD, Directed by Steven Spielberg, Universal Studios, 1975.

¹³ *The West Australian*, Tues. 7 November, 2000, Western Australia.

of the attack and dedicated much of its reporting to sharks, including a claim by reporter Frank Robson that 'menacing great whites circle Australia's coastline'.¹⁴

Similarly in the U.S. in 2001, according to *Shark Savers org.*, when eight year old Jessie Arbogast had his arm bitten off in the waters of Pensacola, Florida it created a media frenzy. Any shark encounter after that, no matter how insignificant was reported in prime time.¹⁵ In the same year, *Time* once again used its front cover to feature an open mouthed shark, but this time with the disturbing caption 'Summer of the Shark.'¹⁶ Inside, an article by Timothy Roche, titled 'Saving Jessie Arbogast', graphically detailed the attack on the boy and his subsequent rescue.¹⁷ Moreover, the feature article by Terry McCarthy et al., 'Why can't we be friends?', claimed that shark attacks had been on the rise in recent years and devoted his article to exhaustive accounts of attacks.¹⁸ This claim was dismissed by *Shark Savers org.* as untrue and simply media hype.¹⁹

30 years after the release of the film *Jaws*, Stephan Lovgren, writing for the *National Geographic News* in 2005, reported that the perception that sharks were 'stalking, killing machines' remained in the public's psyche. He quoted George Burgess, shark biologist at the University of Florida in Gainesville as saying that the shark population plunged after thousands of fishers attempted to catch trophy sharks after seeing *Jaws*. At the same time, the unprecedented success of the movie created invaluable scientific and public interest in sharks.²⁰

So what is the public perception of sharks and shark attacks in 2011? Is *Jaws* paranoia still entrenched in the public mind, and if it is, are the media still

¹⁴ Frank Robson, 'A Monster of Our Own Making', in Big Weekend, *The West Australian*, Saturday 17 February, 2001.

¹⁵ *Shark Savers*, 2007, web page, <http://www.sharksavers.org/en/education/shark-myths/23-media-hype.htm1> accessed 10/12/2009

¹⁶ 'The Summer of the Shark', *Time*, 30 July, 2001, Vol. 158 No. 4, <http://www.time.com/time/magazine/article/0,9171,1000420,00htm1> accessed 17/09/2010.

¹⁷ Timothy Roche, Alice Jackson, 'Saving Jessie Arbogast', in *Time*, 30 July, 2001, Vol. 158 No. 4.

¹⁸ McCarthy, Terry, et al., 'Why can't we be friends', *Time*, July 30 2001 Vol. 158 No. 4, <http://www.time.com/time/magazine/article/0,9171,1000420,00htm1> accessed 17/09/2010.

¹⁹ *Shark Savers*.

²⁰ Stefan Lovgren, 'Jaws at 30: Film Stoked Fear, Study of Great White Sharks', in *National Geographic News*, June 15, 2005, web page, http://news.nationalgeographic.com/news/2005/06/0615_050615_jawssharks.html

exploiting public fear? In his book *The Encyclopedia of Sharks* (2008), zoologist and author Steve Parker examines the life and biology of sharks and concludes that human beings have come a long way from an attitude of 'disdain and kill-at-all-cost', to one of respect and awe.²¹

This thesis will examine the devastating impact that the 1975 film *Jaws* had on world shark populations. In the process I will analyse the media exploitation of the unprecedented fear of sharks and shark attacks it produced. The film was also responsible for a surge in scientific interest in sharks. I will argue that as shark populations plunged, public and government agencies developed a greater awareness and consideration of the shark and its environment, which shaped policies locally, nationally and internationally. I will further argue that while the media played a dominant role in changing attitudes, there persists the initial media frenzy immediately after any shark attack and *Jaws* remains the touchstone for reporting.

In Chapter One, I outline historical attitudes to sharks and shark attacks, and discuss the development of methods for shark protection. In the following chapter I introduce the film *Jaws*, directed by Steven Spielberg, and show how the film entrenched 'shark paranoia' in the psyche of bathers worldwide; a paranoia that was exploited by the media. In Chapter Three, I examine the devastating consequences the '*Jaws* syndrome' had on shark populations and argue that the media used the terror, generated by the film, to shape public attitudes of fear. Chapter Four is a case study of media hype that substantiates my argument. In Chapter Five, I examine the shark conservation issues and government policies that arose from shark population decline, and present my evidence of the changing community and government attitudes from fear to conservation.

²¹ Steve Parker, *The Encyclopedia of Sharks*, (London: A & C Black publishers Ltd., 2008), 185.

Chapter One

History of shark attacks pre Jaws

Fossils show that sharks have been around for over 40 million years and have evolved into the world's top predators in the sea. They are the oceans' main scavengers; nature's vacuum cleaners. Most sharks are ocean dwellers and can be found in many marine habitats. However, the Bull shark can survive in marine and fresh water and has often been found in freshwater environments hundreds of kilometres from the sea.²²

Until recently, much of the history of sharks was based on myth and sea lore. Ancient sea-farers fervently believed in sea monsters and serpents that were lurking in the gloomy depths of the world's oceans; they filled their charts and maps with hideous creatures that had features both real and imagined.²³ In Ancient Greece, in the Mediterranean, legends of sea-monsters and great fishes that partly referred to sharks, evolved from the stories told by fearful mariners.²⁴

It is not known from where the name shark originates, but many suggestions have been postulated. In German the word for villain is *schurke*. The Anglo-Saxon etymological root of shark is *scheron* which means to cut or tear. In France the shark is called *requin*, probably stemming from 'requiem' a possible reference to what awaits any unfortunate seaman who falls overboard.²⁵ Shark expert Dr. Victor M. Coppleson suggested that the word shark replaced *Tiburón* in about 1569, when Sir John Hawkins's expedition took back a specimen and exhibited it in London.²⁶

Aristotle (384-322 B.C.) of Ancient Greece was the first great scientific naturalist who noted the difference between fish and sharks.²⁷ But in his history of the Greco-Persian wars, the Greek historian Herodotus, (485-425 B.C.) was the

²² Steve Parker, *The Encyclopedia of Sharks*, (London: A & C Black publishers Ltd., 2008) 18.

²³ Parker, *The Encyclopedia of Sharks*, 8

²⁴ G.P. Whitley, *The Fishes of Australia, Part 1: Sharks, &c.*, (Sydney: Royal Zoological Society of New South Wales, 1940), 28.

²⁵ Xavier Maniguet, *The Jaws of Death*, Translated by David A. Christie, (London: HarperCollins Publishers Ltd., 1991), 28-9.

²⁶ Dr. Victor M. Coppleson, *Shark Attack*, (Sydney, London, Melbourne and Wellington: Angus & Robertson Ltd., 1958) 4.

²⁷ Parker, *The Encyclopedia of Sharks*, 18

first to describe and set down details of sailors being attacked by ‘sea monsters’ - undoubtedly sharks - when the mariners were shipwrecked after the Persian fleet sank during a sea battle off Mount Athos on the coast of Thessaly in 492 B.C.²⁸

Possibly one of the earliest pictorial records of a shark attack was depicted on a vase excavated in Lacco Ameno in Ischia. The vase is believed to have originated around 725 B.C. and depicts shipwrecked sailors with one sailor being attacked by a shark.²⁹ Illustrated in Olaus Magnus’s *Historia de Gentibus Septentrionalibus* (Rome 1555 A.D.) is one of the first published pictures of a man being attacked by sharks and about to be rescued by a large ray.³⁰ Magnus writes of ‘The cruelty of some fish and the kindness of others’. He describes a fish that is a kind of Sea-dogfish called *Boloma* in Italian, and *Haafisck* in Norwegian that will,

...set upon a man swimming in the Salt-Waters, so greedily, in Troops, unawares, that he will sink a man to the bottome, not only by his biting, but also by his weight ; and he will eat his more tender parts, as his nostrils, fingers, &c., until such time as the Ray come to revenge these injuries ; which runs thorow the Waters armed with her natural fins, and some violence drives away the fish that set upon the drown’d man, and doth what he can to urge him to swim out.³¹

In an early account, the Greek poet Leonidas of Tarentum wrote in detail of the death of a sponge diver, Tharsys, who having descended into the depths of the Ionian Sea to loosen an anchor, rose to the surface, reached out a hand to his comrades in the boat only to be attacked by a terrible sea monster (a *ketos* - doubtless a shark according to Dr Copleson) which bit him in two and gulped down his lower half. Tharsys’ comrades carried the remaining portion ashore and buried him there. ‘Thus Tharsys was buried, according to Leonidas, both on land and in the sea’.³²

For many of the old-time mariners such was the fear of being eaten by sharks that a shark’s fin would be suspended from the outer end of the jib boom

²⁸ Copleson, *Shark Attack*, 4.

²⁹ G.P. Whitley, *The Fishes of Australia, Part 1: Sharks, &c.*, (Sydney: Royal Zoological Society of New South Wales, 1940), 28.

³⁰ Olaus Magnus, ‘Historia de Gentibus Septentrionalibus’, (1555 A.D.), in Whitley, *The Fishes of Australia, Sharks &c.*, 13.

³¹ Olaus Magnus, ‘Historia de Gentibus Septentrionalibus’, (1555 A.D.), in *Curious Creatures*, (1890), John Ashton, 255.

³² Copleson, *Shark Attack*, 5.

as a warning to other sharks to stay clear.³³ Sharks were believed to be responsible for diminished fish catches so it was considered a sign of good luck if a pregnant female was caught, for that meant fewer sharks in the ocean. But any idea of eating a shark was repulsive to many sailors. They considered this would be eating 'recycled' human flesh if sharks had consumed the bodies of comrades buried at sea.³⁴

The sight of a shark in the wake of a ship was a sign of imminent death. Sharks were given the attribute of being able to 'smell death' and it was believed when they followed a ship it was a sure sign that a man on board was about to die. Xavier Maniguet tells the story of a ship that used to sail from San Francisco with the corpses of Chinese people who had died in the United States. According to ancient custom, the corpses had to be buried in China. Even though they were encased in plated coffins, the skipper was insistent that the ship was followed by a contingent of sharks, yet there were no sharks to be seen when he carried other cargo.³⁵

Pacific Islands

In the Pacific Islands, many of the primitive cultures revered sharks as gods. Sharks were especially important in the lives of Hawaiians who had many shark gods and goddesses. It was believed that the deities had supernatural powers and could assume human shape. These were considered powerful and malignant and were greatly feared by all those who entered the sea. Each of the islands had their own shark kings and queens. The greatest and most powerful was Kamo-hoa-lii who lived off Honolulu Harbour and the bottom of Pearl Harbour was home to Oahu, queen of the sharks.³⁶ In his book *The Legends and Myths of Hawaii* (1888), his Hawaiian Majesty Kalakaua tells of the *Heiaus* or temples that were erected to the shark-gods. The temples were built on promontories overlooking the ocean where vast amounts of fish and fruits were offered. The gods were thought to assume

³³ Peter D. Jeans, *Sea-Faring Lore & Legend*, (U.S.: The McGraw Companies, 2004), 314.

³⁴ Parker, *The Encyclopedia of Sharks*, 20.

³⁵ Maniguet, *The Jaws of Death*, 27-8.

³⁶ Maniguet, *The Jaws of Death*, 146.

the forms of gigantic sharks that would often whip the waters of the ocean into a fury and destroy the canoes of the fishermen.³⁷

Myths and legends of the Polynesians were handed down through word of mouth by old priests who relived the legends through stories and songs.³⁸ One well known legend concerned 'Ina, the daughter of wealthy parents who lived in the land of Nukutere. One day, after a disagreement with her parents she ran down to the ocean. At that moment, a shark swam into view and with delight she mounted its broad back carrying with her two coconuts for food. Soon she was thirsty. She told the shark which raised its dorsal fin for her to pierce the coconut. Sometime later, she again told the shark that she was thirsty, but when it raised its head to respond, she cracked the coconut's hard shell on its forehead. Not expecting such a blow, the shark dived, leaving 'Ina floating in the water. Today, all sharks have a protuberance on their forehead that is forever known as, 'the bump of 'Ina'.³⁹

Shark worship was also common in the Solomon Islands. In his book *Fishes of Australia* (1940), G.P. Whitley quoted from a 1927 newspaper article by Dr Walter Ivens. It described shark worship as common to the islands of Mala, Ulawa, and San Cristoval. Dr Ivens said that,

Shark worship in the Solomons is based on the idea held by the people that at death the souls of certain men inhabit the bodies of sharks, or rather, that certain men at death actually become sharks...⁴⁰

He explained that the sharks were divided into two classes: sharks associated with good ancestors and 'wild' sharks associated with wicked ancestors who would attack anyone. Those that worshipped the former sharks considered themselves safe from their attacks whilst the 'wild' sharks belonged to no one and were greatly feared by all.⁴¹

³⁷ His Hawaiian Majesty Kalakaua, *The Legends and Myths of Hawaii*, (1888), Charles L. Webster and Co., New York, 44.

³⁸ Johannes, C. Anderson F.N.Z. Inst., *Myths and Legends of the Polynesians*, (1969), Pub. Charles E. Tuttle Company of Rutland, Vermont and Tokyo Japan, 3.

³⁹ Anderson., *Myths and Legends of the Polynesians*, 243-4.

⁴⁰ Dr. Walter Ivens, in *The Sydney Morning Herald*, October 15, 1927, in Whitley, *The Fishes of Australia*, 29.

⁴¹ Ivens, *The Sydney Morning Herald*, 29.

Accounts of strange and unusual objects found in the stomachs of sharks abound. Guillaume Rondelet, the sixteenth century naturalist, described whole bodies being removed and, while it seems a little far-fetched, even a knight in a full suit of armour.⁴² In 1791, Mary Ann Parker set sail with her husband to bring relief to a recently established British colony in Botany Bay on the east coast of New Holland. She recorded her experiences in a series of letters later published in 1795 under the title *A Voyage Round the World*. In one letter, she describes a rather strange event that occurred during the homeward voyage after setting sail from Australia. A large shark had been caught and its belly was duly cut open on the deck and out tumbled a prayer book. Written inside was the name of one of the mariners on board the ship. On one of the leaves of the book was the word 'TO DIE' and underneath was written the word 'REPRIEVED'.⁴³

United States of America

By the 1900s, it was generally believed in the United States that sharks were harmless. But in 1916, America was stunned by a series of shark attacks at Beach Haven, New Jersey, that saw four people killed and one severely wounded over a terrifying period of twelve days. Incredibly, after the first attack on 2 July, the public were assured by authorities that sharks did not attack people and the waters were safe. Four days later, when a second bather was attacked and killed, the entire coastal area went into a frenzied panic.⁴⁴ However, Dr J.T. Nichols, Curator of the Department of Fisheries of the American Museum of Natural History, declared that it was a killer whale rather than a shark that was the culprit.⁴⁵

For a few days all was calm and people slowly returned to the water. Then 12 July, terror struck Matawan, a small town twenty-five kilometres inland from the coast. Captain Thomas Cottrell noticed a grey shape swimming up the Matawan Creek. He ran shouting warnings to the townspeople who laughed at

⁴² Parker, *The Encyclopedia of Sharks*, 18.

⁴³ Dierdre Coleman, ed., *Maiden Voyages and Infant Colonies*, (London: Leicester University Press, 1999) 215.

⁴⁴ Victor Coppleson and Peter Goadby, *Shark Attack*, (London: Angus & Robertson, 1958) 70-2.

⁴⁵ Michael Capuzzo, *Close to Shore*, (London: Headline Book Publishing, 2001), 160.

him. It was too late to save 10-year-old Lester Stilwell who was swimming in the creek with his friends. In a desperate attempt to rescue the boy, Stanley Fisher dived into the water. He surfaced with the body, but before he could reach shore the shark grabbed him. Hands dragged him ashore and raced him by train to the hospital at Long Branch, but he died on the way. In the meantime, 12-year-old John Dunn had suffered an attack to his leg. He was rushed by car to the hospital in New Brunswick where his leg was amputated, but fortunately he survived.⁴⁶

Men armed with dynamite and rifles rushed to kill the animal; anything that moved was shot and bombed. Dozens of sharks were slaughtered. Hooks baited with meat and fish trailed boats until finally, a nine-and-a-half-foot bull shark (*Carcharhinus leucas*) believed to be the killer was caught and killed. The shark turned out to be a female and when cut open, amidst great excitement and anticipation, twelve dead pups spilled out, each a miniature replica of the mother. There were no human remains.⁴⁷ Newspapers such as the *New York Times*, *The New York Herald* and the *New York World* headlined the terror of the shark attacks across their front pages spreading hysteria and fear, claiming that the whole of the east coast was infested with man-eating monsters. America was in the grip of a shark panic as never before.⁴⁸ According to police, fifty thousand Coney Island bathers stayed out of the water for fear of the man-eater.⁴⁹

Twelve months later WWI replaced public interest and newspaper headlines and sharks were once more relegated to mariners' stories. However, with the advent of WWII, many survivors of sunken ships or downed aircraft told spine-chilling tales of being surrounded by sharks as they clung desperately to boats or rafts. Survivors related stories of sharks attacking the flimsy vessels in an effort to overturn them, occasionally succeeding then devouring anyone who fell overboard. During the war, the concern about shark attacks triggered a great deal of scientific research in Great Britain and the U.S. Consequently, an organisation known as the Arctic, Desert, Tropic Information Centre (ADTIC) was established by

⁴⁶ Whitely, *The Fishes of Australia*, 51-7.

⁴⁷ Capuzzo, *Close to Shore*, 233-46.

⁴⁸ Capuzzo, *Close to Shore*, 269-272.

⁴⁹ Capuzzo, *Close to Shore*, 271.

the U.S. Air Force to study this and other related problems. The result of the research was published in *Airman against the Sea* by Dr George A Llano, Secretary of the Panel on Biological and Medical Sciences of the Committee on Polar Research at the National Academy of Sciences in Washington.⁵⁰

The study concluded that the fear of shark attack was a genuine concern of downed airmen and sharks were indeed a 'grave danger.' Yet out of the 2,500 aviation survival accounts studied, there were only thirty-eight shark sightings and of those only twelve resulted in casualties. Most managed to reach life vessels before the sharks appeared. Dr Llano noted, however, that the study contained only accounts where at least one man survived and suggested that there could have been many more shark attacks where no-one survived. Airmen who successfully inflated their life rafts had a greater chance of survival than those who only had life jackets or pieces of wreckage to cling to. But the physical and physiological effect of constantly being harassed by sharks resulted in a terror that permanently damaged the minds of many survivors.⁵¹

The most horrific wartime shipwreck in WWII involving sharks was the sinking of the USS *Indianapolis* by Japanese torpedoes in 1945, two weeks before the war ended. Of the 1,196 crew, approximately 300 went down with the ship. The remaining 900 were left floating in their life jackets in shark infested waters with no lifeboats, food or water. The ship was not missed for four days. By the time the men were rescued only 316 were still alive.⁵² In survivor Edgar Harrell's words:

We'd see those shark fins swimming around us. They were as curious about us as we were about them. A man would get a high fever from an injury. He would begin to hallucinate and imagine he saw an oasis. He would leave to swim to it and all of a sudden you would hear a blood-curling scream and he would disappear. Then, his kapok [life] jacket would appear in a red pool of blood growing in the water.⁵³

⁵⁰ Coppleson and Goadby, *Shark Attack*, 228.

⁵¹ Jean Campbell Butler, *Danger Shark!*, (1965: The Scientific Book Club, London) 19-20.

⁵² Web page, <http://www.ussindianapolis.org/> accessed 21/07/2011.

⁵³ Amy Hunter, 'USS Indianapolis crewmember recounts harrowing tale of survival', 9 October, 2008, web page, <http://www.fearbeneath.com/2008/10/uss-indianapolis-crewmember-recounts-harrowi...> Accessed 22/07/2011.

Stories of shark attacks on downed servicemen and the fact that there was no effective shark repellent, prompted the Office of Naval Research within the United States Navy to plan a 'research strategy for development of an effective repellent.'⁵⁴ In 1958, the Shark Research Panel, consisting of a working group of shark researchers, was formed and initiated the establishment of The Shark Attack File. It was the first such attempt to comprehensively document attacks on a global, historical basis.⁵⁵ However, naval support ceased in 1968 and after several unsuccessful attempts to secure funding from other sources, the file was transferred to the Florida Museum of Natural History in 1988 where it is now under the auspices of the American Elasmobranch Society, under Director George H. Burgess. The society is an organisation of scientists actively engaged in studies of sharks, skates, rays and chimaeras who continuously add new data to the file. Access to the files is limited to scientists, but inquiries by the media and general public are answered by staff.⁵⁶

Australia

Australians have always been aware of sharks in their coastal waters. The earliest recorded fatal attack was in 1791 on an Aboriginal woman on the North Coast of New South Wales (NSW).⁵⁷ From the 1870s to 1920s, the Kiama council in NSW disposed of animal carcasses by throwing them into the ocean off Blow Hole point. For entertainment, hundreds of townspeople would gather to watch as people tried to catch or shoot the many sharks that arrived to attack the carcasses. Protests from the Kiama lifesavers that the practice increased the risk of shark attacks merely drew a promise from the local council that they would try to ensure the animal carcasses would not float!⁵⁸

Surfing became widely popular in Australia from 1919. The end of the Great War saw a relaxation of many previous bathing taboos. Around that time,

⁵⁴ 'International Shark Attack File', web page, <http://www.flmnh.ufl.edu/fish/sharks/isaf/isafhistory.htm> accessed 23/11/2010.

⁵⁵ 'International Shark Attack File'.

⁵⁶ 'International Shark Attack File'.

⁵⁷ Taronga Conservation Society Australia, web page, <http://www.taronga.org.au/animals-conservation-science/australian-shar...> Accessed 23/07/2011.

⁵⁸ *New South Wales Ocean Baths: swimming with our Coastal Heritage*, 'Sharks', (NSW Heritage Office), web page, <http://www.nswoceanbaths.info/topics/t069.htm>

sharks were not considered a serious problem at Sydney beaches. All that changed in February 1922, when lifesaver Milton Coughlan was attacked and killed. One month later a second fatality was followed by two more attacks within the next two years.⁵⁹ These four shark attacks at Coogee, all within a distance of little more than a mile, created a great deal of public alarm and forced the authorities to consider establishing protective measures. Look-out towers were erected on the beaches, surf lifesaving clubs organised shark watches, shark alarm bells were used for the first time and harpoons became standard equipment in surf boats.⁶⁰

But the attacks continued. The populations of dangerous sharks off Sydney beaches in the 1920s and 1930s were abnormally large. Sharks were attracted to the wastes from the Homebush Bay abattoir on the Parramatta River which between 1916 and 1970 were discharged through the sewage outfall at Malabar on Sydney's southern beaches and to the freshly killed whales at the Twofold Bay whaling station at Eden before it closed in 1932.⁶¹ By 1934, with continuing attacks, the public had begun to lose confidence in bathing. As a consequence, the government of NSW set up a special Shark Menace Advisory Committee (SMAC), to investigate the problem. First-aid stations were installed in surf club houses to deal with the victims, and shark-spotting from the air was carried out during surf carnivals. However, local businesses accused the spotter plane of frightening away customers. They complained that it made people too shark conscious when it cruised up and down the metropolitan beaches, with its amplifier continually blaring out the all clear for surfers below. As a result, the patrols were discontinued.⁶²

In 1936 the Committee brought down its report. Due to intense lobbying by the Surf Life Saving Association, the main recommendation was that the 'Government should subsidise systematic and continuous meshing along the

⁵⁹ Coppleson, *Shark Attack*, 61-7

⁶⁰ Coppleson, *Shark Attack*, 207-8.

⁶¹ Dr Paxton, 'NSW Shark Attack Record: Monthly analyses from shark meshing areas (Greater Sydney, Newcastle, Central Coast, Wollongong)' presented at the 'Scientific Shark Protection Summit, 10 April, 2006, NSW Department of Primary Industries, 52.

⁶² Coppleson, *Shark Attack*, 207-8.

metropolitan coastline.⁶³ Despite many detractors, the Government adopted the recommendation in 1937 and meshing was successfully introduced off the metropolitan beaches. Trawlers travelling about 6 knots laid 150 metre nets 500 metres from the shore. A 14 kilogram anchor with three glass floats as markers was then installed at one end and another anchor with markers was dropped at the other end to hold the net in position. The floats held it upright forming a long fence parallel to the beach. In the years that followed it was to prove the most effective protective method. Sharks hit the net and, in their struggle to free themselves, became entangled and drowned.⁶⁴

Between October 1937 and February 1939, 1500 sharks were meshed between Palm Beach and Cronulla. Of these, 900 were large sharks believed to be man-killers. The most notable feature of meshing is the reduction in the number of sharks caught each year.⁶⁵

Meshing was halted in 1943 when the United States armed forces commandeered the vessels and was resumed in 1946. But once the nets were back in place, the shark population once more began to decline. It seemed that meshing combined with long-line professional fishermen and game fishing, was successfully defending the Australian east coast.⁶⁶ According to Dr Coppleson, 'The whole catch for the twelve months in 1940 was 751 sharks and the tally for fifteen months from July 1953 to October 1954 was 214. Even fewer sharks are now being caught.'⁶⁷ According to Coppleson and Goadby:

Statistics show a dramatic decrease in the number of dangerous species taken off the Sydney metropolitan beaches. In 1976-77, 20 of the big three-whites, tigers and whalers-were meshed. In 1977-78, it dropped to 7, in 1978-79 to 12, 1979-80 to 23, and in 1980-81 to 14.⁶⁸

Queensland followed the New South Wales Government's anti-shark measures in 1962. A combination of nets and set lines were established on Brisbane's North and South Coast beaches and at Cairns. These measures were extended in 1963 to include Mackay and Townsville, followed by Rockhampton in 1968, Point Lookout in 1973, Bundaberg and Rainbow Beach in 1974. But unlike in

⁶³ Coppleson, *Shark Attack*, 207-9.

⁶⁴ Coppleson and Goadby, *Shark Attack*, 209-10.

⁶⁵ Coppleson, *Shark Attack*, 210-11.

⁶⁶ Coppleson and Peter Goadby, *Shark Attack*, 249-51.

⁶⁷ Coppleson, *Shark Attack*, 211.

⁶⁸ Coppleson and Goadby, *Shark Attack*, 251.

NSW, Queensland nets were 200 metres long although still set 500 metres from the beach. Once again, as happened in NSW, shark catch numbers progressively fell after the instillation of the nets, although the decline was not as dramatic as in NSW.⁶⁹

Sharks are part of the coastal environment of Australia with the result that shark attacks in this country have been intensely studied. In 1958, Victor Coppelson, one of the most respected shark specialists of the period, developed the 'rogue shark' theory. Dr Coppelson believed that,

A rogue shark...like the man-eating tiger, is a killer which, having experienced the deadly sport of killing or mauling a human, goes in search of similar game...attacks have...occurred many miles apart along the path of a cruising 'rogue'. It may seem fantastic to suggest that attacks up to and even beyond 50 miles apart can be due to the same shark, but there is strong evidence to indicate this.⁷⁰

Although Dr Coppelson's theory has since been discounted, the idea of a 'rogue shark' remains firmly planted in popular belief even today and is a common term favoured by the media. However, the occasional shark attack did not demand world attention. But in 1974, a novel by Peter Benchley titled *Jaws* about a 'rogue shark' that terrorised a small island community off Long Island in the United States was published. The following year, Steven Spielberg's film of the same name was released. Suddenly, man-eating sharks appeared to be everywhere. The theory of rogue sharks seemed to be a reality and the media hype that followed intensified the fear that entering the water was a risky business.

⁶⁹ Coppelson and Goadby, *Shark Attack*, 245-6.

⁷⁰ Coppelson, *Shark Attack*, x.

Chapter Two

***Jaws* the movie**

'Jaws made shark phobia a household word.'⁷¹

When Peter Benchley's best-selling novel *Jaws*⁷², about a rogue shark that terrorised a small island community off Long Island, appeared on the bookshelves in 1974, it enthralled its readers. One year later *Jaws*⁷³ the movie was released and it petrified its audiences. This chapter will discuss the film *Jaws*, directed by Steven Spielberg (1975), and the unprecedented paranoia effect it had on its audiences. I will argue that while critics first dismissed the film as unexceptional, 'shark paranoia' meanwhile had become firmly entrenched into the psyche of bathers around the world, a fact that the media was quick to exploit. In the course of these discussions I will examine the relevance of four articles, published between 1975 and 1994, which reviewed the movie and debated various interpretations of U.S. cultural symbolisms within the film's plot.

Jaws opened on June 20, 1975, in 490 theatres across the U.S. on an unprecedented wave of advertising and grossed \$7,061,573 in its first three days. Within a few weeks it became the first film to break through Hollywood's benchmark of \$100 million – an achievement some considered impossible.⁷⁴ Director Steven Spielberg's movie had tapped into a primeval fear of what lurks beneath the surface of the ocean, and it had movie-goers paralysed with fear. The tagline of the film –'Don't go in the water' resonated with millions of beachgoers around the world, and the myth that sharks are man-eating, bloodthirsty killers was reinforced in the minds of the public.⁷⁵

⁷¹ Lisa Fritscher, 'Jaws Movie, Shark Phobia for the Masses', *About.com*, (7th Feb. 2009), <http://phobias.about.com/od/introductiontophobias/a/jawsmovie.htm>

Accessed 14/09/2010.

⁷² Peter Benchley, *Jaws*, (London: Andre Deutsch Ltd., 1974).

⁷³ *Jaws*, DVD, Directed by Steven Spielberg, *Universal Studios*, 1975.

⁷⁴ Tom Shone, *Blockbuster: How Hollywood Learned to Stop worrying and Love the Summer*, (Great Britain: Simon & Schuster UK Ltd, 2004), 27.

⁷⁵ Lovgren, Stefan, 'Jaws at 30: Film Stoked Fear, Study of Great White Sharks', in *National Geographic News*, June 15, 2005, web page,

http://news.nationalgeographic.com/news/2005/06/0615_050615_jawssharks.htm1

Accessed 17/09/2010.

The film takes place over the Fourth of July weekend in the small fictional seaside resort of Amity Island off the coast of New York State, which is deeply dependant on the tourist dollar. In the dramatic opening sequence, young Chrissie entices a young man to leave their friends and go swimming. She strips off her clothes and dives into the water while her companion collapses drunk on the sand. The presence of a man-eating shark is established when she is attacked and dragged screaming under the moonlit waters off Amity beach. New-comer police chief Martin Brody (Roy Scheider) is persuaded by Mayor Vaughn (Murray Hamilton) and the town's business leaders to keep the beaches open and not scare away the tourists. But after a second attack on a young boy in front of a crowded beach, the boy's mother puts a \$3000 bounty on the shark. This leads to a frenzied hunt for the killer, and when a tiger shark is eventually caught, it is blamed for the attacks. However, further attacks follow forcing the mayor to acquiesce to Brody's insistence that they hire professional shark hunter Quint (Robert Shaw).

Together with marine biologist Matt Hooper (Richard Dreyfuss), for whom Brody has sent, Brody and Quint set off in Quint's battered boat, *The Orca*, to find and destroy the killer shark which Hooper has identified as a great white (*Carcharodon carcharias*). After a few drinks during a lull in the chase, Quint and Hooper compare shark scars and Quint reveals that he was on the *U.S.S. Indianapolis* in 1945 when it delivered the Hiroshima bomb. In an unforgettable scene, he relates the true story of how 1100 American sailors were thrown into shark infested waters after their ship was sunk, and only approximately three hundred survived. The tale leads to a few more drinks and as the men relax into song, the boat suddenly comes under siege from the great white. The shark shows itself to be powerful, smart and determined to kill them. After several unsuccessful battles to destroy the shark, Hooper is lowered into the water in a cage in a final attempt to shoot cyanide into it. The shark attacks the cage and Hooper manages to escape just before the shark destroys it. But when the shark

attacks the boat again, Quint dies, trapped in the jaws of the great white. Minutes later, Brody manages to destroy the shark and save himself and Hooper.⁷⁶

To add authenticity to the film, Australian underwater photographers Ron and Valerie Taylor were hired to shoot live footage of great whites off the Australian coast. A problem for the Taylors was the underwater scenes with Hooper in the cage. The *Jaws* shark was 25 feet against real great whites, which only measured 14 feet. In order to solve this difficulty, they used a half-sized cage and little person, stuntman Carl Rizzo as a double for Hooper. However, according to Valerie Taylor in her interview in *The Making of Jaws* documentary, Rizzo couldn't dive. Apparently, during his stunt career he had mainly ridden horses and stood in for children. Nevertheless, he was flown to Australia to join the Taylors off Dangerous Reef in the Southern Ocean where he fearfully entered the special half-sized steel cage that was attached to a winch on their boat. This was then lowered over the side of the boat into the water where he was surrounded by several great whites while filming took place. In an unexpected incident, when the empty cage was hanging from the winch in the water, a very large great white became trapped in the cage by its nose. Again according to Taylor, when a great white becomes trapped they 'go crazy' and that's exactly what happened. Fortunately, Ron Taylor was filming from below and although someone was supposed to be in the cage, the footage was so dramatic that the script was changed in order to use the sequence in the film. Ron Taylor said that it looked like the shark was destroying the cage which broke away from the boat and the whole lot went crashing down onto the bottom. The shark escaped and swam away. 'It was the scariest thing I have ever seen underwater,' Taylor said.⁷⁷

The film received excellent reviews. Critics such as Vincent Canby of the *New York Times* regarded it as 'a noisy, busy movie...at heart, the old standby, a science fiction film...[in] time-honoured tradition ...innocent suddenly ravaged by

⁷⁶ *Jaws*, Spielberg.

⁷⁷ *Jaws*, DVD, Directed by Steven Spielberg, 'The Making of Jaws', Universal Studios, 2003.

the mad monster'.⁷⁸ Likewise, Roger Ebert of the *Chicago Sun-Times* called it 'a great adventure movie',⁷⁹ and *Variety's* A.D. Murphy considered it 'an artistic and commercial smash.'⁸⁰ *Time* magazine devoted its front page to 'Super Shark' with a detailed article on the film and sharks in general.⁸¹ However, none of the critics appeared to realise how deeply the experience of the film had affected its audiences. Far from being an 'old standby' or simply 'a great adventure movie', audiences related to *Jaws* as no other audience had related to a film before. Tom Shone, in his book *Blockbuster: How Hollywood Learned to Stop Worrying and Love the Summer* (2004), describes the audience as being united 'in a common cause – a shared unwillingness to be served up as lunch' and defines their reaction as an ecstasy of sharing an escape from certain death with three hundred new best friends. And, they kept returning to do it all over again.⁸² Quoted in Shone's book, Spielberg's mentor at Universal Studios, Sidney Sheinberg, said that 'One of the wonderful things about *Jaws* was that the cultural impact was greater than you could make today.'⁸³

The question is why? What set *Jaws* apart from previous 70s spectacular movies such as *Airport*, (1970), *The Poseidon Adventure* (1972) and *The Towering Inferno* (1975)? And why didn't Peter Gimble's documentary *White Water, White Death* (1974),⁸⁴ also about the hunt for great white sharks, have the same impact? Much of the impact of *Jaws* can be attributed to the fact that very little was known about sharks and their environment in 1975, and this primal fear of the unknown, together with Spielberg's employment of many of Alfred Hitchcock's suspense techniques, coupled with John Williams compelling musical score, intensified the

⁷⁸ Vincent Canby, 'Entrapped by 'Jaws' of fear', Movie Review, *New York Times*, 21/06/1975, <http://www.nytimes.com/1975/06/21/movies/moviesspecial/21JAWS.html> accessed 14/09/2010.

⁷⁹ Roger Ebert, 'Jaws', *Chicago Sun-Times*, 01/01/1975, <http://rogerebert.suntimes.com/apps/pbcs.d11/article?AID=/19750101/REVIEWS/501...> accessed 14/09/2010.

⁸⁰ A.D. Murphy, 'Jaws', Film, *Variety*, 17/06/1975, <http://www.variety.com/review/VE1117792123.htm1?categoryid=31&cs=1> accessed 14/09/2010.

⁸¹ 'Summer of the Shark', *Time*, 23/06/1975, Vol. 105 No. 26, <http://www.time.com/time/magazine/article/0,9171,913189,00.htm1> accessed 17/09/2010.

⁸² Shone, *Blockbuster*, 37.

⁸³ Shone, *Blockbuster*, 37.

⁸⁴ Peter Gimbel, *Blue Water, White Death*, DVD, CBS Broadcasting, 1974

Jaws illusion to a degree most audiences had never experienced before. Moreover, Jonathan Lemkin in his essay 'Archetypal Landscapes and *Jaws*' (1984), believes that, unlike previous formula movies, audiences in 1975 recognised the 'real' America although it was a constructed fantasy of idealism. It was one that they could relate to as a typical American small town community.⁸⁵ Shone takes this further when he says that instead of the singular super hero able to effortlessly resolve every crisis, a format which would eventually become synonymous with the blockbuster movie, '...*Jaws*, from the outset, was an exercise in dramatic downsizing'.⁸⁶ The heroes could have been anyone in the audience; they were ordinary men with human frailties and vulnerabilities and they were in a battle with a single shark that had only killed four people throughout the entire film, but it was one that returned again and again.⁸⁷ It was this recognition that resonated with audiences world-wide, including Australia. In 1975, the local cinemas were dominated by American films and *Jaws* struck a chord with Australian beach-goers who were all too familiar with the possibility of shark attacks.

In the U.S., almost immediately after *Jaws* was released, the film's significance came under scrutiny, and the symbolism and text within the film became the subject of many and varied interpretations. Peter Biskind was one of the first to publish an analytical review of the film with his essay 'Jaws Between the Teeth,' published in *Jump Cut: A Review of Contemporary Media*. He paralleled the demise and 'respective aquatic antagonists' of Quint with those of Captain Ahab in *Moby Dick*. However, he says, unlike the 'bleakness' of *Moby Dick*, when the whale goes free after the death of Ahab, the shark is destroyed even though it had already killed Quint. *Jaws*, he considers, is a 'tale of liberalism at sea...a middle-class *Moby Dick*'; its ending, is 'cathartic and comforting.'⁸⁸ He goes on to

⁸⁵ Jonathan Lemkin, 'Archetypal Landscapes and *Jaws*', in *Planks of Reason: Essays on the Horror Film*, (Metuchen, N.J., and London: The Scarecrow Press, Inc., 1984), 277.

⁸⁶ Shone, *Blockbuster*, 32.

⁸⁷ Shone, *Blockbuster*, 32.

⁸⁸ Peter Biskind, 'Jaws Between the Teeth', in *Jump Cut*, 'a review of contemporary media', no. 9, 1975, pp. 1, 26, web page, <http://www.ejumpcut.org/archive/onlinessays/JC09folder/Jaws.htm1> accessed 07/10/2010.

say that this is much more than just a good film that has spawned an industry of beach towels, T-shirts, shark-lore books and the like. He notes, ‘...according to the *New York Times* [the film] has resulted in a vast increase in the number of shark sightings off the East Coast.’⁸⁹ Could, Biskind asks, there be more ‘between the teeth?’

Benchley’s book had two sub-plots that Spielberg left out of the film. One was Mayor Vaughan’s connection to the Mafia and the other concerned Police Chief Brody’s wife Ellen. In the book, Ellen believed that she had married beneath her class and strives to regain what she had lost by having an affair with Hooper, someone from her past. But Spielberg has removed these sub-plots, and relegated women to dependant roles of domesticity and men their protectors. In fact, Biskind suggests, that ‘...in line with the film’s conservative domesticity...’ young Chrissie, in the first attack, is punished for her promiscuity.⁹⁰

Despite implying that the film is a reflection of traditional values, Biskind claims that there are many sexual references throughout the film. The phallic head of the shark aimed at the naked woman swimmer in the familiar advertisement for *Jaws*, he believes, invites the audience to put ‘a sexual construction on the encounter between the shark and woman’; the shark is a representation of a ‘marauding penis.’ Brody’s fear of the water suggests impotence. Hooper’s love for sharks is his subservient female element, which is revealed when he offers himself as bait in the cage. When he loses his spear, ‘his puny erection’, he is ultimately un-manned, therefore he cannot consummate his relationship with the shark. Even the grizzled Quint is not spared in Biskind’s extraordinary sexual analysis. When Quint and Hooper compare scars, Biskind sees this as a ‘latent love affair’ of homosexual male bonding that developed from the narcissism of the 70s *Bond* films. Within this sexual analysis, there is just a brief

⁸⁹ Biskind, ‘*Jaws Between the Teeth*’.

⁹⁰ Biskind, ‘*Jaws Between the Teeth*’.

reference to Mayor Vaughan as Amity's Nixon and to Nixon's administration as the self-interested business community which is emphasised in Benchley's book.⁹¹

When the film took to the water, Biskind acknowledged that *Jaws* had become a 'male adventure story' but his analysis of the sexual symbolism within the movie appears to be far removed from Spielberg's original idea of *Jaws*. In an interview for the documentary *The Making of Jaws* (2003), Stephen Spielberg explained that what drew him to make *Jaws* was the similarity of the story to *Duel*, a film he had directed in 1971. *Duel* was about a truck menacing a hapless driver. *Jaws*, said Spielberg, was the sequel to *Duel* only underwater; both were about a leviathan preying upon everyman. Ironically, he observed, even the title of the two films contained four letters.⁹²

Twelve months later, Dan Rubey took Biskin's analysis even further. In his article 'The *Jaws* in the Mirror', also in *Jump Cut*, he contends that the film is more than just a sequence of audience reactive narratives about a man-eating shark. Neither, he says, is it simply the private vision of the director; the shark image reflects the 'shared concerns and fears of our society.'⁹³

In *JAWS* the shark reflects a disguised hatred of women and the preoccupation of our society with sadistic sexuality, a view of business as predatory and irresponsible in human terms, and a fear of retribution for the atomic bombing of Hiroshima. The film resolves these issues and fears by externalising them from the protagonists and solving them in a macho fantasy, fear-and-bravery ending which denies any possibility of concerted social action, excludes women as weak and ineffectual, erases the past and its guilts.⁹⁴

Like Biskind, Rubey believes that the first shark attack on young Chrissie is a sexual statement. But in his view it is a sexual attack of pain and pleasure rather than punishment for promiscuity; sexuality and violence, he says, is inextricably linked in society. Rubey further sees significant symbolism of impotence in the powerlessness of the men to kill the shark. Two little boys are caught with a fake

⁹¹ Biskind, 'Jaws Between the Teeth'.

⁹² Spielberg, 'The Making of Jaws'.

⁹³ Dan Ruby, 'The *Jaws* in the Mirror', in *Jump Cut*, 'a review of contemporary media', no. 10-11, 1976, pp. 20-23, web page,

<http://www.ejumpcut.org/archive/onlinesays/JC10folder/JawsRuby.htm1> accessed 07/10/2010.

⁹⁴ Ruby, 'The *Jaws* in the Mirror'.

shark and the men are left pointing their phallic rifles; a man's severed leg sinking to the bottom of the pond is an image of castration.⁹⁵

The film comes in for severe condemnation for its treatment of women. According to Rubey, the women are treated with hatred and aggression; Ellen Brody 'exists in the film only to be scared'; Quint is a woman hater, with his bawdy songs that denote women as whores to be left behind as men go off to war; Hooper's non-existent scar from where Mary Ellen Moffit broke his heart. However, Rubey finds it difficult to explain the film's appeal to audiences of both genders. Nevertheless, he finds no problem analysing the true tale Quint tells of the sinking of the *Indianapolis* and the death of nearly 800 sailors by sharks after they had delivered the Hiroshima bomb. He cites prior evidence of 'feelings of national guilt,' and declares that the shark represents those fears of guilt and retribution over the bombing of Hiroshima.⁹⁶

Both Rubey and Biskind appear to have interpreted *Jaws* in a way never envisaged by Spielberg and his crew. Carl Gottlieb who played Meadows, the editor of the local paper, was initially hired as an actor, but ten days before filming became the main script writer, delivering scripts each day before filming, even re-writing as the day progressed. He wrote in his book *The Jaws Log, 30th Anniversary Edition*, that 'the collaborators who served his vision, (Spielberg) myself included, never knew that our simple commercial entertainment would become a part of common popular culture'.⁹⁷

A more bizarre analysis came in 1977 from Robert Wilson in his article 'Jaws as Submarine Movie' also in *Jump Cut*. He wrote that no-one had considered 'the audience's latent fears of threat to the U.S. community's safety and way of life.'⁹⁸

⁹⁵ Ruby, 'The *Jaws* in the Mirror'.

⁹⁶ Ruby, 'The *Jaws* in the Mirror'.

⁹⁷ Carl Gottlieb, *The Jaws Log, 30th Anniversary Edition*, (Newmarket Press, 2005), web page, http://books.google.com.au/books?id=PfuQ8fFexUoC&printsec=frontcover&dg=carl+gottlieb&source=bl&ots=m_u83zv3fq&sig=UwWVFnH4tl accessed 19/10/2010.

⁹⁸ Robert Wilson, 'Jaws as Submarine Movie', in *Jump Cut*, 'A Review of Contemporary Media', no. 15, 1977, pp. 32-33, web page, <http://www.ejumpcut.org/archive/onlinesays/JC15folder/JawsSubmarine.htm1> accessed 07/10/2010.

In his opinion, Spielberg took his inspiration for *Jaws* from WWII movies, in particular those involving U.S submarines against the 'Axis powers'. Amity, Wilson says, is at war with an un-Christian enemy. He believes Spielberg wanted to re-create the same emotional outrage when innocent victims of *Jaws* are devoured by sharks, which was felt towards stereotypical Japanese who committed similar dreadful sneak attacks. He parallels the 'mindless killing force' of the shark with the mechanics of a submarine in the 'sub' genre movies, even suggesting that Spielberg depended on the audiences to make the thematic connection.⁹⁹

In contrast to Wilson's strange interpretation of the film's impact, Carl Gottlieb says that it was Peter Benchley's genius in telling the story from the shark's point of view that reminded us we are safe on dry land until we enter the creature's domain where we face a fearsome death.¹⁰⁰ J. Hoberman had other ideas. In 1994, he wrote an article for *ArtForum* titled 'Don't go near the water – the influence of the film *Jaws* on U.S. culture – American Myths'. He stated that *Jaws* was a political film. It represented a crisis in American leadership and that, 'In 1975, there were few American fears that were not displaced onto the shark.'¹⁰¹

That summer alone, the *Jaws* poster was parodied to show the Statue of Liberty menaced by the CIA, Portugal by communism, Uncle Sam by a soviet submarine buildup,...American citizens by a tax "bite", American wages by inflation, American drivers by the energy crisis, American workers by unemployment, and Gerald Ford by recession, Ronald Reagan, and a toothless Congress. (Meanwhile, Fidel Castro identified the great white with U.S. imperialism.)¹⁰²

By the summer of *Jaws*, Hoberman states, the Watergate disaster had finished, Nixon was gone, Senator Edward Kennedy had removed himself from the presidential race, and '...there was no more Vietnam, no further talk of the space

⁹⁹ Wilson, 'Jaws as Submarine Movie'

¹⁰⁰ Gottlieb, *The Jaws Log*.

¹⁰¹ J.Hoberman, 'Don't go near the water – the influence of the film *Jaws* on US culture – American Myths', in *ArtForum*, April, 1994, web page,

http://findarticles.com/p/articles/mi_m0268/is_n8_16109590/pg_2/?tag=conte... accessed 17/08/2010.

¹⁰² Hoberman, 'Don't go near the water'.

race, no new Miami or Las Vegas to construct.’¹⁰³ *Jaws* he believed, was now the summit of American achievement.

Over the years, critics have continued to disseminate and analyse the film from many varying positions. However, Stephen Spielberg in his own analysis of *Jaws* articulates why he considers the film had such an impact on its audiences.

The film hit a nerve somewhere. Maybe because it is basically Freudian. We’ve been taught to suppress our fears – the macho cover – but *Jaws* makes it safe to express our fear in public. Then there’s the theory of its relationship to our pre-natal hours, because people are like little sharks at one point. They know how to survive in water for a while. Also the film illustrates that Common Man can become a hero by dealing with...what has to be dealt with.¹⁰⁴

Regardless of the many different analyses, *Jaws* was, and still is, considered an iconic moment in cinematic history. It is regarded as the precursor of the ‘block-buster movie’. But much more than that, the film has had a significant world-wide impact on raising shark awareness in the psyche of people and bathers alike. Peter Benchley, the author of *Jaws*, speaking to Brian Handwerk of *National Geographic News* in 2002 in an interview for his new book *Shark Trouble*, admits that very little was known about sharks back then. He says that he had since discovered a different creature from the monster that he wrote about in 1974 and could not possibly write the same story today. ‘Sharks’, he declared, ‘have more to fear from us than vice versa.’¹⁰⁵ Divers Mark Carwardine and Ken Watterson agree that there was a dearth of knowledge about sharks in 1974 and blame much of the anti-shark hysteria on *Jaws* the film and the popular press. In their book, *The Shark Watcher’s Handbook* (2002), they concede that even the shark experts had very little shark understanding. Accordingly, advice in dive magazines and books, even until recently, was when a shark appears ‘leave the water’.¹⁰⁶ Nevertheless, the film generated world-wide public and scientific interest in shark biology and the

¹⁰³ Hoberman, ‘Don’t go near the water’.

¹⁰⁴ Philip M. Taylor, *Steven Spielberg*, (London: B.T. Batsford Ltd., 1992) 88.

¹⁰⁵ Brian Handwerk, ‘Jaws Author Peter Benchley Talks Sharks’, for *National Geographic News*, June 7 2002, web page, http://news.nationalgeographic.com/news/2002/06/0606_sharks5.htm1 accessed 07/01/2010.

¹⁰⁶ Mark Carwardine and Ken Watterson, *The Shark Watcher’s Handbook*, (BBC Worldwide Ltd., London, 2002), chapter 2, How Dangerous are Sharks, 23.

understanding that ‘sharks are such an integral component of marine eco-systems, their disappearance would disrupt the whole ecology of the oceans.’¹⁰⁷

Jaws has indeed become synonymous with sharks and shark attacks; its intense four beat musical score is instantly recognised and the film is answerable for the ‘shark paranoia’ that has become entrenched in the psyche of bathers around the world. Nevertheless, it is undeniable that the film was instrumental in raising shark awareness to an unprecedented level which has led to new knowledge and an understanding of the vulnerability of the fish and its habitat. In 1991, in response to the growing awareness of the severe impact of over-fishing on fish populations around the world, the Species Survival Commission (SSC), a volunteer network within the International Union of Conservation for Nature (IUCN, the umbrella body for the world’s conservation agencies and institutions), established the IUCN Shark Specialist Group (SSG). The group is one of the largest and most active groups within the SSC and provides leadership in promoting effective habitat management and long-term conservation of the world’s sharks and their related species.¹⁰⁸

¹⁰⁷ Carwardine and Watterson, chapter 5, ‘Shark Conservation’, 79.

¹⁰⁸ Compiled & and edited by Rachel D. Cavanagh, Peter M. Kyne, Sarah L. Fowler, John A. Musick, & Michael B. Bennet, *The Conservation Status of Australian Chondrichthyans: ‘Report of the IUCN Shark Specialist Group’*, Australia & Oceania Regional Red List Workshop, Queensland, Australia, 7-9 March 2003, (University of Queensland, School of Biomedical Sciences, Brisbane, Australia, 2003), 1.

Chapter Three

Shark attacks post *Jaws*

Like Peter Benchley's book, Steven Spielberg's 1975 movie *Jaws* tapped into a primeval fear of what lurks beneath the surface of the ocean.¹⁰⁹ Around the world, few bathers could take to the water without failing to recall John William's ominous soundtrack as the great white prepared to attack.¹¹⁰ The shark hysteria that followed the film's amazing success was paralleled by media frenzy, excited journalists eager to exploit the primal dread that had been released. But the portrayal of the shark as an eating machine that makes repeated attacks on bathers and fishermen alike until eventually tracked down and destroyed, alarmed many shark conservationists and scientists. They believed that the movie *Jaws*, the sequels it spawned and the media hype, were very much part of the anti-shark hysteria that gripped the western world.¹¹¹

When the film was released, there was a surge of public attention in sharks, especially in the US. Interest became so intense, that the film was followed by four more *Jaws* sequels and decades of graphic film and television imagery of sharks and shark attacks; each portrayed the animal as a monstrous adversary that was bent on devouring all who entered the water. Sensationalist media accounts of sharks as man-eaters reinforced the fear of the possibility of 'an attack' in the mind of the general public. Sharks had suddenly become a bankable commodity for the media that was guaranteed to attract the public interest.

There have been many studies relating to how the media has influenced public opinion and shaped attitudes towards animals. For example, after California outlawed the hunting of cougars in 1990, there was an increase in cougar-human interaction and conflicts that generated extensive media coverage. Debate on management policies and political pressure to re-introduce hunting escalated. In

109 Lovgren, Stefan, "Jaws at 30: Film Stoked Fear, Study of Great White Sharks", in *National Geographic News*, June 15, 2005, web page,

http://news.nationalgeographic.com/news/2005/06/0615_050615_jawssharks.htm1

Accessed 17/09/2010.

110 Steve Parker, *The Encyclopedia of Sharks*, (London: A & C Black publishers Ltd., 2008), 88.

¹¹¹ Mark Carwardine & Ken Watterson *The Shark Watcher's Handbook*, (London: BBC Worldwide Ltd., 2002), 23

1997, in an effort to appraise public discourse, Jennifer R. Wolch and Unna Lassiter of Southern California University conducted a study entitled 'Changing Attitudes towards California's Cougars'. They examined the tone, terminology and attitude of cougar-related coverage in the *Los Angeles Times* between 1985 and 1995. Along with Andrea Gullo of the Mountains Recreation and Conservation Authority in Los Angeles, they analysed what impact the print media had on influencing public attitudes and understanding of the California cougar.¹¹²

The study determined that story selection and story emphasis by journalists was made according to commercial, professional, and audience expectations. This influenced the information presented to consumers, as the attitudes and commonly held beliefs also influenced journalists. 'Analysis of coverage can thus reveal how public attitudes are dynamically shaped by the media, but also how underlying attitudes are changing as well.'¹¹³ The increase in the reporting rates of cougar-human interactions, scientific debate, political controversy and public anxiety about cougar management, changed public focus of concern, 'from preservation to protection from cougars.'¹¹⁴

[The study] concluded that such analysis of public discourse around wildlife management issues is a useful method of tracking broad shifts both in public attitudes towards wildlife and in the positions on wildlife issues of major institutions which influence those attitudes.¹¹⁵

In 2005 a similar study was conducted on the grey nurse shark (*Carcharias taurus*) and the media's influence on public attitude. Many shark species were in danger of becoming extinct, but there was concern for the depleting populations of the more harmless shark species. This led to an examination of the media's role in relation to society's knowledge and understanding of shark species, in particular the grey nurse shark with its frightening appearance yet placid nature. The study was essential in order to understand public perception of the grey nurse sharks as the population had declined to such an extent that many were having difficulties

¹¹² Jennifer R. Wolch, Andrea Gullo, Unna Lassiter, 'Changing attitudes towards California Cougars', *Society & Animals: Journal of Human-Animal Studies*, vol. 5, no.2, 1997, 95.

¹¹³ Wolch et al. 'Changing attitudes towards California Cougars', 102.

¹¹⁴ Wolch, et al., 'Changing attitudes towards California Cougars', 113.

¹¹⁵ Wolch et al., 'Changing attitudes towards California Cougars', 95.

finding mates. The study, 'Grey Nurse Shark Human Interactions and Portrayals: a study of newspaper portrayals of the Grey Nurse Shark from 1969-2003', was undertaken by Marie-France Boissonneault, William Gladstone, Paul Scott, and Nancy Cushing of the University of Newcastle in New South Wales (NSW). Using the premise of Wolch et al., the group analysed the content of 41 Australian newspaper editorials and articles pertaining specifically to the grey nurse.¹¹⁶

The study revealed that the articles in the early 1970s were simple accounts of sightings. Over the next thirty years the form of reporting changed little, but there was an increase in the amount of coverage. By the 1990s, regular reports were appearing about the possible extinction of the grey nurse shark but at the same time there were undeserved references in the media to the shark as responsible for attacks on humans. The use of descriptive terminology characterized the animal as a 'perfect killer,' a 'man-eater' and transmitted fear to the reader. The study drew a parallel between negative and positive articles on the grey nurse with the negative and positive articles on the California cougars. In the cougar study, the most prevalent theme of the negative articles was danger, and three quarters of these were pertaining to cougar attacks on humans. This form of reporting was reflected in the negative grey nurse articles, while editorials and opinion pieces were more sympathetic towards cougar protection. That again was reflected in the grey nurse study. Nevertheless, the research established that the content of the articles generated a great deal of public discourse around the topic of the grey nurse and issues of its conservation.

In the early 2000s, change in the status of the shark from 'vulnerable to extinction' to 'critically endangered,' produced a flood of articles underlining the declining grey nurse populations. This change in focus, the study assessed, was possibly due to 'shifts in political movements' and pressure from environmental

¹¹⁶ Marie-France Boissonneault, William Gladstone, Paul Scott, and Nancy Cushing, (2005), 'Grey Nurse Shark Human Interactions and Portrayals: a study of newspaper portrayals of the Grey Nurse Shark from 1969-2003', *Electronic Green Journal*, 1(22). Retrieved from: <http://escholarship.org/uc/item/9nb9h48n> accessed 08/01/2011.

lobbyists.¹¹⁷ Nevertheless, articles on the grey nurse and its passive nature rather than its fearsome appearance steadily increased. The study determined that the research findings had implied that the more the species declined, the more interest was created.¹¹⁸ Consequently, when Environment Australia published the *Recovery Plan for the Grey Nurse Shark (Carcharias Taurus) in Australia* in June 2002, the plan received significant media coverage and support.¹¹⁹ The grey nurse and cougar studies ascertained that the key issue that aroused newspaper interest was human-animal interactions.¹²⁰ Wolch further determined that newspaper sites of discourse and other sites of mass communication not only reflect broad attitudes, but are also powerful players that 'have the potential to shape attitudes and wildlife policy outcomes.'¹²¹

This ability by the media to shape and form public perception and attitudes was evident in an article in *The Sydney Morning Herald*, as far back as 1932. The then president of the Surf Life-saving Association of Australia, Mr C. D. Paterson, was reported as expressing concern over repeated media publicity given overseas to the 'so-called shark menace on Australian beaches.' He said there was an impression that 'the sharks are almost as thick as the surfers' and described how American visitors would not venture into the surf for fear of sharks. This was despite the fact that there was an average of less than one attack per annum.¹²²

In 1990 criticism of the media was again reflected in an article in *The Sydney Morning Herald*. John West, director of the Australian Shark Attack File at Taronga Zoo, said the public was getting very little correct information about sharks and blamed media hysteria for the fear in the public mind. He also added that Australia had an undeserved worldwide reputation as a country of shark attacks due to well-publicised incidents from the 1930s to the 1950s. Yet, considering Australians' love of the water, the frequency of attacks was very

¹¹⁷ Boissonneault, et al. 'Grey Nurse Shark Human Interactions and Portrayals', 13-4.

¹¹⁸ Boissonneault, et al. 'Grey Nurse Shark Human Interactions and Portrayals', 1.

¹¹⁹ Boissonneault, et al. 'Grey Nurse Shark Human Interactions and Portrayals', 13.

¹²⁰ Boissonneault, et al. 'Grey Nurse Shark Human Interactions and Portrayals', 4.

¹²¹ Wolch et al., 'Changing attitudes towards California Cougars', 113.

¹²² 'Shark Attacks, Damaging Publicity', *The Sydney Morning Herald*, 6 December, 1932, 12.

low.¹²³ In 1987, prior to John West's criticism, an article appeared about sharks in *The Sydney Morning Herald* under the heading 'A perfect killing machine'. The article described how the word 'shark' on the front page of a newspaper immediately stimulates people's fear, regardless of years of shark-free surfing. But, the article admitted, 'they want you scared because fear sells.'¹²⁴

Over the years, use of highly descriptive language, such as 'man-eater', 'feeding frenzy', 'killer', especially in the print media, has continued to describe shark incidents regardless of the severity of the encounter. In April 1996 a shark attack in Sydney Harbour, the first in the harbour for 33 years, triggered a plethora of media shark articles. According to Dr John Paxton, Principal Research Scientist in the Fish Section of the Australian Museum, many of the articles were sensationalist and imbalanced, most of them emphasising the dangers of sharks. Writing in the *Sydney Morning Herald*, he said that: 'Our fear of sharks was used to sell newspapers, magazines, and television programs'.¹²⁵ However, media reports on sharks had become more balanced. There were more articles on conservation, 'but, [he wrote] when an attack occurs, a media 'feeding frenzy' may result, as followed two fatalities within a week in 1993.' Nevertheless, he was adamant that there was 'a need to report the facts and to point out the danger, however small...But [he added] we have been swimming in Sydney Harbour for decades.'¹²⁶

Dr Paxton's criticism was justified when inflammatory articles appeared in Sydney's *The Daily News* in December 1996. The paper reported on the state government of NSW's decision to protect the great white (*Carcharodon carcharias*). Under the provocative headings of 'Killer shark protected from people' and 'Jail for killing great whites', the articles described the animals as 'marine predators', 'one of nature's most efficient killing machines' and 'the most

¹²³ Paul Baily, 'Sharks Lose Their Teeth', *The Sydney Morning Herald*, 15 September, 1990, 28.

¹²⁴ Steve J. Spears, 'A perfect killing machine,' *The Sydney Morning Herald*, 29 December, 1987, 12.

¹²⁵ John Paxton, 'Warriors Of The Deep In Fight For Their Lives', *The Sydney Morning Herald*, 4 March, 1996, 13

¹²⁶ Paxton, 'Warriors Of The Deep In Fight For Their Lives', 13 .

likely to attack people'.¹²⁷ The report included a statement by the then Fisheries Minister Bob Martin who said:

Years of irrational hatred, and indiscriminate hunting and destruction, have taken their toll...It is time to stop demonising the species and start recognising it as a fine example of top-of-the-food-chain evolution.¹²⁸

A graphic statement by renowned professional shark hunter Vic Hislop criticised the decision. He was reported as saying, 'For a government to protect something that can tear your children apart in seconds is brainless.'¹²⁹ Consequently, the main tone of the articles was not the importance of the government's decision but rather the danger of the ruling.

In Western Australia (WA), Perth beaches have always been considered relatively safe from sharks.¹³⁰ However, in October 1997 there was a white pointer shark attack on Brian Sierakowski and Barney Hanrahan, two high profile West Australians, in the waters off Cottesloe beach. Subsequently, the attack received intense media attention locally, nationally and internationally. *The West Australian* newspaper, in what appeared to be an attempt to connect two attacks to one shark, reported that a white pointer was also seen in the area of a shark attack in 1995 south of Esperance. Nevertheless, the article included a statement by a scientist from the Fisheries Department which said that white pointer sharks were common off Perth beaches but seldom attacked people.¹³¹ In this instance, even the national paper, *The Australian*, whose reporting style is usually more conservative, resorted to emotive terminology when it commented on the 'angry, hungry shark.'¹³² According to Karin Becker, Professor of Visual Studies and Pedagogy of Stockholm University, this style of:

...sensational' journalism breaks the press' ascribed guidelines of ethical practice with the intention of attracting attention in order to sell more papers...a component common to

¹²⁷ Mark Skelsey, 'Killer shark protected from people,' *The Daily News*, 4 December 1996, 4.

¹²⁸ As quoted in Skelsey, 'Killer shark protected from people,' 4.

¹²⁹ As quoted in Skelsey, 'Killer shark protected from people,' 4.

¹³⁰ Victor Courtney, *Perth and all this!*, (Sydney: Halstead Press, 1962), 252.

¹³¹ Mark Mallabone, 'Two Survive Cottesloe Shark Attack,' *The Sydney Morning Herald*, 29 October, 1997, 1.

¹³² Matt Price, 'Old Saint's prayers answered as huge shark misses mark,' *The Australian*, 29 October, 1997, 3.

the various constructions of the sensationalism is that attracting attention takes precedence over the other journalistic values, including accuracy, credibility and political or social significance.¹³³

Nevertheless, a more positive focus on sharks and the vulnerable status of the animals has gradually emerged from the media. Often, articles on the biology and ecology of sharks are interspersed with the hysteria. In June 1999, in an article in *The Australian*, shark expert Jon Stevens from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) was interviewed and he described the great white as a 'much maligned animal'. While he agreed that white sharks are dangerous, he dismissed the image portrayed by the film *Jaws* and TV documentaries as misleading. He said that most of the times when they are swimming around a boat, great white sharks are not aggressive.¹³⁴

However, the idea that great whites are not aggressive apparently did not impress Matthew Horan of Sydney's *Sunday Telegraph*. In April 2000, under a graphic heading, 'The danger lurking beyond Sydney's beautiful beaches', he reported that:

The monsters of the deep have been trying out our shallow waters for size, alarming swimmers, lifesavers and scientists...Sydney's Indian summer has brought a few unwelcome guests. While crowds flock to the beaches to enjoy the last rays of the sun – only 50m away, in some cases – are the sharks.¹³⁵

He said that, while sharks had always been a feature of Sydney's beaches, surf life savers claimed that there had been an increase in shark sightings and that sharks were 'coming in a lot closer' than previously. His article contended that, 'Shark nets are humanity's last line of defence against the monsters of the deep, and they have been working overtime this year.'¹³⁶

In contrast, in May 2000 Adelaide's *The Advertiser* published an article 'Swimming with sharks' by spear fisherman Rodney Fox who survived a horrific

¹³³ Karin E. Becker, 'Photojournalism and the tabloid press', in *The Tabloid Culture Reader*, (ed. Anita Biressi and Heather Nunn, 2008, Open University Press, New York), 84.

¹³⁴ Bruce Montgomery, 'Man-eaters? They'd rather a plump seal', *The Australian*, 26 June, 1999, 5.

¹³⁵ Matthew Horan, 'The danger lurking beyond Sydney's beautiful beaches', *Sunday Telegraph*, 16 April, 2000, 101.

¹³⁶ Horan, 'The danger lurking beyond Sydney's beautiful beaches', 101.

shark attack in 1963. After the attack, Fox went on to become a strong advocate of shark protection. But he admits that at first he killed a number of sharks trying to prove to the public that there was an effective way of protecting oneself while exploring the 'wonderful underwater world'. Over the years he filmed his expeditions, all the while becoming increasingly uncomfortable with killing sharks. His knowledge and films gained Hollywood's attention and he spent six weeks filming great whites at Dangerous Reef. A small segment of his film became part of Steven Spielberg's film *Jaws*. In the article, Fox details his attack, but the over-all emphasis of the article was how much he has learned about sharks and how important they are to the diversity of the marine environment.¹³⁷

Around this time, *Jaws* author Peter Benchley was in Australia promoting his shark conservation message concerned that 'In the 25 years since *Jaws* was first released, sharks have experienced an unprecedented and uncontrolled attack'.¹³⁸ Sydney's *The Daily Telegraph* could not resist heading Benchley's interview on 11 July 2000 with 'Jaws has a friendly mouthpiece'. Eleven days later, in a complete turnaround, the paper was warning of 'Shark attack danger', quoting notorious shark hunter Vic Hislop who declared that 'protecting great whites will lead to a surge in shark attacks.'¹³⁹ Even the *Sunday Mail* found it difficult to promote a positive spin on an interview with Jean-Michel Cousteau. The headline 'Swimming with monsters – Giant man eaters just misunderstood' certainly did not relay the image that sharks were not the bloodthirsty creatures of the movies Cousteau was trying to convey.¹⁴⁰

Then in September 2000, two surfers were taken by sharks off the South Australian (SA) coast within two days just 250 kilometres apart. Honeymooner Cameron Bayes, 25, was camping with his wife at Cactus Beach when he was taken 50 metres from shore. Two days later, 17 year old surfer Jevan Wright was

¹³⁷ Rodney Fox, 'Swimming with sharks,' *The Advertiser*, 16 May, 41.

¹³⁸ Peter Holder, Jo Casamento, 'Jaws has a friendly mouthpiece', *The Daily Telegraph*, 11 July, 2000, 16.

¹³⁹ 'Shark attack danger', *The Daily Telegraph*, 22 July, 2000, 11.

¹⁴⁰ Christine Jackman, 'Swimming with monsters – Giant man eaters just misunderstood', *Sunday Mail*, 10 September, 2000, 24.

attacked and killed and the media reflected the shock of the communities. Newspapers such as *The Australian* and *The Advertiser* were respectfully restrained after the first attack, while the *Herald Sun* maintained that 'Killers lurk in surfing heaven.'¹⁴¹ But after the second attack, the front page of *The Weekend Australian* declared that 'Signs pointed to shark horror'.¹⁴² *The Australian* countered with less dramatic language: 'Second fatal shark attack'. Nevertheless it used a distressing picture of the remains of Wright's surfboard and several highly descriptive articles on the two attacks.¹⁴³

The following day, *The Australian* again featured a full length article on sharks in our waters. The article concentrated on the science and the decline of sharks, but with the predictable picture of a fearsome, open-mouthed great white.¹⁴⁴ The print media, including the more conservative newspapers, appear unable to report information calmly on sharks, without hysterical headings or terrifying pictures of teeth and ferocity. Indeed, Bob Franklin's analysis of 'corporate manipulation and unseen censorship' of the British media in his book *Newzak and News Media*, (1997) considered that, 'Entertainment has superseded the provision of information; human interest has supplanted the public interest; measured judgement has succumbed to sensationalism.'¹⁴⁵

This was never more evident than in Western Australia, when on 6 November 2000, two months after the SA attacks, well-respected businessman Ken Crew was attacked and killed and his friend mauled by a great white at one of Perth's popular beaches. The media frenzy that followed intensified a public hysteria that was at an all-time high.¹⁴⁶

¹⁴¹ Mark Buttler, 'Killers lurk in surfing paradise', *Herald Sun*, 25 September, 2000, 5.

¹⁴² Mathew Spencer and Terry Plane, 'Signs pointed to shark horror', *The Weekend Australian*, 30 October, 2000, 27, 32.

¹⁴³ Terry Plane and Carol Altman, 'Second fatal shark attack', *The Australian*, 26 September, 2000, 1-26..

¹⁴⁴ Sian Powell, 'Swimming against the tide', *The Australian*, 27 September, 2000, 36.

¹⁴⁵ Bob Franklin, *Newszak and News Media*, (1997: Hodder Headline Group, London and Oxford University Press Inc., New York) 3.

¹⁴⁶ Matt Price, 'Where terror's wave broke the dawn', *The Weekend Australian*, 11-12 November, 2000, 1-2.

Throughout 2001, shark articles and letters continued to appear in the national and local print media as the debate between public safety and shark conservation raged back and forth. On the other side of the world in the U.S., sharks were also on everyone's mind. Two days after the fourth of July, 8-year-old Jessie Arbogast was attacked by a bull shark in knee-deep water in Pensacola, Florida. From then on, an increasing number of shark attacks, two of them fatal, began making headlines in the US.¹⁴⁷ As public hysteria grew, *Time Magazine* was calling it 'The Summer of the Shark'.¹⁴⁸ *The Sunday Times* in WA reported that, 'Jaws hysteria has hit the US':

...near-fatal encounters and dozens of biting incidents in a spate that has started a media blitz. The *New York Daily News* front-page screamed 'Jaws' on Tuesday and even the seriously minded *Time* magazine devoted a cover to sharks. Television footage of packs of sharks off the coast of Florida and graphic accounts by survivors dominated the evening news...¹⁴⁹

Media coverage grew more manic. Even CNN admitted that Miami state tourism officials had told them that since the Jessie Arbogast attack they had 'received 100 calls from reporters about sharks – but only one call from a concerned tourist.'¹⁵⁰ Yet despite the fatal attacks and several shark incidents, George Burgess, director of the International Shark Attack Files, insisted that the number of shark attacks was down for 2001. He said that the problem was 'a media frenzy, not a feeding frenzy.'¹⁵¹

Back in Australia, shark incidents and shark articles continued to surface in the media from time to time. By 2004, Perth's swimmers had nervously reclaimed the beaches after the Ken Crew attack. Then on the afternoon of 10 July, 29-year-old surfer Bradley Smith was attacked and killed by what was thought to be two sharks at Gracetown, a popular holiday town 280km from Perth in the South West. The media frenzy that followed was similar in hysteria to the 2000 Ken Crew

¹⁴⁷ 'Shark feeding angers divers', *The West Australian*, 21 August, 2001, 19.

¹⁴⁸ 'Summer of the Shark', *Time Magazine*, 30 July, 2001.

¹⁴⁹ Damon Johnson, 'Summer of sharks', *The Sunday Times*, 9 September 2001, 046.

¹⁵⁰ 'Year of the shark 'hype', says expert', *CNN.com./U.S.*, 4 September, 2001, web page, <http://archives.cnn.com/2001/US/09/03/shark.perspective/>

¹⁵¹ Kate McGeown, 'Shark attacks: On the increase?', *BBC News*, 5 September, 2001, web page, <http://news.bbc.co.uk/2/hi/americas/1501063.stm> accessed 10/12/2009.

attack. *The Sunday Times* claimed that there had been a 'spate of attacks' and Fisheries had organised a patrol boat to search for the sharks, with the authority to shoot to kill.¹⁵² *The West Australian* was warning that, 'Man eaters likely to swim free' although Fisheries WA shark research scientist, Dr Rory McCauley, had explained it was almost impossible to identify the exact sharks that had been involved in the attack.

Nevertheless, columnist and fishing writer Mike Roennfeldt was demanding that 'Sharks that take human life need to be killed',¹⁵³ apparently disregarding Bradley Smith's brother Stephen's plea for the shark to be spared.¹⁵⁴ *The Sunday Times* did not appear interested in saving the shark either. Provocative language such as 'rogue' sharks, 'monster' and 'death from the deep' were once again part of the headings of articles that dominated the paper. According to one article, in an extraordinary claim, Sydney shark hunter Vic Hislop said it was the same shark that had been killing people around Perth and that 'the larger shark was 'training' the smaller shark to attack humans'.¹⁵⁵ This claim was dismissed by Fisheries WA shark expert Dr Rory McCauley.

...Mr McCauley said there was no evidence sharks hunted for humans.

"There is almost no scientific evidence that a shark that has been involved in an attack on a human will return to the same area again or indeed will continue to attack humans", he said. "A taste for humans is really the stuff of fiction and has come about by the deep impact that the movie *Jaws* had."¹⁵⁶

The article said that Fisheries WA had sought a media analysis of public sentiment on the 'kill-or-be-killed' argument.¹⁵⁷ It was revealed that 'Smith's death was raised 4000 times in the media over a ten day period; 21 per cent of comments favoured the shark's preservation, while 4 per cent favoured destruction (76 per cent were neutral).'¹⁵⁸ The same percentage of pro-shark

¹⁵² 'SHARK KILLS SURFER', *The Sunday Times*, 11 July, 2004, 1.

¹⁵³ Carmelo Amalfi, 'Man eaters likely to go free', *The West Australian*, 13 July, 2004, 5.

¹⁵⁴ Eloise Dortch, 'Don't kill the shark that killed my brother', *The West Australian*, 12 July, 2004, 7.

¹⁵⁵ Peter Law, 'Death from the deep', *The Sunday Times*, 18 July, 2004, 40.

¹⁵⁶ Law, 'Death from the deep'.

¹⁵⁷ Victoria Laurie, 'Blood in the water', *The Weekend Australian*, 13-14 November, 2004, 25.

¹⁵⁸ Laurie, 'Blood in the water'.

preservation was also reflected after the death of Ken Crew.¹⁵⁹ Dr McAuley said that the film *Jaws* is the seminal point for most media responses and the histrionic reporting reinforces popular images of great whites as man-eating predators. As he points out, shark attacks do not need this form of hype because people are interested anyway.¹⁶⁰

Nevertheless, after the hysterical media coverage following the attack of Ken Crew and Bradley Smith, Dr McAuley said that there was a tangible change and a reduction in reporting hype. Over that period, he had established a working relationship with journalists who had become more aware of the science behind sharks and shark attacks. Unfortunately, he said, they had since been replaced by a new breed of journalists who have reverted back to the standard *Jaws* format of hysterical reporting and recounting ill-informed myths such as comparing deaths by bee stings to shark attacks, which has no meaning in conservation issues.¹⁶¹

When another fatal shark attack occurred in December 2004 off a popular Adelaide beach, *The Weekend Australian* was reporting that 18-year-old surfer Nick Peterson's mates 'demand revenge on the killer shark'.¹⁶² Yet the victim's father was asking for the shark to be spared,¹⁶³ a sentiment that was increasingly emerging from the families of victims and from the victims themselves. 2005 saw another fatal attack. This time, 26-year-old Geoffrey Brazier, skipper of a luxury catamaran, was taken in the waters off the Abrolhos Islands. Confirming Dr McAuley's comments on the return to journalistic hype, a week after the attack, *The Sunday Times* claimed that 'Shark attacks are on the rise and WA waters are among the most dangerous in Australia'.¹⁶⁴

¹⁵⁹ Laurie, 'Blood in the water'.

¹⁶⁰ Dr Rory McAuley, Senior Research Scientist, Department of Fisheries, Government of Western Australia, personal contact, 21 June, 2011.

¹⁶¹ McAuley, personal contact.

¹⁶² Jeremy Roberts, 'Mates demand revenge on killer shark', *The Weekend Australian*, 18-19 December, 2004, 4.

¹⁶³ 'Spare killer shark, says father', *The West Australian*, 18 December, 2004, 23.

¹⁶⁴ Peter Law and Nick Taylor, 'Warning: enter at your own risk', *The Sunday Times*, March, 2005.

Media hype had increased to a level that Dr McAuley had cause to strongly respond to a claim by journalist Bret Christian who wrote an article in the 26 March 2005 *Cambridge Post*, proclaiming the existence of a 'rogue' shark. In the article, and in previous articles, Christian argued that it was possible the same shark was responsible for the three previous fatal attacks in Western Australia and the Brian Sierakowski's surf ski attack. Mr Christian based his hypothesis on the story of a series of five shark attacks that occurred in New Jersey in 1916. Dr McAuley replied that shark attack researchers now generally attribute these multiple attacks to multiple sharks, not an individual. He rejected the suggestion that a single shark was responsible in the WA attacks and added that as most victims are not eaten, it dispels the shark's motive as a predator. Dr McAuley said what seems to be lost in the shark hype is the fact that sharks eat fish and as they get bigger, they move to seals; but the constant in their diet is fish.¹⁶⁵

When 51-year-old Brian Guest was attacked and killed in December 2008 at Port Kennedy, just south of Perth, while snorkelling with his son, *The Sunday Times* was claiming that there had been a 'Decade of fear off WA's fatal shores.'¹⁶⁶ Two weeks later 13-year-old Hanna Mighall was seriously hurt after a shark attack on Tasmania's east coast. The media around the world was calling the attack 'like a scene from *Jaws*',¹⁶⁷ as was the normally moderate ABC.¹⁶⁸ As Bob Franklin again points out, the exploitation of 'personal tragedy for public spectacle is increasingly commonplace'.¹⁶⁹ In the US, *Time* was proclaiming that 'Sharks rampage in Australia'¹⁷⁰ and *Fox News* declared that 'Recent Shark Attacks...[had

¹⁶⁵ McAuley, personal contact.

¹⁶⁶ Todd Cardy, 'Decade of fear off WA's fatal shore', *The Sunday Times*, 28 December, 2008, 4.

¹⁶⁷ Bonnie Malkin, 'Australian shark attack on teenage girl 'like a scene from *Jaws*', 11 January, 2009, web page, <http://www.telegraph.co.uk/nes/worldnews/australiaandthepacific/australia/4217094...> Accessed 12/12/2009.

¹⁶⁸ 'Tas shark attack 'like a scene from *Jaws*', 11 January, 2009, *ABC News*, web page, <http://www.abc.net.au/news/stories/2009/01/11/2463283.htm?site=news> accessed 16/12/2009.

¹⁶⁹ Franklin, *Newszak and News Media*, 3.

¹⁷⁰ Rory Callinan, 'Sharks rampage in Australia', 12 January 2009, *Time*, web page, <http://www.time.com/time/world/article/0,8599,1871007,00.htm1> accessed 12/12/2009.

sparked]...Hysteria in Australia'.¹⁷¹ *The West Australian* reported that one of Australia's allegedly most experienced shark experts and author, Hugh Edwards, was calling for the 'rogue' shark to be hunted down and killed. Fisheries WA said this would only be carried out on the protected species as a last resort. Yet in a reflection of a growing social attitude, Brian Guest's 24-year-old son Daniel said that his father loved the ocean and would not have wanted the shark hunted and destroyed.¹⁷²

What has emerged over the years is that with each shark incident, whether fatal or otherwise, a greater appreciation and understanding of sharks as an integral part of the marine environment is evident. However, while many journalists are indeed giving more attention to the science of sharks and their importance to healthy oceans, the fact remains that, regardless of how often authorities stress that the apparent increase in shark attacks and sightings is due to 'the level of reporting of shark incidents, sightings and attacks [which] has improved in both media and the general public',¹⁷³ there remains the initial media frenzy immediately after an attack, the interspersed shock headlines and the continual reporting hype of the slightest shark incident.

¹⁷¹ 'Recent Shark Attacks Spark Hysteria in Australia', 14 January, 2009, *Fox News*, web page, <http://www.foxnews.com/story/0,2933,479874,00.htm1> accessed 12/12/2009.

¹⁷² Jodie Thompson, 'Family man died in the sea he loved, respected', *The West Australian*, 29 December, 2008, 3.

¹⁷³ Law and Taylor, 'Warning: enter at your own risk'.

Chapter Four

Case study of media hype: Ken Crew, the day it all changed?

In Western Australia, at approximately 6.30am on 6 November 2000 at one of Perth's most popular metropolitan beaches, 49-year-old Ken Crew was attacked and killed by a great white shark (*Charcharodon carcharias*). The result was a media frenzy that exacerbated the terror of a shattered and traumatised community and changed the complacency of West Australian beach-goers. The hysterical reaction of the media after the attack, prejudiced public perception of sharks and divided community opinion on shark conservation and management. Consequently, public pressure forced the local and State Government to review beach safety issues and instigate new policies.

In a 2011 article for the Commonwealth Scientific and Industrial Research Organisation (CSIRO), John West, coordinator of the Australian Shark Attack File, concluded 'The results of the current analysis have demonstrated that shark attacks in Australia have increased over the last 20 years.'¹⁷⁴ This is understood to be the result of a variety of factors. The rise in population in Australia, increased tourism, popularity of water sports such as swimming, surfing, snorkelling and SCUBA diving, have increased the risk of a possible interaction with sharks.¹⁷⁵ Dr West also considers that,

...the capacity of the media to easily access these encounters via mobile phones and the internet is likely to have contributed to the 190% rise in reported non-injury attacks in the past decade (2000-2009), compared with the previous decade (1990-1999).¹⁷⁶

When a shark attack does occur, he says that, 'they often have serious consequences for those involved, invoke a dramatic emotional response from the public and therefore attract a high level of media interest.'¹⁷⁷

Western Australia has some of the most beautiful swimming beaches in Australia along a coastal strip that is easily accessible to the metropolitan

¹⁷⁴ John G. West, 'Changing pattern of shark attacks in Australia', *Marine and Freshwater Research*, (2011: CSIRO publishing), 750-1.

¹⁷⁵ West, 'Changing pattern of shark attacks in Australia', 750-1.

¹⁷⁶ West, 'Changing pattern of shark attacks in Australia', 751.

¹⁷⁷ West, 'Changing pattern of shark attacks in Australia', 744.

population. Unlike their eastern states counterparts who were well acquainted with the dangers of shark attacks, WA surfers and swimmers enter the water with little reason to fear that they may be attacked by a marauding shark; the last fatal shark attack off the metropolitan beaches was in 1925.¹⁷⁸ However, on the morning of 28 October 1997 at approximately 6.30, Perth barrister and former St Kilda footballer Brian Sierakowski and his friend plastic surgeon Barney Hanrahan were in the water at Cottesloe beach waiting on their double surf ski for a final wave into shore. The two men were part of the many dedicated swimmers and surfers who met regularly for an ocean plunge at the popular metropolitan beach every morning, no matter what the weather. Without warning a shark, thought to be a great white, attacked one of their surf skis and tossed them into the water. Ignoring the danger, rescuers immediately paddled out to them before the shark could strike the ski a second time and dragged the two men to shore. Fortunately, the only injuries the pair received were grazes to Mr Sierakowski's nose and cheek from the shark's abrasive body and he was able to leave for work as normal that afternoon.¹⁷⁹

Research scientist Colin Simpford, spokesperson for the Fisheries Department, acknowledged that white pointers were common visitors off Perth beaches and at least six or seven were seen each year, but he was adamant that they seldom attacked swimmers. He said not enough was known about white pointers to understand why the shark had attacked the ski, but possibly it had mistaken it for prey. There had been only six fatalities recorded in 160 years along the WA coast. The last was at Hopetoun on the State's south coast in 1995 when abalone diver David Weir, 29 was killed.¹⁸⁰ Despite the Cottesloe attack and several shark sightings along Perth's beaches, including an attack by a white pointer on a sea lion, Perth bathers and surfers were soon back in force. The following

¹⁷⁸ Carmelo Amalfi and Steve Butler, 'Shark hunter calls for cull to prevent new attacks', *The West Australian*, 7 November, 2000, 4.

¹⁷⁹ Mark Mallabone and Fran Spencer 'Rescuers thought friends were practical jokers', *The West Australian*, 29 October, 1997, 4.

¹⁸⁰ Mark Mallabone and John Townsend, 'White pointers frequent visitors', *The West Australian*, 29 October, 1997, 5.

week saw thousands of people flock to the beaches to take advantage of the perfect spring weather.¹⁸¹

Two weeks later on 10 November, a 5m white pointer attacked Albany diver Kevin Hulkes' bright yellow underwater scooter and sank its teeth into his arm. Mr Hulkes managed to fight off the shark and his partner pulled him onto their boat. They sped to another part of the bay where he had to re-enter the water to undergo decompression before heading to Albany hospital to spend the night recovering.¹⁸² Veteran abalone diver and shark fisherman Lee Warner, who had seen his partner killed by a great white in 1967 off Jurien Bay, north of Perth, told the *West Australian* that his divers had regular 'run-ins' with great whites which were often caught in local fishing nets. He said that it was imperative that such aggressive sharks should be removed and that sightings and attacks off the WA coast showed that shark numbers were not low.¹⁸³

Six weeks after the attack on Brian Sierakowski and Barney Hanrahan, an enormous shark was sighted off Cottesloe beach. When interviewed by *The West Australian* for an article provocatively titled, 'Kill Giant Shark, Says Survivor', Mr Sierakowski stated that it was probably the same shark that attacked him and his friend and he believed that it continued to prey off Perth beaches. He said that positive action should be taken before someone got hurt. However, the previous week, bowing to public pressure and increasing scientific evidence showing a continuing decline, the Federal government had listed the great white and the grey nurse as endangered shark species, and they were then protected by law.¹⁸⁴

By 27 January 1998, *The West Australian* was boasting that, 'since our own shark attack at Cottesloe beach late last year, there has been heightened interest in white pointers and their feeding habits.' The article revealed that Discovery Television Channel would be airing segments of shark attacks hosted by marine

¹⁸¹ Kristen Watts and Shaun Anthony, 'Feeding Sharks Sparks Warning', *The West Australian*, 3 November, 1997, 3.

¹⁸² Amanda Bower, 'Shark Victim Dives Straight Back In', *The West Australian*, 11 November, 1997, 3.

¹⁸³ Steve Pennells, 'Sharks must go: fisherman', *The West Australian*, 12 November, 1997, 30.

¹⁸⁴ Rod McGuirk, 'Kill Giant Shark, Says Survivor', *The Daily Mail*, 22 December, 15.

biologist and shark expert David Baxter. This would be followed by a series of documentaries 'to provide answers to the questions raised by our undoubted proximity to many sharks'.¹⁸⁵ When interviewed in the *Adelaide Advertiser*, Baxter stressed that sharks are very curious creatures by nature but humans are not their main diet. He added that popular attitudes 'have been influenced by the sensational horror of movies such as *Jaws*' and 'If we give people the facts, we lose that *Jaws* syndrome'.¹⁸⁶

While there was a growing awareness by many Australians that sharks were an important part of the marine ecology, in June 1998, off the South Australian coast, fisherman Douglas Chesher was attacked by a shark and killed. Within two years, there were two more fatal attacks off the South Australian coast. In September 2000, two surfers were taken within three days of each other, just 250 kilometres apart.¹⁸⁷

These two, so close together, triggered a plethora of publicity about sharks in Western Australia. On 8 October, *The Sunday Times* revived the 1997 attack on Brian Sierakowski and insensitively suggested that a research centre be established in Perth displaying memorabilia from Sierakowski's attack, such as his damaged ski, copies of shark attack media reports and photos in order to attract tourists.¹⁸⁸ Three days later, *The West Australian* devoted two pages to a report on a great white that had attacked the boat of two fishermen off the coast of Bunbury south of Perth the previous month. In a sub-heading, 'Close encounters of the shark kind', the paper detailed the attack and claimed that 'shark sightings off the coast have soared in the past month'.¹⁸⁹ This was firmly denied by WA Fisheries shark researcher Dr Rory McAuley, who told the *West Australian*:

...it did not mean that shark numbers were increasing off WA. It meant more shark sightings were being reported because of recent close and tragic shark encounters. Since

¹⁸⁵ Pam Brown, 'Sharks: Answers From The Deep', *The West Australian*, 20 January 1998, 9.

¹⁸⁶ Michelle Daw, 'OVERRATED AS A KILLER?', *Adelaide Advertiser*, 27 January, 1998, 50.

¹⁸⁷ Peter Hackett, 'Survival Under Attack', *Adelaide Advertiser*, 30 September, 2000.

¹⁸⁸ 'Wanted – secrets of the great white', *The Sunday Times*, 8 October, 2000, 20-1.

¹⁸⁹ Carmelo Amalfi, 'Close encounters of the shark kind', *The West Australian* 11 October, 2000, 38-9.

the tragedy in South Australia, sharks have become very much part of the public consciousness.¹⁹⁰

Despite the recent tragedy in South Australia and the media hype, Perth swimmers continued to enjoy their beach past-time, none more than a group of middle-aged, high profile, early morning swimmers known locally as 'the pod'. The group of five to eight bathers met at Cottesloe beach regularly every morning around 6.30am. Their usual swim was from a small break in the reef known as Peters Pool to the North Cottesloe surf club. On 6 November, members of the group met for their swim as usual. The morning was quite misty and visibility was not very good when Ken Crew, Dirk Avery, Malcolm McCusker QC and his wife Diane, Jerry Ventouras, Ann Vincent and several others plunged into the Cottesloe waters.¹⁹¹

In a graphic re-enactment documentary for *Discovery Channel* 2010, Jerry Ventouras, Ann Vincent and Diane McCusker described what happened that day. As they swam, Ken called out that he had spotted what he thought was a seal or dolphin but the sighting was dismissed and the group carried on swimming. They had a last sprint to North Cottesloe and finished their swim. For the next few minutes, the group stood chatting in chest deep water. Suddenly someone yelled out 'shark, get out of the water'. Swimmers fled for their lives, women screamed and men shouted as they rushed out of the water. Jerry Ventouras said that he has a picture in his mind of Ken swimming free-style full pelt as a huge shark reared out of the water behind him. The shark took Ken in its jaws, shook him and then dropped him. Jerry reflected that he had seen plenty of sharks up north, but in that one horrific moment, he had never seen such a savage attack.¹⁹² In an emotional interview with *The Weekend Australian* a few days after the attack, Ventouras described the powerful killing lunge that hit Ken as 'like an express

¹⁹⁰ Steve Butler, 'Great white attacks Bunbury fishermen', *The West Australian*, 11 October, 2000, 38-9.

¹⁹¹ DVD, 'Sharks: predators of the deep', *Discovery Channel*, 2010.

¹⁹² 'Sharks: predators of the deep'.

train...there was such a thrashing of water. And blood, so much blood. It was *Jaws* in real action'.¹⁹³

Other witnesses said that when the shark struck, it was less than 40m from the shore and as it chased swimmers towards the beach it attacked Ken Crew in waist-deep water. The huge shark tore Mr Crew's leg from his body and turned the water around him deep red. The animal pushed him north, and as it dropped him and rolled in the bloody water, Mr Crew began weakly swimming back to shore.¹⁹⁴ According to a witness, in an incredible act of bravery, a swimmer calmly breast stroked through the bloody water to Ken Crew. With the shark still circling, the swimmer reached Mr Crew who had sunk below the surface of the water.¹⁹⁵ By this time, surf life savers Gary Whyatt, John Verity and Alexander Harrison who had all been helping several swimmers to safety on their single and double skis, frantically paddled out to the aid of Ken Crew and his unknown rescuer, as the shark turned to attack Dirk Avery.¹⁹⁶ Mr Avery desperately thrashed the water with his hands as he backed away from the shark trying to fend it off. A witness described the shark as so close to the shore that it was stirring up sand with its body. Incredibly, Mr Avery was able to reach safety and staggered ashore with both his legs and feet severely bitten.¹⁹⁷

When the rescuers finally reached the shore, many people ran to their aid and helped drag Mr Crew out of the water. 'Pod' member John Ventouras said as they dragged Ken up the beach, he put his arms around his friend and realised there was no leg. Local doctor Murray Jacobs, who had just walked down to the beach for his usual morning swim, immediately gave Mr Crew medical attention. He described how Ken was still breathing when he was taken from the water and

¹⁹³ Matt Price, 'Where terror's wave broke the dawn', *The Weekend Australian*, 11-12 November, 2000, 1-2.

¹⁹⁴ Ben, Martin, Ben Harvey and Carmelo Amalfi, 'Shoot-to-kill order goes out to patrols', *The West Australian*, 7 November, 2000, 3.

¹⁹⁵ 'Five horrible minutes that changed our lives', *Subiaco POST*, 11 November, 2000, 3.

¹⁹⁶ Robbie Burns, 'SHARK HEROES, Trio risked attack to help swimmers', *The West Australian*, 8 November, 2000, 1&9.

¹⁹⁷ 'Five horrible minutes that changed our lives', 3.

was absolutely white. Dr Jacobs said he had lost an enormous amount of blood and although he tried to resuscitate him, the blood loss was too great.¹⁹⁸

Immediately after the attack, Ken Crew's wife Robin, who had been walking on the beach, was brought to where her husband lay bleeding and dying in the arms of Father Brian Morrison. Father Morrison, a priest and fellow early morning swimmer held Mr Crew in his arms as he administered last rights.¹⁹⁹ According to the attending ambulance crew, there was no panic but many people were milling around and there was a lot of emotional turmoil. They described Mr Crew as having massive injuries and severe trauma to the lower half of his body and legs. His right leg had been bitten off and the major artery had been sliced through causing him to lose too much blood to survive. He would have bled to death within seconds.²⁰⁰

It was to be days later that Perth's media discovered the name of the unknown man who had swam out to rescue Ken Crew. Channel Nine eventually tracked him down and he agreed to an interview on the proviso that they did not reveal his identity other than the name Brian.²⁰¹ Afterwards, he would be identified as Mosman Park resident Brian Farley and in an interview with *Post* in August 2001 he told how he heard yelling and saw the shark hit a man, who he later learned was Mr Crew. When he saw the shark, he said that he had to make a decision. 'It had to be a conscious decision to get out of the water or go out and help Ken.'²⁰² When the shark moved towards Dirk Avery, Mr Farley saw his chance to go to Ken. By this time Ken Crew had bobbed back up to the surface but was unconscious. As Mr Farley reached Ken and swam him towards the shore, the three paddlers tried to get their skis between him and the shark. They attempted to ram the shark and to form a protective shield as Brian tried to grab the rudder of one ski but missed. The paddlers backed up and he was able to cling with one arm to the back of one and with the other he held onto Ken as they were towed to

¹⁹⁸ Martin, et al, 'Shoot-to-kill order goes out to patrols', 3.

¹⁹⁹ 'Five horrible minutes that changed our lives', 63.

²⁰⁰ 'Sharks: predators of the deep'

²⁰¹ Price, 'Where terror's wave broke the dawn', 1-2.

²⁰² 'Modest heroes who faced shark terror', *Subiaco POST*, 11 August, 2001 6.

shore.²⁰³ In a later interview with *The West Australian*, Brian described the horror of the attack and said that having the surf skiers around him had given some him comfort, but the experience had left him exhausted and absolutely drained. He met Robin Crew after the attack. She was very grateful and he was happy to have given the grieving family some comfort.²⁰⁴

After the attack, the massive 4.5m shark turned and swam out to sea. Above, Channel Seven's veteran helicopter pilot Andy Jankowski followed the shark in order to beam photographs of the giant around Australia. Using a two-way radio, he was also guiding a rubber dingy that held Doug Coughran, one of Western Australia's official shark spotters, and State Conservation and Land Management veteran and a police officer who was manning the outboard motor, to the shark's whereabouts. To Jankowski, the shark appeared to be hardly moving yet the racing dingy was struggling to keep up.²⁰⁵ Fishermen scrambled for their boats and chased the shark while other media helicopters circled the area. Within three hours of the attack, they had tracked and surrounded the great white but could not kill the protected species, as many were desperate to do. White sharks had been totally protected since 1997 and could only be destroyed with approval of the Fisheries Minister in each state. As WA viewers were watching the dramatic pictures on television unfold, journalists were frantically ringing the office of WA Fisheries Minister Monty House. The minister was in a cabinet meeting that morning and could not be disturbed. It was not until almost midday that he was told about the attack and signed the paper to hunt down and destroy the shark – a delay that sparked a furore within the community.²⁰⁶

As authorities and media in planes, helicopters and boats circled the shark in an attempt to drive it out to sea the white pointer dived to the depths and disappeared from sight - prompting authorities to close the beaches from

²⁰³ 'Modest heroes who faced shark terror', p6.

²⁰⁴ Sarah Helzman, 'Hero tells of shark horror', *The West Australian*, 9 November, 2000, 3.

²⁰⁵ Price, 'Where terror's wave broke the dawn', 1-2.

²⁰⁶ 'Licence to kill was given too late – Barnett', *Subiaco POST*, 11 August, 2001 2.

Fremantle to Hillarys.²⁰⁷ By the time the licence to kill the animal was given just after midday, the shark had disappeared. Fremantle shark hunter John Smythe said that it was inevitable that this was going to happen. Fishermen used to fish inshore but had been pressured by Fisheries WA to move offshore. Echoing other people who wanted the shark hunted and killed, he called for the department to approve the culling of big sharks and to provide regular shark patrols along the beach that could net or kill a shark on the spot. On the other hand, Fisheries WA research director Jim Penn said that a fatal attack so near a beach was rare: the last fatal attack at Cottesloe was in 1925. He said 'You would end up killing a lot of other protected species just to find one shark...You cannot protect a whole beach.'²⁰⁸ Asked his opinion later, Cottesloe Liberal MP Colin Barnett stated that although he was not an early morning swimmer he knew most of the people involved. He said that it was very sad and while it was not a question of blaming anyone, not even the shark, in his view, 'when you have a shark cruising a metropolitan beach the proper thing to do is to destroy it.'²⁰⁹

The shocking death of Ken Crew devastated his family, friends and the community. He was a popular figure at the beach, well-liked by the North Cottesloe Surf Life Saving Club and respected as a businessman. As friends laid flowers on the beach where he died, Lee Tate, a columnist with the *Sunday Times* and Mr Crew's best friend, said he and Ken had been discussing shark attacks recently and people from the North Cottesloe Surf Club had joked about shark attacks ever since Brian Sierakowski and John Hanrahan had been attacked by a 3 metre white pointer just south of Cottesloe Beach.²¹⁰

At dawn the day after the attack, Ken Crew's wife Robin, son Andrew 17, daughters Rebecca 22, and Aimee and a small group of friends gathered on the North Cottesloe Beach for a dawn memorial service to say goodbye. Mr Crew's friend and swimming companion Dirk Avery was still in hospital recovering from

²⁰⁷ Martin, et al, 'Shoot-to-kill order goes out to patrols', 3.

²⁰⁸ Carmelo Amalfi & Steve Butler, 'Shark hunter calls for cull to prevent new attacks', *The West Australian*, 7 November, 2000, 4.

²⁰⁹ 'Licence to kill was given too late – Barnett', 2.

²¹⁰ 'Friends pay tribute to a man who loved the sea', *The West Australian*, 7 November, 2000, 4-5.

microsurgery on his severely bitten feet and legs. Under a grey sky and an almost empty beach, Father Brian Morrison conducted the short ceremony and urged the mourners to remember a beautiful man. After the service, Mrs Crew walked along the beach supported by friends and then the mourners moved across the road to the Blue Duck Café as people continuously arrived to lay wreaths on the beach under the crossed flags where Mr Crew had died.²¹¹

As Father Brian Morrison began the service, Fisheries officers battling poor visibility and choppy seas, started a six hour patrol covering beaches from Leighton to Swanbourne while overhead a plane searched the waters below. Aboard the boat was an armed water policeman ready to shoot the shark should it emerge and stray too close to the shore. According to *The West Australian*, 'The overcast scene was eerily reminiscent of the movie *Jaws*'.²¹² The hope was to follow the shark and then lay massive hooks that were baited with salmon and attached to chains and big plastic balls, but there was no sign of the great white.²¹³ Mr van Houwelingen from Fisheries admitted that there was little chance of catching the shark but 'we have to do something.' After searching for several hours the boat returned to dock for minor repairs and to unload seasick journalists.²¹⁴

The idea of a shark attack on WA beaches drove the media into an excited frenzy. Within minutes of the attack at 6.30am, other media helicopters were over the scene and by 10.10am Channel Seven had broadcast the terrible news. Radio talk-back shows were inundated with opinionated callers and the day after the attack the nation woke to a print media circus of hysteria. Under histrionic headlines, details of the horrific tragedy were spread over several pages of the nation's major and community papers as journalists sought to capture the lurid and graphic details of the attack.²¹⁵ *The West Australian* carried a full page

²¹¹ Ben Harvey, 'Farewell to a fatal shore', *The West Australian*, 8 November, 2000, 7.

²¹² Ben Martin and Ben Harvey, 'Hooks baited but patrol fails to find sign of killer', *The West Australian*, 8 November, 2000, 7.

²¹³ Martin and Harvey, 'Hooks baited but patrol fails to find sign of killer', 7.

²¹⁴ David Reardon, 'Hunt fails to find killer', *The Age*, 8 November, 2000.

²¹⁵ Price, 'Where terror's wave broke the dawn' 1-2.

photograph, ostensibly the moment rescuers pulled Ken Crew from the water overlaid by the graphic banner 'SHARK ATTACK' on its front page.²¹⁶ Inside were two articles, 'Siren of fear hits home'²¹⁷ and 'Shoot-to-kill order goes out to patrols.'²¹⁸ The first was an emotional story from journalist Robbie Burns who was part of the early morning surf ski crowd and was on the beach with friends at the time of the attack. His highly charged article described their reaction after the shark alarm went off and they realised there was no one in the water and that a large group had gathered on the beach.

In those brief moments those of us who swim and paddle from North Cott every morning lost our innocence. We won't ever again take for granted our right to be in the ocean. Three year ago those involved with the shark attack at South Cottesloe agreed they should get back out on their skis the next day – a bit like climbing straight back on a horse after you've been thrown.

But this is different. The mind-numbing horror of this attack, and the tragic consequences, will affect forever those who were there.²¹⁹

The Australian was equally shocked and enticed its readers with its front page story about 'Shark hunters licensed to kill'. Inside was a two page spread using the same photograph of Ken Crew being dragged ashore as used by *The West* with accompanying editorials such as 'A scream and blood in the sea', 'Air, sea hunt for man-eater, Survivors relive the horror' and 'Seaside culture shattered in fatal seconds'.²²⁰ Local community papers such as the *Post* and the *News Chronicle, Community* also devoted most of their attention to the attack. *News Chronicle* carried a front page banner, 'Killer shark alert' and a photograph of the beach closed sign overlaid on a picture of a traumatised witness.²²¹ None of this did little to calm a distraught and frightened West Australian community.

The following day, Wednesday 8 November, *The West Australian* was still consumed with the shark attack as its lead story. Page one was devoted to the

²¹⁶ Robbie Burns, 'SHARK ATTACK', *The West Australian*, 7 November, 2000, 1.

²¹⁷ Robbie Burns, 'Siren of fear hits home', *The West Australian*, 7 November, 2000, 3.

²¹⁸ Martin, et al, 'Shoot-to-kill order goes out to patrols', 3.

²¹⁹ Burns, 'Siren of fear hits home', 3.

²²⁰ Roger Martin & Amanda Keenan, 'A scream and blood in the sea', Roger Martin & Stephen Brook, 'Air, sea hunt for man-eater', Matt Price, 'Survivors relive the horror', Matt Price, 'Seaside culture shattered in fatal seconds', *The Australian*, 7 November, 2000, 6-7.

²²¹ 'Killer shark alert', *News Chronicle, Community*, 7 November, 2000, 1.

heroic rescue by the three surf skiers. Inside were stories on the memorial ceremony and details of the Fisheries patrol's unsuccessful attempts to find 'the killer' and a shark information article on 'why sharks are heading for shore'-²²²an unfortunate caption for already nervous beach-goers. However, Fisheries WA's Dr Rory McAuley, while taking care to avoid the popular term 'man-eater' said the shark came close to the shore because it was probably looking for food, especially as a seal pup had been spotted in the area. He said that sharks sometimes beach themselves in an effort to take seals or even dogs, but assured the community that the shark would not return and that 'There had never been a shark in Australian waters that has repeatedly killed humans.'²²³

The Australian was also reporting on the 'aftermath' of the attack. The editorial inside included a poignant photograph of Robin Crew supported by a friend bracing the waves at the Cottesloe ceremony. The paper was still concerned about the impact the attack had had on Perth's community and declared that the 'City was divided over the fate of man-eating shark'. Surprisingly, the article revealed that the shark hunt had created an 'unprecedented reaction on local talkback radio, with two-thirds of callers against destroying the white pointer.'²²⁴ Indeed, despite the media hype, Fisheries WA spokeswoman Rae Burrows said that 'about 40 per cent of people who contacted the department on Monday wanted the shark killed. Yesterday, all callers wanted the animal protected'.²²⁵

Fisheries WA continued the search throughout the day after having held discussions with Surf Life Saving WA as to whether the shark would return. They in turn communicated with the councils which controlled Perth's beaches. Barry Austin from the Cottesloe Town Council said that it was their responsibility as to how long the beach would remain closed.²²⁶ At 12.30am the Town of Cottesloe

²²² *The West Australian*, 8 November, 2000, 1,7,9.

²²³ Carmelo Amalfi, Ben Harvey & Anne Burns, 'Prey drew shark: expert', *The West Australian*, 8 November, 2000, 9.

²²⁴ Amanda Keenan, 'City divided over the fate of man-eating shark', *The Australian*, 8 November, 2000, 5.

²²⁵ Amalfi, et al, 'Prey drew shark: expert', 9.

²²⁶ Martin and Harvey, 'Hooks baited but patrol fails to find sign of killer', 7.

ranger removed the no-swimming sign, but the beach remained empty.²²⁷ Although Fisheries believed the shark had moved to deeper waters, spokesman Greg Finlay confirmed that officers from the authority would continue to patrol from the air and from boats until Monday. He confirmed that the animal would not necessarily be killed if it were found. 'If we relocate the shark within coastal waters we will make a decision about what we do with it then.'²²⁸

By Thursday, 10 November, more shark sightings off local beaches had triggered a panic within the anxious community. In response to public fears, Surf Life Saving WA made the unprecedented decision to close every beach it patrolled from Mandurah to Mindarie; a difficult ban to enforce as the association had no powers to keep people out of the water and one ignored by a few swimmers and surfers. To reinforce its message the association cancelled all weekend club competition. The Surf Assault paddle race from Port Beach to Rottnest with 170 entrants from around Australia was called off along with sailing events from several sailing clubs. While Fisheries WA supported the Surf Life Saving decision, spokesman Greg Finlay said that the shark sightings had not been confirmed and could more likely be attributed to paranoia.²²⁹

The hysteria that gripped Perth during the week of Ken Crew's attack raised claims that the white pointer was a serial killer - a suggestion that Fisheries WA vehemently denied as 'ridiculous and dangerous'. Fisheries expert Rory McAuley said that there was no scientific evidence that great whites repeatedly return to the same spot to kill again. He stressed that the animals are not rogue or serial killers but opportunistic feeders and such ideas and misinformation 'only reinforces the myth that they are merciless man-eaters'.²³⁰ University of WA psychologist Neil McLean said that the outrage of the community was indicative of the way people react to a tragedy. Shock and revenge were the immediate

²²⁷ Ben Harvey, 'Beaches open but no takers', *The West Australian*, 9 November, 2000, 3.

²²⁸ Belinda Hickman, 'White water wader throws caution to the wind', *The Australian*, 9 November, 2000, 9.

²²⁹ Ben Harvey, Ben Martin & Carmelo Amalfi, 'Swim ban as fear reigns', *The West Australian*, 10 November, 2000, 3.

²³⁰ Carmelo Amalfi, 'It's no serial killer, say experts', *The West Australian*, 10 November, 2000, 3.

responses, followed by a protection reaction to the shoot-to-kill order. That was followed by fear and an over-reaction to a threat that was still out there.²³¹

However on Saturday, 11 November, regardless of the fact that Fisheries experts had dismissed the idea of a serial killer as a dangerous myth, the local community paper *Subiaco POST* ran a hysterical front page headline raising the possibility that the Cottesloe shark could be a serial killer.²³² In an accompanying article, author Hugh Edwards, allegedly one of Australia's most experienced shark experts, said that he was disappointed in a Fisheries statement that there was no evidence of a shark being involved in more than one attack. He admitted there was no proof in Australia, but he believed there was a strong suspicion that it was correct. Mr Edwards said that on Monday, the authorities missed the opportunity to destroy the shark after delays in making a decision. In a broad assumption, the article went on to suggest that attacks listed in Mr Edward's recently released book *Shark – The Shadow Below*, showed that the shark that attacked Brian Sierakowski was possibly the same shark that attacked Ken Crew.²³³

The attack on Ken Crew continued to be the main topic of discussion for the community and the media. *The Sunday Times* columnist Liam Bartlett was scathing in his attack on the delay from the Minister's office and threatened that 'if another victim is mauled, someone will pay a high price for the Minister's indifference.'²³⁴ Cottesloe Mayor John Hammond called on the State Government to look into the feasibility of shark netting, a call that was rejected by Fisheries and Conservation and Land Management experts as impossible. Fisherman John Smythe continued to attack Fisheries WA claiming that the department had created a 'shark sanctuary' close to shore by driving fishing boats out to sea.²³⁵ Letters to the editors in local and community papers were dominated by opinions on sharks and arguments continued to flow for and against the killing of sharks.

²³¹ Amalfi, 'It's no serial killer, say experts'.

²³² 'Serial killer?', *Subiaco POST*, 1.

²³³ 'Serial killer?', 1.

²³⁴ Liam Bartlett, 'Deadly dilemma faces Minister', *The Sunday Times*, 12 November, 2000, 15.

²³⁵ Bruce Butler, Nets urged to deter killers of the deep', *The Sunday Times*, 12 November, 2000, 5.

Calls for retribution and protection of Perth beaches were interspersed by calls for more awareness of the shark environment and accepting the risk on our beaches.

On Monday morning, 13 November, after recommendations from the Surf Life Saving Association and Fisheries WA, the beaches were re-opened. As the debate raged over how to protect Perth beaches, the State Government announced that a single engine Cessna Cutlass aircraft flown by student pilots from Edith Cowan University would patrol the beaches from 6am to 12.30pm starting from Thursday. The aircraft would be connected by radio to lifesavers on the ground. Previously the flights had been operating during the summer months but only on the weekends and public holidays.²³⁶

Shark related articles persisted in the media. Channel nine ran a one-hour special on surviving a shark attack. The Cottesloe Mayor demanded permanent lookout towers on Cottesloe beach and friends of Ken Crew were back in the water swimming and paddling in groups, but for limited journeys.²³⁷ Shark fever gripped Perth and there was a sense that things would never be the same. In the local magazine *Perth Weekly*, author Robert Drewe who grew up on the West Australian coast, wrote a deeply personal article 'The day it all changed'.²³⁸

Nestled between the reefs, North Cott is a generally quiet beach, never famed for its surf – and even less so since the Cottesloe groyne was built and the resulting tidal changes swept its sand away. For generations it was a cosy, safe, little enclave – the favoured ocean beach of the western suburbs' middle-class, an important part of their lives. It was there they, and later their teenagers, went through their summer rites of passage. And now that security, that sense of serenity and healthy well-being, the essence of what we like to think of as quintessential West Australianness, has been horribly breached.²³⁹

Three weeks after the attack, bathers remained reluctant to enter the water. Swimming numbers 'skyrocketed' at the local aquatic centre as many preferred the safety of the pool.²⁴⁰ Diving schools reported a 'dramatic downturn'

²³⁶ Ben Ruse, 'Shark watch to take to sky', *The West Australian*, 15 November, 2000, 3.

²³⁷ 'Shark victim's friends return to the water', 18, 'Mayor wants air and beach lookouts', *Post*, 18 November, 2000, 63.

²³⁸ Robert Drewe, 'The day it all changed', *Perth Weekly*, 15-21 November, 2000, 4-5.

²³⁹ Drewe, 'The day it all changed', 4-5.

²⁴⁰ 'Roaring trade at Claremont pool', *Post*, 25 November, 2000, 46.

in business causing many to lay off casual staff.²⁴¹ Cottesloe Council made the decision to approach the State Government 'to research the most effective way to deter sharks from popular swimming beaches'.²⁴² In response to public fears, the government brought together representatives from the Department of Premier and Cabinet, Police, Fisheries, Rottnest Island Board, local councils, Conservation and Land Management, Surf Life Saving Association, and Cottesloe and Stirling councils to form the Shark Awareness Committee, from which was developed the Shark Hazard Committee (SHC). The SHC was charged with '...coordinating beach safety issues relating to shark incidents and facilitate the development of policies and procedure in consultation with other stakeholders.' The Department of Fisheries WA was identified as the lead agency.²⁴³ The SHC established and were responsible for the Shark Incident Emergency Response Plan in order to deal with shark attack mitigation in Western Australia.²⁴⁴

The horrific death of Ken Crew and the mauling of Dirk Avery by a great white at one of Perth's most popular beaches had a profound effect on the community. The safe and carefree image that once symbolized West Australian beaches was shattered forever. An ocean that had been taken for granted, now demanded respect and a new awareness, but the unbridled media hysteria that followed, continued to reinforce the idea that 'Jaws' was alive and well and circling just off our coast.

²⁴¹ Trevor Ross, 'Shark takes toll on dives', *The West Australian*, 27 November, 2000, 11.

²⁴² Ben Harvey, 'Deter sharks, says Cottesloe', *The West Australian*, 23 November, 2000, 13.

²⁴³ *Shark Hazard Report*, 12 July, 2002, Western Australian Department of Local Government and Regional Development, 3.

²⁴⁴ *Scientific Shark Protection Summit, 10 April, 2006*, NSW Department of Primary Industries, 79.

Chapter Five

Shark conservation post *Jaws*

Scientists and conservationists have held the movie *Jaws* responsible for decades of fear of shark attacks, an anxiety the media was quick to exploit. The film has been blamed for the surge in shark game fishing, shark tournaments in the U.S., and worldwide overfishing that has devastated shark populations. But the film was also responsible for a flood of scientific interest in sharks, and an expansion of shark conservation groups around the world. All were anxious to advance awareness of the importance of sharks in marine ecology, to raise the alarm over the plunging shark populations and to protect the endangered species. Consequently, science related articles in the media increased as shark populations declined. Nevertheless, there persists the initial media frenzy after any shark attack and *Jaws* remains the touch stone for media reporting.

Concern for the depleting shark populations is summed up by Robin Taylor, writing in a 2010 article for CSIRO's magazine *Ecos* titled 'When predator becomes prey':

Shark attacks on swimmers or surfers have a tendency to make headlines. But, there has been less public interest in the insidious depletion of the world's shark populations due to overfishing and other human activities.²⁴⁵

However, attitudes are changing. In 2011, *Marine and Freshwater Research* of the CSIRO published a paper on diver attitudes towards sharks and rays, and observed that attitudes have changed significantly. Articles from a 53-year period of the dive magazine *SportDiving* were analysed. It was found that before 1975, articles focused on spearfishing and the dominant attitudes were 'fear', 'danger' 'hunting and pride'. Since the 1980s, articles concentrated on observation; the change most evident in relation to sharks and rays was 'excitement', 'wonderment and respect'.²⁴⁶

²⁴⁵ Robin Taylor, 'When predator becomes prey', *Ecos magazine*, (CSIRO publishing: 2010), web page, <http://www.ecosmagazine.com/?paper=EC156p14> accessed 17/08/2011

²⁴⁶ Sally Whatmough, Ingrid Van Putten and Andrew Chin, 'From hunters to nature observers: a record of 53 years of diver attitudes towards sharks and rays and marine protected areas', *Marine and Freshwater Research*, 2011, 62, CSIRO publishing, 755.

...recreational divers...[changed]...from a group that could be described as *adventure-seeking hunters* to a group that can be described as *nature-appreciating observers*, suggesting an increase in conservation awareness.²⁴⁷

The authors acknowledged that the research focused on a single group of stakeholders within Australia. However, they recognised that similar viewpoints expressed in the many diverse dive publications and other sources indicate that there is an emerging new type of diver typology. This involves a greater appreciation of sharks (and rays) and an increasing concern for the marine environment.²⁴⁸

Peter Benchley and conservation

According to Peter Benchley:

Shark attacks on human beings generate a tremendous amount of media coverage...partly because they occur so rarely, but mostly, I think because people are, and always have been, simultaneously intrigued and terrified by sharks. Sharks come from a wing of the dark castle where our nightmares live – deep water beyond our sight and understanding – and so they stimulate our fears and fantasies and imaginations.²⁴⁹

Benchley admits that when he wrote *Jaws* in the 1970s, very little was known about sharks. In the decades since writing the novel, and in an effort to promote understanding and conservation of the animal he once demonized, Benchley hosted television documentaries and wrote articles for *National Geographic* and various other magazines. He is adamant that had he known in 1974 what he knows today about sharks, he would never have written such a book.²⁵⁰

He credits his own developing interest in sharks and other marine creatures to the sword-fishing expeditions he took as a boy with his father off the coasts of Nantucket. Benchley claimed sharks were so numerous that he and his father were catching them by the boat-load: some were so big they would often

²⁴⁷ Whatmough, et al, 'From hunters to nature observers', 757-8.

²⁴⁸ Whatmough, et al, 'From hunters to nature observers', 761-2.

²⁴⁹ Peter Benchley, *Shark Trouble*, web page, <http://www.peterbenchley.com/newbook.htm> accessed 20/01/2010.

²⁵⁰ Peter Benchley (1940-) Biography – Personal, Addresses, Career, Member, Writings, Adaptations, Sidelights, web page, <http://biography.jrank.org/pages/1842/Benchley-Peter-1940.html> accessed 29/01/2011/

take the carcasses home just to cut out the jaws.²⁵¹ When he started researching for his book *Jaws*, his main sources were Peter Gimbel's 1971 documentary *Blue Water, White Death*²⁵² about the adventures of a film crew that searched the world for 'man-eaters,' and Peter Matthiessen's book *Blue Meridian* published in 1969 on which the documentary was based. In each case, the great white was portrayed as a bloodthirsty, man-eating predator.²⁵³

Out of a concern that sharks were being hunted to extinction and to further his efforts to inform the public, he wrote the novel *White Shark* in 1994. In the book the hero works to protect shark environments and to persuade local fishermen to end killing sharks as trophy fish. Benchley was praised for his scientific credibility but critics were less than enthusiastic about the novel.²⁵⁴ In 2002 he went on to publish the critically well-received *Shark Trouble*²⁵⁵, a non-fiction account of the interactions he and his family had with the oceans' fascinating predators. In the book he describes the different types of sharks and their behaviour and includes instructions on how to avoid becoming a shark attack victim. He is highly critical of the way the media sensationalise shark attacks and over-blow the shark attack threat.²⁵⁶

Shark conservation in the US

When *Jaws* the film was released in 1975, it instilled the idea in people's mind that sharks were monsters, bent on savaging innocent bathers. The image triggered what George Burgess, director of the Florida Program for Shark Research in Gainesville, described as 'A collective testosterone rush... [that] swept through the East Coast of the U.S.'²⁵⁷ As a consequence, a plethora of shark fishing

²⁵¹ Benchley, Biography.

²⁵² Peter Gimbel, *Blue Water, White Death*, DVD, CBS Broadcasting Inc., 1971.

²⁵³ Steve Perez, 'Jaws author explores sharks' territory', SignOnSanDiego.com, *Union Tribune*, web page, <http://www.signonsandiego.com/sports/outdoors/20041214-0951-sharks-benchley.html> accessed 14/09/2010.

²⁵⁴ Benchley, Biography.

²⁵⁵ Peter Benchley, *Shark Trouble*, (New York: Random House, 2002).

²⁵⁶ Benchley, *Shark Trouble*, 12.

²⁵⁷ Charles Q. Choi, "How 'Jaws' Forever Changed Our View of Great White Sharks", *Live Science*, 20 June 2010, web site, <http://www.livescience.com/culture/jaws-impact-great-white-sharks-100620.htm1> accessed 09/02/2011.

tournaments sprang up. It wasn't necessary to have a big boat or expensive tackle to take part. The average fisherman could catch a big fish, firm in the belief they were catching man-eaters, a practice that dramatically reduced many shark species over the ensuing decades. 'The movie helped initiate that decline by making it sexy to go catch sharks,' says Burgess.²⁵⁸

Just as the interest in killing sharks increased after *Jaws*, so too did the world-wide interest in saving sharks. After the death of her husband Peter Benchley, Wendy Benchley continued his conservation work. She joined the Humane Society of the United States (HSUS) in condemning shark fishing tournaments, saying they added to the depletion of sharks. She admitted that *Jaws* scared people but it also inspired. 'We received letters from scientists who became oceanographers because of *Jaws*...Richard Dreyfuss was a role model for those who went into the ocean sciences. They said they never knew it could be so exciting.'²⁵⁹

In 2006, the HSUS began a campaign to end shark tournaments across the country after a record-breaking tiger shark was caught and killed in a Martha's Vineyard tournament in an atmosphere of what the Society described as 'appalling brutality and cruelty'.²⁶⁰ The group was also dismayed by the results of a 2006 study carried out by the Shark Specialist Group (SSG) of the *International Union for Conservation of Nature* (IUCN) – the umbrella body for the world's conservation agencies and institutions. The study revealed that '...up to one-fifth of the 547 species of sharks and rays in the world face possible extinction'.²⁶¹ The group has since worked closely with *DivePhotoGuide*, a comprehensive photography and

²⁵⁸ Choi, "How 'Jaws' Forever Changed Our View of Great White Sharks".

²⁵⁹ George Brennan, 'Jaws author's widow slams shark tournaments', Cape Cod Times, 1 April, 2008, web page

<http://www.capecodonline.com/apps/pbcs.d11/article?AID=/20080401/NEWS/804010...> Accessed 17/02/2011.

²⁶⁰ Michelle Lee, 'With species in decline, group wants Cape May shark tournaments banned,' 2 February, 2010, *pressofAtlanticCity.com*, web page,

http://www.pressofatlanticcity.com/news/cape_may/article_bf99cea8-0f94-11df... Accessed 17/02/2011.

²⁶¹ Lee, 'With species in decline, group wants Cape May shark tournaments banned'.

videography resource whose members write articles and photograph many of the tournaments.

The HSUS generated enough negative publicity in 2007 to shame the board of directors of the Destin Florida shark fishing tournament into shutting down. Some of the other tournaments had been persuaded to turn to a 'catch and release' programme which still didn't guarantee the survival of the shark. Although the group's campaigns achieved some measure of success, shark killing in the name of sport continued as Donna Barrett discovered when she visited the 2009 annual Ocean City Maryland Shark Tournament for *DivePhotoGuide*. She admitted that she was '... not prepared for the brutality and...the ignorance'.²⁶² The day Barrett arrived it was raining and many of the fishermen did not venture out but stayed drinking at Mickey Finn's bar/restaurant, the official tournament site. However a sign on one of the fishing boats moored at the 'weigh-in' dock appeared to sum up the attitude of the people and the atmosphere of the place:

The Floating Slaughter Wagon is Ready to Roll

Sharks!! Tuna!! Blues!!

It's Killing Time People!!²⁶³

With such an attitude, Barrett concluded that it may be difficult if not impossible to change the mind-set of the people that have taken part in tournaments for years. She was appalled that there were so many very young children, innocently excited, being exposed to the slaughter and suggested that education of the next generation may be the only key to halting such barbarism.²⁶⁴

Meanwhile, respected scientist and marine wildlife artist Dr Guy Harvey, founder of the Guy Harvey Research Institute at Nova Southeastern University and founder of the Guy Harvey Ocean Foundation (GHOF) both which support shark studies had successfully initiated the first tag-and-release tournament on the West

²⁶² Jason Heller and Donna Barrett, 3 July 2009, 'Ocean City Shark Tournament – Floating Slaughter Wagon, http://www.divephotoguide.com/underwater-photography-scuba-ocean-news/ocean_c... Accessed 13/02/2011.

²⁶³ Heller and Barrett, 'Ocean City Shark Tournament.'

²⁶⁴ Heller and Barrett, 'Ocean City Shark Tournament.'

Coast of Florida. He has continued to pressure for a cultural change in the structure of shark fishing tournaments and to create Catch and Release divisions. He has also worked for change in commercial and recreational fisheries from J-hooks to the more humane circle hooks, where the barb points inward and not outward.²⁶⁵

Commercial shark fishing in the U.S.

Commercial fishing for sharks has caused a catastrophic decline in shark populations in the waters off the eastern seaboard; much of the decline due to sharks being caught as by-catch when fishermen take other fish. Many shark species have dropped by 50 per cent and some have fallen as low as 90 per cent.²⁶⁶ The National Marine Fisheries Service's Atlantic management plan sets quotas, oversees tagging programs and bans finning, and in 1997, it cut shark quotas by half. It limited the catching of many shark species in U.S. controlled waters, confined recreational fishing to a tag-and-release program along the Gulf and Atlantic coasts of the U.S. and banned the commercial fishing of five shark species – the basking shark, whale shark, great white, sand shark, and big-eyed sand tiger shark.²⁶⁷

The increased interest in sharks has also seen an increase in government funding for research. Explosive growth in shark fishing created a need to closely monitor shark populations. In 1994, the Florida Museum of Natural History (which is home to the International Shark Attack File), located on the University of Florida campus, and the fishers of the United States Atlantic commercial shark fishery developed a cooperative shark research program, known as the Commercial Shark Fishery Observer Program (CSFOP). The program involved three biologists and was initially voluntary, funded with about \$170,000 annually by the U.S. Department of

²⁶⁵ 'Guy Harvey applauds decision to ban commercial shark fishing in the Bahamas', 11 July, 2011, web page, <http://guyharvey.wordpress.com/tag/shark-conservation/> accessed 16/07/2011.

²⁶⁶ 'Charles Q. Choi, 'People more dangerous than sharks,' *Our Amazing Planet*, 18 June, 2010, web page, <http://www.ouramazingplanet.com/people-more-dangerous-than-sharks-0284/> accessed 09/02/2011.

²⁶⁷ Michael Bright, 'Jaws: The natural history of sharks', *The Natural History Museum*, web page, <http://www.fathom.com/course/21701777/session4.htm1> accessed 09/08/2011.

Commerce. However, after the intense media hype over the shark attacks in 2001 and pressure from shark scientists over the plunging shark populations, the US Congress passed a bill providing \$1.5 million annually to fund new research programs.²⁶⁸

The widespread practice of shark finning exacerbated the decline in shark populations. Shark finning is the inhumane way of removing the fin from the shark while it is still alive. The body is then thrown overboard and the shark faces a slow, painful death and drowns.²⁶⁹

Limited on-board space, combined with the increasing value of shark fin, has made it economically advantageous to discard the bulky shark bodies while retaining the valuable fins, which can be sun dried and stored very compactly without refrigeration.²⁷⁰

Shark fin soup has long been considered a status symbol among the Chinese and today is served at festive occasions and in high-end restaurants. A bowl of the soup can fetch as much as US\$80.²⁷¹ The demand for the soup is one of the most serious threats to sharks around the world, driving several shark populations to the brink of extinction.²⁷²

...the huge consumer demand for shark fins – largely driven by Hong Kong and an increasingly affluent Chinese market – has made sharks among the most valuable animals in the sea. In Asian markets, fins are sold for up to AU\$500 per kg, and fins from the large whale and basking sharks can fetch more than \$10,000.²⁷³

The practice is banned in many countries including Australia and the U.S. Unfortunately, on the high seas, there is no effective regulation and shark finning is causing a massive depletion in species. Most disturbing is the taking of the larger

²⁶⁸ Joseph Kays, 'UF Shark expert George Burgess preaches a message of tolerance', *Shark Savers*, 2002, web page, <http://www.research.ufl.edu/publications/explore/v07n1/sharks.htm> accessed 13/02/2011.

²⁶⁹ 'Stop shark finning!', *Ian Somerhalder Foundation*, web page, <http://www.isfoundation.com/news/creatures/stop-shark-finning> accessed 17/08/2011.

²⁷⁰ Susie Watts, 'Shark finning: Unrecorded wastage on a global scale', *WildAid*, and *Co-Habitat*, September 2003, 3.

²⁷¹ 'Chinese Americans divided over ban of shark fin soup in California', web page <http://www.ibtimes.com/articles/171671/20110629/shark-fin-soup-shark-finning-calif...> Accessed 17/08/2011.

²⁷² 'Science in the spotlight: the science of shark finning', *SeaWeb*, web page, http://www.seaweb.org/science/spotlight_sharkfinning.php accessed 02/08/2011.

²⁷³ Taylor, 'When predator becomes prey'.

sharks because of their slow reproduction.²⁷⁴ In the U.S., concern about overfishing and the growing popularity of shark fin soup in the Asian market led to President Bill Clinton signing the Shark Finning Prohibition Act in 2000, 'making it unlawful to possess a shark fin in U.S. waters without a corresponding carcass.'²⁷⁵ Then in 2009, *The Shark Conservation Act* was introduced into the House of Representatives with amendments that strengthened the U.S. ban on finning and signed into law by President Obama in January 2011.²⁷⁶

Shark conservation in Australia

Growing concern by environmentalists and the scientific community in Australia, over the decline in shark populations, in particular the great white and its very slow recovery rate, resulted in a world first: in 1984, the NSW government listed the great white as a protected species. By 1985, the animal had been added to the *Australian Society of Fish Biology's* list of threatened species, and as alarm grew over the dwindling populations, the shark was nominated in 1996 for listing as a vulnerable species under the national *Endangered Species Protection Act*. Upset by the proposed ban, gamefishers organised a concerted effort against it, although they claimed that they didn't target the species: a strange protest if, as they claimed, they didn't take great whites.²⁷⁷ The following year, 1997, the Federal government introduced legislation that protected the great white and also the endangered grey nurse shark (*Carcharias taurus*).

Australian game fishers agreed that some level of conservation was needed and there was a strong move to 'catch-and-release' and 'tag-and-release' protocols. Recreational catches of sharks in Australia are significant and the majority are now released. There have been studies on the tag-and-release mortality on fishes released by anglers that show an increased death rate due to

²⁷⁴ McAuley, personal contact.

²⁷⁵ 'Shark Conservation Act', *Animal Welfare Institute*, 7 January, 2011, web page, <http://www.awionline.org/ht/d/sp/i/11225/pid/11225> accessed 25/07/2011.

²⁷⁶ 'Shark Conservation Act', *Animal Welfare Institute*.

²⁷⁷ Bob Beale and John Paxton, 'Great white shame', *The Sydney Morning Herald*, 4 November, 1996, 15.

stress and handling, but the limited studies that have been carried on sharks suggest that survival often exceeds 90 per cent.²⁷⁸

An additional pressure on shark species in Australian waters is the protective shark meshing on the Sydney and Queensland beaches. These have been severely criticised by environmentalists and scientists alike for the damage they cause not just sharks, but to other marine life. The nets give an illusion of safety. They do not physically prevent sharks from entering the shallow beach waters, since sharks can swim over or around the nets. Considering there are over 1,300 kilometres of NSW coastline that is un-meshed, attacks have been rare and even during the three year cessation of meshing during WWII there were no fatalities.²⁷⁹

Environmental groups such as the Humane Society International (HSI) have been waging a long campaign against the netting. They want the nets to be removed from Australian waters, at least during winter months, in order to avoid the regular entanglement of migrating humpback whales along Australia's eastern coastline. Speaking to the *National Geographic* in 2005, Nicola Benyon from the HSI said that the nets killed hundreds of marine animals every year.²⁸⁰ Previously, in an article in the Australian Museum's *Nature Australia Spring 2003*, research fellow in ichthyology Dr John Paxton had also expressed his concern over the destructive nets. He demanded, 'How many more sharks and other animals must be killed before beach meshing is removed?'²⁸¹ He explained that:

...it is a common misconception that shark nets physically prevent sharks from entering the shallow waters. The nets, which are set on the bottom, do not reach the surface and are open at both ends, so sharks swim over and around them. Those that try to swim

²⁷⁸ Kevin McLoughlin and Georgina Eliason, 'Review of information on cryptic mortality and the survival of sharks and rays released by recreational fishers', *Australian Government Bureau of Rural Sciences*, 2008, 1-3. web page,

<http://docs.google.com/viewer?a=v&q=cache:caEOhEnE74J:adl.brs.gov.au/brsShop/...>

²⁷⁹ Dr John Paxton, 'Shark meshing program in need of urgent review', web page http://www.tucs.org.au/~cneville/marineSharkMeshNSW_Paxton.htm accessed 10/03/2011.

²⁸⁰ Stephanie Peating, 'Sharks Kill Surfer, reigniting net debate in Australia', 28 January 2005, *National Geographic*, web page, http://news.nationalgeographic.com/news/2005/01/0128_050128_sharknets.htm1 accessed 25/11/2010.

²⁸¹ Paxton, 'Shark meshing program in need of urgent review'.

through them (from either direction!) become entangled and immobilised in the wide mesh, and 'drown'. Thus the only purpose of shark nets – to reduce the population sizes of sharks and thus the threat to swimmers.²⁸²

Addressing a *Scientific Shark Protection Summit* in Sydney in 2006, Dr Paxton observed that the meshing has a huge environmental cost that threatens NSW marine life. The NSW Department of Primary Industries, who hosted the Summit, admitted that the Shark Meshing Program (SMP) was aimed at culling populations of large aggressive sharks off Sydney metropolitan beaches to minimise the potential for shark attacks on swimmers. But as Dr Paxton pointed out, the nets not only kill sharks but numerous other animals such as dugongs, dolphins, whales, turtles, rays and seals and also the endangered east coast population of protected grey nurse sharks. In fact, prior to the Summit, the NSW Fisheries Scientific Committee (an independent group of scientists), listed the NSW Shark Meshing Program as a 'Key Threatening Process.'²⁸³

At the Summit, John West, Coordinator of the Australian Shark Attack File (ASAF), agreed with Dr Paxton that the nets capture many more harmless animals than dangerous sharks. He said he understood that the meshing was originally set up to kill sharks and stop them establishing localised territories off Sydney beaches. It is now known that the majority of sharks involved in fatal attacks on humans are transient to NSW and do not set up localised territories. Statistics from the ASAF show that shark attacks remain a genuine, but highly unlikely danger for humans entering the water in Australia.²⁸⁴ Fisheries WA's Rory McAuley explained that accepted evidence dispels the myth that each coastline has its own shark population, although he said that there is an increase in the Perth white shark population during the winter months.²⁸⁵

²⁸² Paxton, 'Shark meshing program in need of urgent review'.

²⁸³ Dr John Paxton, 'NSW Shark Attack Record: Monthly analyses from shark meshing areas (Greater Sydney, Newcastle, Central Coast, Wollongong),' presented at the *Scientific Shark Protection Summit*, 10 April, 2006, NSW Department of Primary Industries, 51.

²⁸⁴ John West, 'Australian Shark Attack Statistics 1900 – Feb 2006', *Scientific Shark Protection Summit*, 41.

²⁸⁵ McAuley, personal contact, 21 June, 2011.

As a result of continuing pressure from environmental groups and scientists, pingers and 'whale alarms' were deployed on every net to reduce the captures of dolphins and whales, and there has been a reduction in the length of the netting season.²⁸⁶ The winter months from May to August were omitted from the shark program to mitigate the impact on migrating whales, although conservationists and scientists stressed that the months of September and October should also have been omitted.²⁸⁷ In 2009, a report into the NSW Shark Meshing Program (SMP) denied that meshing was a major factor in declining shark populations, and concluded that: 'On the whole, it would appear that the potential individual and cumulative impacts of commercial and recreational fishing on shark stocks of NSW waters is significantly greater than that of the SMP.'²⁸⁸

Commercial fishing in Australia

According to the Australian Marine Conservation Society (AMCS), 100 million sharks are killed each year around the world, and shark numbers have declined by 90 per cent. In Australia, shark flesh is considered low value compared with other fish and sold as cheap fish under names such as flake or trope.²⁸⁹ In 2011, the Commonwealth Department of Agriculture, Fisheries and Forestry released the second Draft Plan of Action for the Conservation and Management of Sharks. However, the Plan has been condemned by conservationists as lacking in prescriptive action and funding to support its implementation. They consider that 'Australia's approach to shark conservation risks falling behind best international practice,'²⁹⁰ unlike other countries such as the Bahamas and Honduras who have

²⁸⁶ 'Report into the NSW Shark Meshing (Bather Protection) Program', NSW Department of Primary Industries, March, 2009, 11.

²⁸⁷ 'Report into the NSW Shark Meshing (Bather Protection) Program', 38-9.

²⁸⁸ 'Report into the NSW Shark Meshing (Bather Protection) Program', 61.

²⁸⁹ Taylor, 'When predator becomes prey'.

²⁹⁰ Michael Beasley, 'Response to Draft 2011 National Plan of Action for the Conservation and management of Sharks', *Department of Agriculture, Fisheries and Forestry*, web page <http://www.daff.gov.au/fisheries/environment/sharks/sharkplan2/shark-plan2-submiss...> Accessed 17/08/2011.

recently banned commercial shark fishing in their national waters.²⁹¹ Robin Taylor observed that since 2001, the Australian Fisheries Management Authority has recognised the dwindling shark populations by imposing substantial restrictions, gear modifications and fishing ground closures to reduce the take of school shark.²⁹² Nevertheless, he said,

Sharks are target species in a number of fisheries controlled by the Commonwealth, State and Northern Territory Governments, and are also taken as bycatch in more than 70 other commercial fisheries. Australia's commercial shark fisheries take school shark, gummy shark, dusky shark, whiskery shark, sandbar shark and blacktip shark.²⁹³

Campaigns to save Australia's sharks are on-going, with some positive outcomes. For example, conservation groups such as the AMCS have successfully lobbied to reduce shark quotas in Queensland.²⁹⁴ However, in Western Australia, shark specialist Dr McAuley maintains that shark fishing is sustainable. He said that although bans on shark fishing come under different state and federal laws, certain shark fishing is allowed, provided that the fins, tail and body remain as part of the catch – not necessarily intact. Dr McAuley said that illegal fishing was the main threat to shark species.²⁹⁵

Future outcomes for sharks

In the past, the fear of shark attack attracted a great deal of research that aimed at protecting humans. However, recent research has shown that the fear of possible shark attack does not deter people from entering the water.²⁹⁶

The lack of science-based solutions to eliminate the risk of shark attacks on humans has not stopped people using the ocean...at least in Australian waters, ocean use has increased dramatically, and as a result the incidence of attacks, relative to total population, has increased over the past 20 years. This suggests that the fear that society

²⁹¹ 'Shark conservation: a timeline', *The Humane Society International*, 7 January, 2011, web page, http://www.hsi.org/issues/shark_finning/timelines/shark_conservation_timeline.html accessed 17/08/2011.

²⁹² Taylor, 'When predator becomes prey'.

²⁹³ Taylor, 'When predator becomes prey'.

²⁹⁴ Taylor, 'When predator becomes prey'.

²⁹⁵ McAuley, personal contact, 21 July, 2011.

²⁹⁶ C. A. Simpfendorfer, M.R.Heupel, W.T. White and N.K. Dulvy, 'The importance of research and public opinion to conservation management of sharks and rays: a synthesis', *Marine and Freshwater Research*, 2011, 62, CSIRO publishing, 519.

once had for sharks has decreased, and with it has come a change in attitude towards sharks.²⁹⁷

One only has to look at the fast-growing shark tourism industry. All around the world, hundreds of thousands of people are willing to part with vast sums of money for the experience of swimming with sharks. Shark diving has become a multimillion-dollar industry and provides a valuable source of income for many different people in many different parts of the world. Dive tour operators offer a range of tour aspects, whether the tourist is in the relative safety of a cage, or an observer while the guide hand feeds the sharks: it depends on the location and the type of shark.

The feature of the industry causing strong debate is the practice of hand feeding sharks, and or chumming and baiting – a process of throwing offal overboard or hanging bait from a float in order to attract the sharks. Many in the environment movement and diving industry disagree with the practices. They believe that shark feeds encourage the sharks to associate people with food, which will change their distribution and hunting patterns. Numerous others from the diving industry and shark tourism believe that there is insufficient evidence to support this. But with the increase in the shark tourism industry, there is a danger of whether sharks are being ‘loved’ to death. This is a concern for environmentalists who nevertheless consider that shark diving is a much better alternative to hunting, and ensures that people are better informed about the world of the shark.²⁹⁸

The change in perception of sharks and recognition of the significant role that sharks play in the marine ecology, has led to a realisation that there is a need

²⁹⁷ Simpfendorfer, Heupel, White and Dulvy, ‘The importance of research and public opinion to conservation management of sharks and rays: a synthesis’, 519.

²⁹⁸ Mark Carwardine and Ken Watterson, *The Shark Watcher’s Handbook*, (2002: BBC Worldwide Ltd., London), 9-17.

for better management practices. Furthermore, this has created an increase in people interested in research and a rise in resources to support the research.²⁹⁹

Growing concern for the world's shark and ray populations is driving the need for greater research to inform conservation management. A change in public perception, from one that we need to protect humans from sharks to one where we must protect sharks from humans, has added to calls for better management.³⁰⁰

Critical for the success of conservation management is research into industries that exploit sharks, human communities that depend on them and changing environmental conditions including climate change.³⁰¹ What is most vital to conservation management however, is research into the status of species to identify those at risk. For instance, there are currently no accurate estimates for any populations of white sharks around the world.³⁰²

CSIRO have tagged around 500 white sharks over the past 10 years and have followed their movements...the researchers are building up a picture of shark movements and behaviour that will be used as part of a national recovery plan.³⁰³

In WA, more than 70 great whites have been fitted with tiny transmitters and 20 state-of-the-art acoustic stations from Ocean Reef to Garden Island and out to Rottnest Island have been established. Data is still being collected, but it would appear that some of the great whites were lingering off Perth's most popular beaches for months at a time. Furthermore, the two-year project has challenged established belief that WA waters are a marine highway for white pointers migrating vast distances between South Australia, the Southern and Indian oceans and South Africa.³⁰⁴

Only a few 'high profile' species (e.g. white shark, whale shark) are attracting most of the research funding, and most of the researchers, especially

²⁹⁹ Simpfendorfer, et al, 'The importance of research and public opinion', 523.

³⁰⁰ Simpfendorfer, et al, 'The importance of research and public opinion', 518.

³⁰¹ Simpfendorfer, et al, 'The importance of research and public opinion', 523-4.

³⁰² Taylor, 'When predator becomes prey'.

³⁰³ Taylor, 'When predator becomes prey'.

³⁰⁴ Trevor Paddenburg, 'The great wait', *Sunday Times*, 27 March, 2011, 5.

the younger ones. For successful conservation management, it is necessary for all sharks (and rays) to receive the same attention.³⁰⁵

Of the 307 shark species assessed by the *International Union for Conservation of Nature* (IUCN), 50 are listed as vulnerable, endangered or critically endangered, but only the white, whale and basking sharks are protected internationally under the *Convention on International Trade in Endangered Species* (CITES). Sharks now represent the greatest percentage of threatened marine species on the IUCN Red List of threatened species.³⁰⁶

Moreover, there is a lack of global coordination for shark conservation. This has led to a call for an over-arching global agency to co-ordinate conservation management of sharks (and rays) similar to the International Whaling Commission, and a need for concise communication of the results of research. At the moment, it is left to the individual researchers.³⁰⁷

Sharks are among the most biologically vulnerable fish to cross national and international boundaries. This, coupled with increasing pressure worldwide, has led to an urgent need for international shark conservation.³⁰⁸

Over the years, research has shown that 'The link between attitudes and behaviour and conservation and management outcomes is particularly relevant for sharks (and rays).'³⁰⁹ Wolch et al, in their research into California's cougars have proved that negative attitudes towards perceived 'dangerous' wildlife, predators, heightened by the media, directly affect conservation and management efforts.³¹⁰ However, as Boissonneault et al. showed in their research on the grey nurse shark, the more critical the decline of the species, the more the concern of the public and the stronger the call for better management and conservation.³¹¹ With more people entering the water, essential studies have been undertaken into

³⁰⁵ Simpfendorfer, et al, 'The importance of research and public opinion', 524.

³⁰⁶ 'Sharks: Overview', web page, <http://na.oceana.org/en/our-work/protect-marine-wildlife/sharks/overview> accessed 04/09/2011.

³⁰⁷ Simpfendorfer, et al, 'The importance of research and public opinion', 524.

³⁰⁸ 'Conserving sharks', *Shark Alliance*, web page, <http://www.sharkalliance.org/content.asp?did=1073> accessed 04/09/2011.

³⁰⁹ Whatmough, et al., 'From hunters to nature observers', 756.

³¹⁰ Jennifer R. Wolch, Andrea Gullo, Unna Lassiter, 'Changing attitudes towards California Cougars', *Society & Animals: Journal of Human-Animal Studies*, vol. 5, no.2, 1997.

³¹¹ Marie-France Boissonneault, William Gladstone, Paul Scott, and Nancy Cushing, (2005), 'Grey Nurse Shark Human Interactions and Portrayals: a study of newspaper portrayals of the Grey Nurse Shark from 1969-2003', *Electronic Green Journal*, 1(22). Retrieved from: <http://escholarship.org/uc/item/9nb9h48n> accessed 08/01/2011.

what human water-based impacts are having on human/shark interactions. Current research has shown that,

Patterns of [shark] attack have changed substantially over time as a result of the changing population and human behaviour. If human activity related to water-based activities and the use of beaches, harbours and rivers continues to change, we can expect to see further changes in the patterns, distribution, frequency and types of attacks in the future.³¹²

While the risk of being attacked by a shark is extremely low, nonetheless, if humans continue to pursue water-based activities encounters with sharks will continue to occur.

³¹² John G. West, 'Changing pattern of shark attacks in Australia', *Marine and Freshwater Research*, (2011: CSIRO publishing), 753.

Conclusion

The media has played a dominant role in shaping attitudes towards shark conservation, shark attack representations and government policies around the world. When Steven Spielberg's film *Jaws* about a 'rogue shark' that terrified a small community was released in 1975, very little was known about sharks. After the release of the film, the media seized on the public fear that it evoked, and exploited the anxiety for commercial gain. Consequently, Peter Benchley, writer of the book on which the film was based, spent the remainder of his days promoting conservation of the animal he once demonized.

The media hype of sharks and shark incidents gave rise to an explosion of shark game fishing, shark tournaments, shark artefact sales and commercial fishing. Combined with an expanding shark finning industry, shark populations worldwide have plunged. Over a 100 million sharks killed each year has seen populations decline by 90 per cent. Several countries have banned commercial fishing and shark finning in their waters, but illegal fishing is prevalent and is continuing to decimate sharks, especially the larger animals. Most sharks are transient, and are among the most vulnerable fish to cross national and international boundaries. While there are a number of international agreements and regional legal frameworks to manage shark fishing and protect the most endangered shark species, many have yet to be implemented. This has led to a call for the establishment of an over-arching global agency to co-ordinate shark conservation management.

The film *Jaws* was also responsible for a surge in scientific interest in sharks and their environment. The research that followed revealed that sharks were the apex species in the marine environment, and played a pivotal role in the health of the marine ecology. By the 1980s, studies showed that shark populations had declined dramatically, and several species were under threat of extinction. This included the great white, the species depicted as the dangerous predator in *Jaws*, whose recovery rate from overfishing is extremely slow. Currently, 50 species of sharks are listed as vulnerable, endangered or critically endangered. However, the

only sharks that are protected internationally are the white, whale and basking sharks. Sharks now represent the greatest percentage of marine species on the International Union for the Conservation of Nature (IUCN) Red List of threatened species.

Scientists' and conservationists' efforts to raise the alarm over the plunging shark populations have led to a change in media attitude. As shark populations have declined, science related articles in the media increased. Many journalists are giving more attention to reporting on the diminishing shark populations and to the sharks' important role in healthy oceans. Increasing human interactions with the natural marine environment and more science-based information from the media has changed social perceptions of sharks from fear to conservation. Consequently, public awareness and subsequent pressure has had an influence on local, national and international government conservation and management policies.

There has been an increase in Australian shark attacks over the past 20 years, although there is no evidence of an increase in shark numbers. The rise in shark attacks coincides with an increase in human populations, a significant rise in water-based activities and more people accessing remote areas. This has increased the occurrences of people/shark interactions, although the risk of a fatality from a shark attack remains low. Nevertheless, there persists the initial media frenzy after any shark attack and *Jaws* remains the touchstone for media reporting. An increase in conservation awareness by an enlightened public ensures, however, that sympathy for the victim of an attack matches consideration for the shark.

Bibliography

Interviews

McAuley, Dr Rory, Senior Research Scientist, Department of Fisheries, Government of Western Australia, personal contact, 21 June, 2011.

Government Publications

Beasley, Michael, 'Response to Draft 2011 National Plan of Action for the Conservation and management of Sharks', *Department of Agriculture, Fisheries and Forestry*, web page <http://www.daff.gov.au/fisheries/environment/sharks/sharkplan2/shark-plan2-submiss...> Accessed 17/08/2011.

Cavanagh, Rachel D., Kyne, Peter, M. Fowler, Sarah, L., Musick, John, A. & Bennet, Michael, B., (Compiled & and edited), *The Conservation Status of Australian Chondrichthyans: 'Report of the International Union for Conservation for Nature (IUCN) Shark Specialist Group'*, Australia & Oceania Regional Red List Workshop, Queensland, Australia, 7-9 March 2003, (University of Queensland, School of Biomedical Sciences, Brisbane, Australia, 2003).

McLoughlin, Kevin and Eliason, Georgina, 'Review of information on cryptic mortality and the survival of sharks and rays released by recreational fishers', *Australian Government Bureau of Rural Sciences*, 2008, 1-3. web page, [http://docs.google.com/viewer?a=v&q=cache:caEOhEnIE74J:adl.brs.gov.au/brsShop/...](http://docs.google.com/viewer?a=v&q=cache:caEOhEnIE74J:adl.brs.gov.au/brsShop/)

Paxton, Dr John, 'NSW Shark Attack Record: Monthly analyses from shark meshing areas (Greater Sydney, Newcastle, Central Coast, Wollongong)' presented at the 'Scientific Shark Protection Summit', 10 April, 2006, NSW Department of Primary Industries.

'Report into the NSW Shark Meshing (Bather Protection) Program', NSW Department of Primary Industries, March, 2009.

West, John G., 'Australian Shark Attack Statistics 1900 – Feb 2006', *Scientific Shark Protection Summit*, NSW Department of Primary Industries.

Shark Hazard Report, 12 July, 2002, Western Australian Department of Local Government and Regional Development.

Newspaper articles

Amalfi, Carmelo and Butler, Steve, 'Shark hunter calls for cull to prevent new attacks', *The West Australian*, 7 November, 2000.

Amalfi, Carmelo, 'Close encounters of the shark kind', *The West Australian* 11 October, 2000.

Amalfi, Carmelo, Harvey, Ben and Burns, Anne, 'Prey drew shark: expert', *The West Australian*, 8 November, 2000.

Amalfi, Carmelo, 'It's no serial killer, say experts', *The West Australian*, 10 November, 2000.

Amalfi, Carmelo, 'Man eaters likely to go free', *The West Australian*, 13 July, 2004.

Baily, Paul, 'Sharks Lose Their Teeth', *The Sydney Morning Herald*, 15 September, 1990.

Bartlett, Liam, 'Deadly dilemma faces Minister', *The Sunday Times*, 12 November, 2000.

Beale, Bob and Paxton, John, 'Great white shame', *The Sydney Morning Herald*, 4 November, 1996.

Bower, Amanda, 'Shark Victim Dives Straight Back In', *The West Australian*, 11 November, 1997.

Brennan, George, 'Jaws author's widow slams shark tournaments', *Cape Cod Times*, 1 April, 2008, web page
<http://www.capecodonline.com/apps/pbcs.d11/article?AID=/20080401/NEWS/804010...> Accessed 17/02/2011.

Brown, Pam, 'Sharks: Answers From The Deep', *The West Australian*, 20 January 1998.

Burns, Robbie, 'SHARK ATTACK', *The West Australian*, 7 November, 2000.

Burns, Robbie, 'SHARK HEROES, Trio risked attack to help swimmers', *The West Australian*, 8 November, 2000.

Burns, Robbie, 'Siren of fear hits home', *The West Australian*, 7 November, 2000.

Butler, Bruce, 'Nets urged to deter killers of the deep', *The Sunday Times*, 12 November, 2000.

Butler, Mark, 'Killers lurk in surfing paradise', *Herald Sun*, 25 September, 2000.

Butler, Steve, 'Great white attacks Bunbury fishermen', *The West Australian*, 11 October, 2000.

Canby, Vincent, 'Entrapped by 'Jaws' of fear', Movie Review, *New York Times*, 21/06/1975,
<http://www.nytimes.com/1975/06/21/movies/moviesspecial/21JAWS.html>
accessed 14/09/2010.

Cardy, Todd, 'Decade of fear off WA's fatal shore', *The Sunday Times*, 28 December, 2008.

Daw, Michelle, 'Overrated as a Killer?', *Adelaide Advertiser*, 27 January, 1998.

Dortch, Eloise, 'Don't kill the shark that killed my brother', *The West Australian*, 12 July, 2004.

Drewe, Robert, 'The day it all changed', *Perth Weekly*, 15-21 November, 2000.

Ebert, Roger, 'Jaws', *Chicago Sun-Times*, 01/01/1975,
<http://rogerebert.suntimes.com/apps/pbcs.d11/article?AID=/19750101/REVIEWS/501...> accessed 14/09/2010.

'Five horrible minutes that changed our lives', *Subiaco POST*, 11 November, 2000.

Fox, Rodney, 'Swimming with sharks', *The Advertiser*, 16 May.

'Friends pay tribute to a man who loved the sea', *The West Australian*, 7 November, 2000.

Hacket, Peter, 'Survival Under Attack', *Adelaide Advertiser*, 30 September, 2000.

Harvey, Ben, 'Beaches open but no takers', *The West Australian*, 9 November, 2000.

Harvey, Ben 'Deter sharks, says Cottesloe', *The West Australian*, 23 November, 2000.

Harvey, Ben, 'Farewell to a fatal shore', *The West Australian*, 8 November, 2000.

Harvey, Ben, Martin, Ben and Amalfi, Carmelo, 'Swim ban as fear reigns', *The West Australian*, 10 November, 2000.

Helnzman, Sarah, 'Hero tells of shark horror', *The West Australian*, 9 November, 2000.

Hickman, Belinda, 'White water wader throws caution to the wind', *The Australian*, 9 November, 2000.

Holder, Peter, Casamento, Jo, 'Jaws has a friendly mouthpiece', *The Daily Telegraph*, 11 July, 2000.

Horan, Matthew, 'The danger lurking beyond Sydney's beautiful beaches', *Sunday Telegraph*, 16 April, 2000.

Hunter, Amy, 'USS Indianapolis crewmember recounts harrowing tale of survival', *Bristol Herald Courier* 9 October, 2008, web page, <http://www.fearbeneath.com/2008/10/uss-indianoplis-crewmember-recounts-harrowi...> Accessed 22/07/2011.

Jackman, Christine, 'Swimming with monsters – Giant maneaters 'just misunderstood', *Sunday Mail*, 10 September, 2000.

Johnson, Damon, 'Summer of sharks', *The Sunday Times*, 9 September 2001.

Keenan, Amanda, 'City divided over the fate of man-eating shark', *The Australian*, 8 November, 2000.

'Killer shark alert', *News Chronicle, Community*, 7 November, 2000.

Laurie, Victoria, 'Blood in the water', *The Weekend Australian*, 13-14 November, 2004.

Law, Peter, 'Death from the deep', *The Sunday Times*, 18 July, 2004.

Law, Peter and Taylor, Nick, 'Warning: enter at your own risk', *The Sunday Times*, March, 2005.

'Licence to kill was given too late – Barnett', *Subiaco POST*, 11 August, 2001.

Mallabone, Mark and Spencer, Fran 'Rescuers Thought friends Were Practical Jokers', *The West Australian*, 29 October, 1997.

Mallabone, Mark and Townsend, John, 'White Pointers Frequent Visitors', *The West Australian*, 29 October, 1997.

Mallabone, Mark, 'Two Survive Cottesloe Shark Attack,' *The Sydney Morning Herald*, 29 October, 1997.

Martin, Ben, Harvey, Ben and Amalfi, Carmelo, 'Shoot-to-kill order goes out to patrols', *The West Australian*, 7 November, 2000.

Martin, Ben and Harvey, Ben, 'Hooks baited but patrol fails to find sign of killer', *The West Australian*, 8 November, 2000.

Martin, Roger and Brook, Stephen, 'Air, sea hunt for man-eater', *The Australian*, 7 November, 2000.

Martin, Roger and Keenan, Amanda, 'A scream and blood in the sea', *The Australian*, 7 November, 2000.

'Mayor wants air and beach lookouts', *Post*, 18 November, 2000.

McGuirk, Rod, 'Kill Giant Shark, Says Survivor', *The Daily Mail*, 22 December.

Modest heroes who faced shark terror', *Subiaco POST*, 11 August, 2001.

Murphy, A.D., 'Jaws', Film, *Variety*, 17/06/1975,
<http://www.variety.com/review/VE1117792123.htm1?categoryid=31&cs=1>
accessed 14/09/2010.

Paddenburg, Trevor, 'The great wait', *Sunday Times*, 27 March, 2011.

Paxton, John, 'Warriors Of The Deep In Fight For Their Lives', *The Sydney Morning Herald*, 4 March, 1996.

Pennells, Steve, 'Sharks must go: fisherman', *The West Australian*, 12 November, 1997.

Plane, Terry and Altman, Carol 'Second fatal shark attack', *The Australian*, 26 September, 2000.

Powell, Sian, 'Swimming against the tide', *The Australian*, 27 September, 2000.

Price, Matt, 'Old Saint's prayers answered as huge shark misses mark,' *The Australian*, 29 October, 1997.

Price, Matt, 'Seaside culture shattered in fatal seconds', *The Australian*, 7 November, 2000.

Price, Matt, 'Survivors relive the horror', *The Australian*, 7 November, 2000.

Price, Matt, 'Where terror's wave broke the dawn', *The Weekend Australian*, 11-12 November, 2000.

Reardon, David, 'Hunt fails to find killer', *The Age*, 8 November, 2000.

'Roaring trade at Claremont pool', *Post*, 25 November, 2000.

Roberts, Jeremy, 'Mates demand revenge on killer shark', *The Weekend Australian*, 18-19 December, 2004.

Robson, Frank, 'A Monster of Our Own Making', in "Big Weekend", *The West Australian*, Saturday February 17', 2001.

'Shark feeding angers divers', *The West Australian*, 21 August, 2001.

'SHARK KILLS SURFER', *The Sunday Times*, 11 July, 2004.

Ross, Trevor, 'Shark takes toll on dives', *The West Australian*, 27 November, 2000.

Ruse, Ben, 'Shark watch to take to sky', *The West Australian*, 15 November, 2000.

'Serial killer?', *Subiaco POST*.

'Shark attack danger', *The Daily Telegraph*, 22 July, 2000.

'Shark Attacks, Damaging Publicity', *The Sydney Morning Herald*, 6 December, 1932.

Skelsey, Mark, 'Killer shark protected from people,' *The Daily News*, 4 December 1996.

'Spare killer shark, says father', *The West Australian*, 18 December, 2004, 23.

Spencer Mathew, and Plane, Terry, 'Signs pointed to shark horror', *The Weekend Australian*, 30 October, 2000.

Spears, Steve J., 'A perfect killing machine,' *The Sydney Morning Herald*, 29 December, 1987.

'Shark victim's friends return to the water', *Post*, 18 November, 2000.

The West Australian, Tues. 7 November, 2000, Western Australia.

The West Australian, 8 November, 2000.

Thompson, Jodie, 'Family man died in the sea he loved, respected', *The West Australian*, 29 December, 2008,

Watts, Kristen and Anthony, Shaun, 'Feeding Sharks Sparks Warning', *The West Australian*, 3 November, 1997.

Montgomery, Bruce, 'Man-eaters? They'd rather a plump seal', *The Australian*, 26 June, 1999.

'Wanted – secrets of the great white', *The Sunday Times*, 8 October, 2000.

Books

Anderson, Johannes, C. F.N.Z. Inst., *Myths and Legends of the Polynesians*, (1969), Pub. Charles E. Tuttle Company of Rutland, Vermont and Tokyo Japan.

Becker, Karin E., 'Photojournalism and the tabloid press', in *The Tabloid Culture Reader*, (ed. Anita Biressi and Heather Nunn, 2008, Open University Press, New York).

Benchley, Peter, *Jaws*, (London: Andre Deutsch Ltd., 1974).

Benchley, Peter, *Shark Trouble*, (New York, Random House, 2002).

Campbell Butler, Jean, *Danger Shark!*, (1965: The Scientific Book Club, London).

Capuzzo, Michael, *Close to Shore*, (London: Headline Book Publishing, 2001).

Carwardine, Mark & Watterson, Ken, *The Shark Watcher's Handbook*, (London: BBC Worldwide Ltd., 2002).

Coleman, Dierdre, ed., *Maiden Voyages and Infant Colonies*, (London: Leicester University Press, 1999).

Coppleson, Victor, M., *Shark Attack*, (Sydney, London, Melbourne, Wellington: Angus & Robertson, 1958).

Coppleson, Victor and Goadby, Peter, *Shark Attack*, (London: Angus & Robertson, 1958).

Courtney, Victor, *Perth and all this!*, (Sydney: Halstead Press, 1962).

Franklin, Bob, *Newszak and News Media*, (1997: Hodder Headline Group, London and Oxford University Press Inc., New York).

His Hawaiian Majesty Kalakaua, *The Legends and Myths of Hawaii*, (1888), Charles L. Webster and Co., New York.

Jeans, Peter D., *Sea-Faring Lore & Legend*, (U.S.: The McGraw Companies, 2004).

Lemkin, Jonathan, 'Archetypal Landscapes and Jaws', in *Planks of Reason: Essays on the Horror Film*, (Metuchen, N.J., and London: The Scarecrow Press, Inc., 1984).

Magnus, Olaus, *Historia de Gentibus Septentrionalibus*, (1555 A.D.), in *Curious Creatures*, (1890), John Ashton.

Maniguet, Xavier, *The Jaws of Death*, Trans. David Christie (London: HarperCollinsPublishers Ltd., 1992).

McDiarmid, Mac *Shark Attack*, (Sydney: THE BOOK COMPANY INTERNATIONAL PTY. LTD., 1996).

Parker, Steve, *The Encyclopedia of Sharks*, (London: A & C Black publishers Ltd., 2008).

Shone, Tom, *Blockbuster: How Hollywood Learned to Stop worrying and Love the Summer*, (Great Britain: Simon & Schuster UK Ltd, 2004).

Taylor, Philip M., *Steven Spielberg*, (London: B.T. Batsford Ltd.,1992).

Whitley, Gilbert P. *The Fishes of Australia Part 1, The Sharks &c.*, (Sydney: Royal Zoological Society of New South Wales, 1940).

Journal articles

Biskind, Peter, 'Jaws Between the Teeth', in *Jump Cut*, A Review of Contemporary Media, no. 9, 1975, pp. 1, 26, web page, <http://www.ejumpcut.org/archive/onlinessays/JC09folder/Jaws.htm1> accessed 07/10/2010.

Boissonneault, Marie-France, Gladstone, William, Scott, Paul and Cushing, Nancy (2005), 'Grey Nurse Shark Human Interactions and Portrayals: a study of newspaper portrayals of the Grey Nurse Shark from 1969-2003', *Electronic Green Journal*, 1(22). Retrieved from: <http://escholarship.org/uc/item/9nb9h48n> (accessed 08/01/2011).

Callinan, Rory, 'Sharks rampage in Australia', 12 January 2009, *Time*, web page, <http://www.time.com/time/world/article/0,8599,1871007,00.htm1> (accessed 12/12/2009).

Hoberman, J., 'Don't go near the water – the influence of the film *Jaws* on US culture – American Myths', in *ArtForum*, April, 1994, web page, http://findarticles.com/p/articles/mi_m0268/is_n8_16109590/pg_2/?tag=conte... Accessed 17/08/2010.

McCarthy, Terry, et al., 'Why can't we be friends', *Time*, 30 July, 2001 Vol. 158 No. 4, <http://www.time.com/time/magazine/article/0,9171,1000420,00.htm1> accessed 17/09/2010.

Peating, Stephanie, 'Sharks Kill Surfer, reigniting net debate in Australia', 28 January 2005, *National Geographic*, web page, http://news.nationalgeographic.com/news/2005/01/0128_050128_sharknets.htm1 accessed 25/11/2010.

Roche, Timothy, Jackson, Alice, 'Saving Jessie Arbogast', *Time*, 30 July, 2001, Vol. 158 No. 4, <http://www.time.com/time/magazine/article/0,9171,1000420,00.htm1> accessed 17/09/2010.

Ruby, Dan, 'The *Jaws* in the Mirror', in *Jump Cut*, A Review of Contemporary Media', no. 10-11, 1976, pp. 20-23, web page, <http://www.ejumpcut.org/archive/onlinesays/JC10folder/JawsRuby.htm1> accessed 07/10/2010.

Simpfendorfer, C. A. Heupel, M.R. White W.T. and Dulvy, N.K., 'The importance of research and public opinion to conservation management of sharks and rays: a synthesis', *Marine and Freshwater Research*, 2011, 62, CSIRO publishing,

Taylor, Robin, 'When predator becomes prey', *Ecos magazine*, (CSIRO publishing: 2010), web page, <http://www.ecosmagazine.com/?paper=EC156p14> accessed 17/08/2011.

'Summer of the Shark', *Time*, June 23, 1975, Vol. 105, No. 26, web page, <http://www.time.com/time/magazine/article/0,9171,913189,00htm1> accessed 17/09/2010.

'The Summer of the Shark', *Time*, 30 July, 2001, Vol. 158 No. 4, <http://www.time.com/time/magazine/article/0,9171,1000420,00htm1> accessed 17/09/2010.

Watts, Susie, 'Shark finning: Unrecorded wastage on a global scale', *WildAid*, and *Co-Habitat*, September 2003.

West, John G., 'Changing pattern of shark attacks in Australia', *Marine and Freshwater Research*, (2011: CSIRO publishing).

Whatmough, Sally, Van Putten, Ingrid and Chin, Andrew, 'From hunters to nature observers: a record of 53 years of diver attitudes towards sharks and rays and marine protected areas', *Marine and Freshwater Research*, 2011, 62, CSIRO publishing.

Wilson, Robert, 'Jaws as Submarine Movie', in *Jump Cut*, 'A Review of Contemporary Media', no. 15, 1977, pp. 32-33, web page, <http://www.ejumpcut.org/archive/onlinessays/JC15folder/JawsSubmarine.htm1> accessed 07/10/2010.

Wolch, Jennifer, R., Gullo, Andrea, Lassiter, Unna, 'Changing attitudes towards California Cougars', *Society & Animals: Journal of Human-Animal Studies*, vol. 5, no.2, 1997.

Films

Blue Water, White Death, DVD, Peter Gimbel, CBS Broadcasting, 1974

Jaws, DVD, Directed by Steven Spielberg, Universal Studios, 1975.

Jaws, DVD, Directed by Steven Spielberg, 'The Making of Jaws', Universal Studios, 2003.

'Sharks: predators of the deep', DVD, *Discovery Channel*, 2010.

Electronic sources

Benchley, Peter, *Shark Trouble*, web page,

<http://www.peterbenchley.com/newbook.htm> accessed 20/01/2010.

Benchley Peter, (1940-) Biography – Personal, Addresses, Career, Member, Writings, Adaptations, Sidelights, web page,

<http://biography.jrank.org/pages/1842/Benchley-Peter-1940.html> accessed 29/01/2011.

Bright, Michael, 'Jaws: The natural history of sharks', *The Natural History Museum*, web page, <http://www.fathom.com/course/21701777/session4.htm1> accessed 09/08/2011.

'Chinese Americans divided over ban of shark fin soup in California',

<http://www.ibtimes.com/articles/171671/20110629/shark-fin-soup-shark-finning-calif...> Accessed 17/08/2011.

Choi, Charles Q., 'How 'Jaws' Forever Changed Our View of Great White Sharks', *Live Science*, 20 June 2010, web site, <http://www.livescience.com/culture/jaws-impact-great-white-sharks-100620.htm1> accessed 09/02/2011.

Choi, Charles Q., 'People more dangerous than sharks,' *Our Amazing Planet*, 18 June, 2010, web page, <http://www.ouramazingplanet.com/people-more-dangerous-than-sharks-0284/> accessed 09/02/2011.

'Conserving sharks', *Shark Alliance*, web page, <http://www.sharkalliance.org/content.asp?did=1073> accessed 04/09/2011.

Fritscher, Lisa, 'Jaws Movie, Shark Phobia for the Masses', *About.com*, (7th Feb. 2009), <http://phobias.about.com/od/introductiontophobias/a/jawsmovie.htm> Accessed 14/09/2010.

Gottlieb, Carl, *The Jaws Log, 30th Anniversary Edition*, (Newmarket Press, 2005), web page, http://books.google.com.au/books?id=PfuQ8fFexUoC&printsec=frontcover&dg=c arl+gottlieb&source=bl&ots=m_u83zv3fq&sig=UwWVFnH4tl accessed 19/10/2010.

'Guy Harvey applauds decision to ban commercial shark fishing in the Bahamas', 11 July, 2011, web page, <http://guyharvey.wordpress.com/tag/shark-conservation/> accessed 16/07/2011.

Handwerk, Brian, 'Jaws Author Peter Benchley Talks Sharks', for National Geographic News, June 7 2002, web page, http://news.nationalgeographic.com/news/2002/06/0606_sharks5.htm1 accessed 07/01/2010.

Heller Jason, and Barrett, Donna, 3 July 2009, 'Ocean City Shark Tournament – Floating Slaughter Wagon, http://www.divephotoguide.com/underwater-photography-scuba-ocean-news/ocean_c... Accessed 13/02/2011.

'International Shark Attack File', web page, <http://www.flmnh.ufl.edu/fish/sharks/isaf/isafhistory.htm> accessed 23/11/2010.

Kays, Joseph, 'UF Shark expert George Burgess preaches a message of tolerance', *Shark Savers*, 2002, web page, <http://www.research.ufl.edu/publications/explore/v07n1/sharks.htm> accessed 13/02/2011.

Lee, Michelle 'With species in decline, group wants Cape May shark tournaments banned,' 2 February, 2010, *pressofAtlanticCity.com*, web page http://www.pressofatlanticcity.com/news/cape_may/article_bf99cea8-0f94-11df... Accessed 17/02/2011.

Lovgren, Stefan, 'Jaws at 30: Film Stoked Fear, Study of Great White Sharks', in *National Geographic News*, 15 June, 2005, web page, http://news.nationalgeographic.com/news/2005/06/0615_050615_jawssharks.htm1 (accessed 17/09/2010).

Malkin, Bonnie, 'Australian shark attack on teenage girl 'like a scene from Jaws'', 11 January, 2009, web page, <http://www.telegraph.co.uk/nes/worldnews/australiaandthepacific/australia/4217094...> (accessed 12/12/2009).

McGeown, Kate 'Shark attacks: On the increase?', *BBC News*, 5 September, 2001, web page, <http://news.bbc.co.uk/2/hi/americas/1501063.stm> (accessed 10/12/2009).

New South Wales Ocean Baths: swimming with our Coastal Heritage, 'Sharks', (NSW Heritage Office), web page, <http://www.nswoceanbaths.info/topics/t069.htm>

Paxton, Dr John, 'Shark meshing program in need of urgent review', web page http://www.tucs.org.au/~cneville/marineSharkMeshNSW_Paxton.htm accessed 10/03/2011.

Perez, Steve, 'Jaws author explores sharks' territory', SignOnSanDiego.com, *Union Tribune*, web page, <http://www.signonsandiego.com/sports/outdoors/20041214-0951-sharks-benchley.html> accessed 14/09/2010.

'Recent Shark Attacks Spark Hysteria in Australia', 14 January, 2009, *Fox News*, web page, <http://www.foxnews.com/story/0,2933,479874,00.htm1> (accessed 12/12/2009).

'Science in the spotlight: the science of shark finning', *SeaWeb*, web page, http://www.seaweb.org/science/spotlight_sharkfinning.php accessed 02/08/2011.

'Shark Conservation Act', *Animal Welfare Institute*, 7 January, 2011, web page, <http://www.awionline.org/ht/d/sp/i/11225/pid/11225> accessed 25/07/2011.

'Shark conservation: a timeline', *The Humane Society International*, 7 January, 2011, web page, http://www.hsi.org/issues/shark_finning/timelines/shark_conservation_timeline.html accessed 17/08/2011.

'Sharks:Overview', web page, <http://na.oceana.org/en/our-work/protect-marine-wildlife/sharks/overview> accessed 04/09/2011.

Shark Savers, 2007, web page, <http://www.sharksavers.org/en/education/shark-myths/23-media-hype.htm1> accessed 10/12/2009.

'Stop shark finning!', *Ian Somerhalder Foundation*, web page,
<http://www.isfoundation.com/news/creatures/stop-shark-finning> accessed
17/08/2011.

Taronga Conservation Society Australia, web page,
<http://www.taronga.org.au/animals-conservation-science/australian-shar...>
Accessed 23/07/2011.

'Tas shark attack 'like a scene from Jaws'', 11 January, 2009, *ABC News*, web page,
<http://www.abc.net.au/news/stories/2009/01/11/2463283.htm?site=news>
(accessed 16/12/2009).

'Year of the shark 'hype', says expert', *CNN.com./U.S.*, 4 September, 2001, web
page, <http://archives.cnn.com/2001/US/09/03/shark.perspective/>

Web page, <http://www.ussindianapolis.org/> accessed 21/07/2011.