

## FROM WHALE HARVESTING TO WHALE WATCHING: TANGALOOMA 30 YEARS ON

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### ABSTRACT

Tourism that is based upon the coastal and marine environment is experiencing rapid growth. In addition, the demand for opportunities to interact with wildlife in the wild, as opposed to in captive situations, is increasing. These demands are reflected in the increasing popularity of eco-tourism operations which are based on interactions with wild cetaceans.

Tangalooma Whaling Station was located in South-east Queensland, Australia from 1952 until 1962. The Tangalooma station and processing factory harvested 6,277 humpback whales (*Megaptera novaeangliae*) before significant reductions in catch levels forced its closure. The site of the whaling factory is now a tourist resort which began to conduct whale watching cruises in 1992. In addition, the resort has developed a program which allows tourists to hand feed a pod of wild bottlenose dolphins (*Tursiops truncatus*) which visit the beach area adjacent to the resort. Tangalooma provides an interesting case which illustrates the transition from a whale based industry which was destructive and un-sustainable, to one which is based on the protection of cetaceans, and which may ultimately be sustainable.

### INTRODUCTION

It is now widely recognised that tourism which is based upon the coastal and marine environment is a rapidly growing industry (Miller, 1990, Miller and Auyong, 1991). The world-wide growth of whale watching activities in the past five years is indicative of this general trend. The transition from an industry based upon commercial harvesting of large cetaceans to an 'ecotourism' industry based on observing and interacting with whales and dolphins has been rapid. In the short space of three decades a shift in public perception and interest in marine mammals has resulted in a proliferation of whale watching operations in locations as diverse as Canada, California, Mexico, Hawaii, Argentina, New Zealand, Australia and Japan. Whale watching is now a significant economic industry (Forestell, 1990) and many tourist operators are looking to expand into this 'ecotourism' market (Forestell and Kaufman, 1990).

Despite this trend towards protection and whale watching the debate over commercial whaling has intensified in recent years. The International Whaling Commission (IWC), which was formed in 1946 to regulate commercial whaling, implemented a ban on commercial whaling in 1986. However, Japan, Norway and the former Soviet Union have continued to harvest limited numbers of whales, ostensibly for scientific research purposes. In May 1993, Norway announced that it was going to resume commercial whaling operations regardless of IWC policy and now, in 1994, there appears to be a push from Japan to persuade the IWC to allow the resumption of regulated commercial whaling.

Predictably, the Norwegian and Japanese moves have resulted in an outcry from environmental organisations and countries which favour the complete protection of all whales. The 'catch-cry' of 'Save the Whales', which was so popular in the 1970s and early 1980s, has been resurrected and has re-appeared on T-shirts, bumper stickers and posters in an attempt to mobilise public opinion against the re-

establishment of commercial whaling. This 'Save the Whales' revival has focussed on the proposal to establish a Southern Ocean Whale Sanctuary which was adopted by the IWC in May 1994.

Tangalooma Whaling Station was located on Moreton Island in South-east Queensland and whaling operations commenced there in 1952. It has been the state's only shore based whaling facility. Located close to the annual migratory routes of the southern Humpback whale (*Megaptera novaengliae*) the Tangalooma station and processing factory harvested 6,277 Humpbacks (Chittleborough, 1963) before significant reductions in catch levels prompted its closure a decade after its opening (Bryden, 1978). The site of the old whaling factory is now a tourist resort which began to conduct whale watch cruises in 1992. Tangalooma provides an interesting case study of a location that has made the transition from being a facility based upon the harvesting of whales to one which is, at least in part, based upon their protection and the whale watching industry. The history of this former whaling station provides evidence that supports some of the claims that whaling is destructive and non-sustainable. Whale watching, however, may be sustainable and could therefore, in the longer term be more profitable.

### WHALING IN AUSTRALIA

The first whales to be taken by Europeans in Australian waters are thought to have been harpooned from the convict transport ships which delivered prisoners to the colony. It is reported that the vessels the "Britannia" and the "William and Ann" harpooned whales (species not specified) on October 25, 1791 near Sydney (Colwell, 1969). Due to its large yields of whale oil the Sperm whale (*Physeter catodon*) was the early target of whalers around Australia. However, its primarily deep water habitat meant that Sperm whales were a difficult and expensive target. It was soon discovered that the Southern Right whale's (*Eubalaena australis*) winter migration to breed in the bays on the southern coast of the continent made them a far easier, and more economically attractive species for whaling.

By the early part of the nineteenth century British, American and French whaling fleets operated off Australian coasts. These operations soon extended to harvest the seal populations which were abundant in southern coastal areas. Australia's first whaling station was built in Hobart, Tasmania and began operations in 1803. This station became the largest in the British empire by the mid - 1800s and the whaling industry became large enough to be Australia's single largest export industry for the first part of the nineteenth century (Colwell, 1969).

However, as early as 1840 the population of Southern Right whales was already in significant decline. Additional factors such as the availability of substitutes for whale products like petroleum based fuels for lighting and the beginning of gold rushes also contributed to the decline of the industry. Australia's last bay whaling station of this era, Twofold Bay in the state of New South Wales, closed in 1928 (Paterson, 1993). The northern state of Queensland was not a common location for whaling during this time. The Southern Right whale seldom ventured that far north and few Sperm whales were found close to shore. As a result, no shore based whaling stations were located in Queensland during the nineteenth century (Bryden, 1978).

A post world war two demand for whale oil prompted a resurgence of the whaling industry in Australia. The Australian Whaling Commission was established in 1949 to coordinate the development of whaling, particularly in Western Australia. This resurgence was based upon new, more efficient catching and processing technologies and focussed on the winter migratory routes of Humpback whales. Humpback whales migrate annually from their feeding grounds in Antarctic waters up the east and western coasts of Australia to breed in warmer tropical waters. The establishment of the Tangalooma Whaling Station formed part of the re-establishment of the whaling industry in Australia (Jones, 1980).

## THE TANGALOOMA WHALING STATION

The population of Humpback whales which migrated up the eastern coast of Australia was estimated at over 10,000 animals prior to the re-commencement of shore based whaling activities (Bryde, 1978). On December 15, 1950, Whale Products Pty Ltd was established in Sydney for the purpose of carrying out whaling activities off the east coast of Australia (Jones, 1980). This company investigated a number of location options on which to site their operations. The advantages of a site on the western coast of Moreton Island were many. It was close to the migratory route of the Humpbacks and it was close to the port and city of Brisbane. Additionally, the site was undeveloped, relatively sheltered from prevailing south-easterly winds and a cheap lease was able to be arranged through the Queensland state government. As a result, the company decided to establish its operations on a 12 hectare site just north of Tangalooma Point on Moreton Island.

Whale Products appointed an experienced Norwegian whaler, Captain Alf Melsom to manage the development of the station. Construction began in 1951. Three whale chaser boats were purchased and steamed from Norway to Tangalooma. Initially these chasers were crewed by more experienced Norwegian crew and assisted by Australians. A licence for five years was obtained from the Australian federal and Queensland state governments for an annual quota of 500 humpback whales to be taken between May 1 and October 31. Restrictions were placed on the taking of any whale under 10.5 metres in length, or a mother with calf. Whaling operations commenced from Tangalooma on June 6, 1952 and catch levels were extremely high with the one hundredth whale being taken on July 7, barely one month after operations began. Quotas were periodically increased so that by 1953 Tangalooma was licensed to take 700 Humpbacks per year (Jones, 1980).

Usually three whale chaser boats operated from Tangalooma. Every day throughout the season these boats would steam out to the waters north off Cape Moreton. Bow mounted harpoon guns were used to shoot a 73kg exploding harpoon head into the whale. An 1 kg gunpowder grenade within the harpoon head was set at a four second time delay. The internal explosion of the grenade in, or close to, the backbone usually killed the whale. Subsequently, the whale would be inflated with compressed air, to keep it buoyant, and secured by its tail flukes to the side of the boat to be dragged back to Tangalooma.

The Tangalooma processing factory operated 24 hours a day during the whaling season. It employed 120 staff who worked two 12 hour shifts seven days a week. Boats often brought tourists out from Brisbane to the station to watch the flensing teams work on landed whales. A visitor to the Tangalooma whaling station commented that "the flensing deck was covered with pieces of whale in more or less advanced stages of treatment - bare bones, pieces of flesh or intestines littered around or heaped together. The whole deck looked like a giant sized butcher's table - fifty yards long!" (Jones, 1980, p36). Similarly, on Australia's west coast, tourists visited the whaling station at Albany which continued operating until 1978 (Commonwealth of Australia, 1978).

The factory at Tangalooma produced three main whale products. The most valuable of these products was whale oil. This was produced by placing the blubber and bone into large pressure cookers where it was cooked for three to four hours. Impurities were then removed from the oil in separators and it was shipped overseas for use in margarine and other edible fat products. Baleen or 'whale bone' was also exported for use in the fashion industry and 'whale meat meal' was cooked, dried and packaged at Tangalooma and sent throughout Australia for use as a high protein food for livestock (Tangalooma Island Resort undated).

Tangalooma's early days were particularly successful. Between 1952 and 1959 the station had no problems filling its yearly quota of whales and, whenever possible, whale chaser captains selected the largest male animals for harpooning. However, from 1960 the time needed to search for whales began to increase and catch rates began to fall. The 1959 quota of 660 whales was filled in 65 days, but in 1960, it took 75 days to land the same number. In the following year, 1961, Tangalooma was unable to fill its quota before the end of the season. 591 whales were caught.

In an attempt to maintain catch levels a 'spotter' plane began to be used and two new, faster and larger, whale chaser boats were bought. Despite this increased effort, 1962 produced a dramatic collapse in catch levels. By August 5, only 68 whales had been caught, whereas at the same time in the previous year 253 whales had been landed. It became obvious that whaling based upon the east Australian Humpback was no longer economically viable and the Tangalooma Whaling Station closed on August 5, 1962. It was estimated that fewer than 500 eastern Australian Humpback Whales remained (Paterson, 1993). Whaling of Humpbacks was banned in Australian waters in 1963 (Bryden, 1978).

#### TANGALOOMA MORETON ISLAND RESORT

On June 21, 1963 the Tangalooma whaling station and lease was sold to a syndicate of Brisbane entrepreneurs who proceeded to convert the site into a tourist resort. Whalers accommodation was converted into holiday units and the factory and flensing decks to a bar and lounge area. The resort opened for business in December 1963 and catered mainly for local holiday makers and recreational boaters from the Brisbane area.

In 1981 the resort was sold to new owners who began a major upgrading of facilities including the construction of 134 new self contained units, two swimming pools, squash and tennis courts. Currently the resort employs between 85 and 100 staff, caters for a maximum of 470 house guests and between 40 and 300 day visitors (J. Oshome, pers. comm.). A daily high speed catamaran ferry service is run between Brisbane and the resort. Guests are also able to fly to the island and land on an airstrip close to Tangalooma.

Little of the original whaling station is now recognisable. The water supply and power generator facilities are based on the originals and the flensing deck is now used as a shelter for building supplies. The old jetty, where the whale chaser boats used to tie up, has been replaced by a new wharf at the south end of the resort. All that remains of the ramp which was used to haul the whales up to the flensing deck is a series of pile stumps in the water shallows. In only a few decades the transformation of Tangalooma makes it difficult to recognise its original purpose.

#### Tangalooma whale watch cruises

The same features that made Tangalooma an attractive location for a whaling station also make it a suitable location for whale watching. It is close to a major city and arrival point for tourists to Queensland and it is within short steaming time of the Humpback migratory route. In addition, the majority of Moreton Island is national park and Moreton Bay is a marine park administered by the Queensland Department of Environment and Heritage. Tangalooma is, therefore, an attractive destination for the 'eco-tourist'.

Prior to 1992 whale watch cruises were not considered by the resort due to the low numbers of whales and the consequent problems of being able to reliably sight them. The growth of numbers of Humpback whales since whaling operations ceased has been slow but current estimates place the population at around 2,000 animals (Pacific Whale Foundation estimates). However, numbers are now sufficient that during the migration the sighting of Humpbacks in the vicinity of Cape Moreton is virtually guaranteed.

In 1992, the Tangalooma Resort ran three trial whale watch cruises using the resort ferry, the 'Tangalooma Flyer'. These trials proved successful and during the 1993 whale migration the Tangalooma Flyer conducted 43 whale watch cruises. Whales were sighted on all but three of these cruises (Tangalooma Whale Watch Records, 1993). The twice weekly cruise originated in Brisbane and proceeded via the resort, where additional whale watchers would be collected, out to the Cape Moreton area to view the whales. These cruises are proving increasingly popular and many thousands of tourists

went whale watching from Tangalooma during 1994. Numbers are expected to further increase in 1995 (J. Osborne, pers. comm.).

### **Tangalooma dolphin feeding program**

In the early part of the nineteenth century it was reported that cooperative fishing between local Aborigines and dolphins occurred on the shores of North Stradbroke Island which borders the southern part of Moreton Bay (Fairholme, 1856; Hall, 1984). More recently dolphins have been observed feeding behind prawn (shrimp) trawlers who work the bay during the summer months (Corkeron et al., 1990). Employees of the Tangalooma Reson report the frequent sighting of dolphins near the resort for over two decades (M. Keeley, pers. comm.). It appears, therefore, that interaction between dolphins and humans in Moreton Bay has been common and has occurred over a significant time period.

In recent months a feeding program with a group of wild Bottlenose dolphins has been established at Tangalooma (Orams, 1994). This program appears to complement whale watch cruises and is proving to be an additional attraction for people who enjoy observing and interacting with marine mammals.

In April 1992, a mature female Bottlenose dolphin together with her young calf were visiting the area beneath the resort wharf and appeared to be particularly interested in fishers up on the wharf. Several small fish (most probably mullet, *Mugil georgii*) were thrown to her and eventually she ate some of them. Subsequently this animal was fed until she gained enough confidence to take fish which were hand held.

Throughout the remainder of 1992 additional dolphins joined the feeding. Currently between six and eight individuals visit the wharf area nightly to be hand fed. This feeding is being promoted as an attraction' for resort guests and up to 100 guests feed the dolphins each evening (see Orams, 1994 for a more detailed discussion of this program).

### **WHAT ARE THE LESSONS?**

There is a growing demand for interaction opportunities with dolphins and whales in the wild and Tangalooma is one Australian example of this trend. It is an interesting case study because it illustrates a major shift in attitudes and commercial activity associated with marine mammals that has occurred in Australia in the past 30 years. This change has occurred rapidly, in less than one human generation. More importantly, however, is the fact that Tangalooma provides us with an historical record which shows the dangers associated with exploding wildlife with inadequate knowledge and controls. The end result being non-sustainable harvest rates and eventually an endangered species.

It is likely that whale watching can be a sustainable industry in the longer term. Certainly its non-consumptive nature means that it is more likely to be so than whale harvesting. However, more study on the impacts of whale watching on whales is needed before it can be established if whale watching will, truly be, sustainable. The future success of Tangalooma as an ecotourism destination with attractions based upon interacting with dolphins and whales will be interesting to watch. There is a need to examine natural laboratories like Tangalooma for they can provide valuable lessons with regard to wildlife management decisions. Irrespective of the moral debate over the commercial harvesting of whales, the case of Tangalooma does provide support for the argument that 'saving the whales' can simply be smart business.

### **CONCLUSION**

There is little doubt that marine mammals and particularly cetaceans evoke a strong emotional response in people (Forestell and Kaufman, 1990). This response may be a "window" through which the importance of caring for and conserving the marine environment is able to be effectively communicated. A number of

authors have suggested that ecotourism opportunities such as these can be used to educate tourists to promote a change to more environmentally responsible behaviour (Orams, 1993, Hackett, 1992, Gudgion and Thomas, 1991, Forestell, 1990, Hungerford and Volk, 1990).

It is important, therefore, that **firstly** these interactions are wisely managed so that they do not become another form of human exploitation of marine mammals. Secondly, it is possible that through the use of education/interpretation programs associated with these interactions that this 'window' into the marine environment can be a *means through which* 'ecotourists' learn and appreciate other marine life (Forestell, 1993). The aim of such programs should be ambitious. Ecotourists can be prompted to go a step beyond changing their attitudes to actually changing their behaviour so that their actions do not adversely affect the marine environment and the animals that live within it.

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