

CHAPTER 4

EDUCATION

Public Awareness about Cetacea

4.1 Proprietors of oceanaria claim that they play a significant role in developing awareness of cetacean welfare. Mr R. Abel, who has applied for a permit to establish an oceanarium in Victoria, has stated that oceanaria are needed:

'... to continually expose the public to the animals to develop concern and awareness of their welfare and environment [and] to develop our knowledge and understanding of the animals and their needs to better protect them in the wild.'¹

4.2 It is commonly accepted that oceanaria have made a significant contribution to the current high level of awareness and concern about cetacea.

4.3 Oceanaria seem to have been the first to provide the opportunity for large numbers of people to see cetacea. The initial realisation that people were fascinated by cetacea frequently seems to have been accidental. Once realised, however, specialised facilities were developed to cater for this interest. In Japan, for instance, dolphins had first been exhibited in 1930. In 1953, however, a number of dolphins were captured in a small natural bay of roughly one hectare in Mito for studies on age. The dolphins, mainly Stenella coeruleoalba, attracted a great many interested spectators. It is claimed that many people, who were not able to distinguish dolphins from fish when the Mito dolphins were first captured, were later able to

recognise different species of dolphins and porpoises and their behaviour. The number of oceanaria increased from two in 1960 to five in 1965, 13 in 1970, 16 in 1976 and 27 in 1982.²

4.4 In Australia in the early 1950s, a dolphin was caught in a fishing net at the mouth of the Tweed River and was placed, as a joke, in the local public swimming pool. The pool operator noticed that many people were coming to the pool, not to swim but to see the dolphin. He started to charge sixpence a look. Realising the potential of displaying dolphins, he established the Tweed Heads Porpoise Pool.³

4.5 It appears that public fascination with killer whales was also discovered by accident. In 1961, a large, old, female killer whale entered Newport Harbour, California and was taken to the newly established Marineland of the Pacific at Palos Verdes where the staff tried vainly to keep it alive. In 1964, a female killer whale, harpooned off Vancouver Island, was transported to Vancouver Aquarium. It lived there for three months in a temporary enclosure in the harbour, where it displayed many appealing characteristics and received much publicity. A large, male killer whale, which was caught in a salmon net, was towed in a floating pen 700 kilometres to Seattle Marine Aquarium. It lived in the pen for one year and responded well to training.⁴ These animals generated so much public interest that catching of killer whales started in earnest for the ready market provided by oceanaria. Little was known about killer whales before these events. It is claimed that previously it had not been known that whales could live out of water and 'the killer about which stories were told of attacking men on iceflows, etc., etc. was shown to have gentle qualities which caused many people to reflect deeply about this beautiful creature'.⁵

4.6 Before the mid-1960s it is probable that many people would only have become aware of cetacea by seeing them in oceanaria, which were becoming more numerous and attracting larger audiences. After that time, other developments began to contribute to a wider interest in and concern about cetacea. In the late 1960s songs of the humpback whale were taped and circulated around Washington D.C. An analysis of the songs was published in Science in 1971 and a record released in 1972. It was claimed that after hearing these songs, Christine Stevens, President of the Animal Welfare Institute in the U.S.A. was moved to, 'almost singlehandedly', push a resolution for a ten year moratorium on the killing of whales through the United States Senate in 1971.⁶

4.7 In 1966 Jacques Yves Cousteau produced his first film of underwater life on American CBS television. From 1968 some of his films in the television series entitled 'The undersea world of Jacques Cousteau', documented the life of cetacea in the wild. This series was widely acclaimed and very popular. Cousteau commented:

'Television for me is the greatest reward there is. Making films and writing books is good but not as thrilling. With television you know that on one evening, 35 to 40 million people are going to see dolphins.'⁷

Constant improvements in underwater filming technology and the immediate popularity of wildlife underwater exploratory series led to a proliferation of high-quality nature films documenting much of what is currently known about cetacea.

4.8 In 1914, the Director of the New York Aquarium was the first person to publish extensive observations on captive cetacea, which included descriptions of swimming, feeding and play behaviours, aerial displays, social behaviour and comments

on their visual acuity. Detailed behavioural descriptions of the cetacea at Marineland, Florida, were published by McBride and Webb in the 1940s.⁸

4.9 Scientific study of cetacea had been proceeding since the middle of the nineteenth century. Initially, so little was known about the cetacea taken captive that oceanaria could not even identify the different species. Mr R. Abel asserted that 'when the Florida Marine Park opened they sent a team to California, first of all to find out whether there were such things as dolphins in the Pacific'.⁹ However, research on cetacea increased from the 1950s as the numbers of captive cetacea increased. These findings were published in both scientific and popular journals. In the last two decades the United States Navy Department has conducted extensive studies of marine mammals in naval centres at Port Mugu and San Diego (California) and Kaneohe and Oahu (Hawaii) providing much information on physiology, anatomy and diseases of cetacea. Early knowledge of anatomy, distribution, migration, and feeding habits had been obtained from studies of commercially harvested cetacea.

4.10 Knowledge of behaviour, physiology, nutritional requirements and diseases advanced considerably in oceanaria in the 1960s, especially where they employed veterinarians. A significant proportion of the current information on marine mammals is a result of interaction between these people and various government and university laboratories.¹⁰

4.11 Innovations in photographic, electronic and audio-visual technology have recently facilitated the observation of wild cetacea over extended periods. Currently, 'field studies emphasising radio tracking, static tagging and observations of naturally marked animals have provided insights into diving behaviour, movement patterns, population structure and social behaviour' of wild cetacea.¹¹

4.12 Significant numbers of people were now learning about cetacea through oceanaria, audio-visual media and published studies on cetacea. At the same time, people realised that certain species of whales were threatened with extinction through commercial whaling. Oceanaria had made a significant contribution to a changed perception about cetacea. Orcas had often been considered fierce and dangerous and dolphins were, in some countries, seen as a threat to commercial fishing. In oceanaria the public found that cetacea were gentle, intelligent and sociable animals. When the campaign to save the whale began in earnest, numbers of the public were already sensitised and sympathetic to cetacea.

4.13. Saving the whale was the first step in a wider campaign to conserve and protect the environment. At the same time a new ethic was emerging which was aimed at shifting the perspective on the issue of human-animal relations to recognise the moral claims of other species.

4.14 The campaign to save the whale was very successful in raising public awareness about cetacea. In the U.S.A. it was claimed that:

'a survey of environmental organisations indicates that over \$25 million was given to whale protection efforts in 1981 in the form of contributions and merchandise purchases from which the profits accrue to environmental organisations. Many contributors, however, are unlikely to ever see a whale alive, but their contributions nonetheless attest to the value they bestow upon knowing that whales will continue to exist.'¹²

The Endangered Species Conservation Act, which included species of whales, was passed in 1969 and the Marine Mammal Protection Act in 1972. In the same year, the United Nations Stockholm Conference called for a ten year moratorium on whaling. The Convention on International Trade in Endangered Species of Wild Fauna and Flora was negotiated by more than 70 countries in 1973.

4.15 In Australia, the passing of the Whale Protection Act, 1980 was influenced by the pressure of public opinion on the issue. At the height of the campaign, a poll conducted by Project Jonah in 1977 indicated that 69 per cent of Australian voters thought that Australia should give up the killing of whales immediately. In the report of the Inquiry into Whales and Whaling it is stated that:

'It is relevant to note the high degree of interest shown in the question whether whales should be killed or not. This may have been due to the widespread public interest in the whole question of Australian whaling, and whaling generally, following the meeting of the International Whaling Commission in Canberra in June 1977.'¹³

4.16 This widespread public interest in the protection and conservation of cetacea may have been partly caused and contributed to by the sympathy aroused in people having seen cetacea in oceanaria. However, evidence indicates that few oceanaria contributed directly to the conservation of whales either through active participation in the campaign to stop whaling or in informing the public visiting their facilities about the demise of certain species of whales through commercial whaling. Paul Watson of the Fund for Animals noted that, at Sea World in the U.S.A., a complex of oceanaria with an annual attendance of seven million people:

'... there is very little mention of the political reality of whaling. When I asked a staff member the reason for this I was told that it was Sea World's policy to not be involved in the politics of whales.'¹⁴

4.17 However, in Australia, Hec Goodall, Proprietor of Pet Porpoise Pool in Coffs Harbour campaigned actively for the cessation of commercial whaling by writing articles, speaking at meetings, working in association with Project Jonah, making petitions available at his oceanarium and giving evidence to the Inquiry on Whales and Whaling held by Sir Sydney Frost.

4.18 In a national survey, 75 per cent of people in Victoria thought that Australia should give up whaling immediately - the second highest State percentage - while 41 per cent were 'very interested' in the debate - equal highest State percentage. Project Jonah, Victoria, has pointed out that this high degree of awareness occurred in a State which did not have an oceanarium¹⁵, indicating that, at least for Victoria, oceanaria do not contribute to public awareness on the issue of cetacean conservation. It also pointed out that a high level of public response to and success with rescuing stranded whales has occurred in Victoria¹⁶ and Tasmania where no oceanarium exists.

4.19 However, oceanaria's past contribution to public awareness about cetacea is generally acknowledged even among many of their strongest opponents. Paul Spong, for instance, has stated that:

'Oceanaria have made a huge contribution to our cause. And we must give them credit for it. I'm serious. Without the public display of cetaceans we would have almost no idea of what they are. Maybe we might have gleaned something from Greek history, but, by and large, without the oceanaria, the mass awareness of cetaceans that exists today and the resulting mass concern for their fate would not be a reality. So, please let us acknowledge this debt.'¹⁷

Opposition to the Educational Role of Oceanaria

4.20 Many of those who acknowledge the past contribution of oceanaria now oppose keeping cetacea captive for educational purposes. They consider that display of cetacea in a captive setting reinforces the notion that humans are entitled to dominate and exploit animals. Project Jonah, Victoria, criticised what it saw as:

'... the tacit assumption implicit in dolphinarium displays that the capture and exploitation of a weaker animal (e.g. dolphins) by a stronger animal (e.g. man) is perfectly legitimate.'¹⁸

They consider that:

'An important development in twentieth century philosophy has been the notion that might is not of itself right, that the presence of the power to perform an action does not legitimise the action. The rights of the weak (be they children, the elderly, the handicapped or animals) are increasingly being recognised, and to continue to legitimise animal exploitation to our children in the form of public performances of captive dolphins is to miss the opportunity to take a giant philosophical stride forwards.'¹⁹

4.21 Australian oceanarium displays and publicity usually emphasise the subordinate relationship of cetacea to trainer in captivity and concentrate on the readiness of cetacea for and susceptibility to training rather than on their own natural attributes. Thus the publicity booklet for Sea World, Queensland states that:

'One important factor about Sea World aside from seeing people enjoy themselves, is encouraging children to become involved, observe and appreciate the wonderful world of

the Sea. Since 1974 Sea World has offered Brisbane and near surrounding schools, the opportunity of organised education programmes within the park. Students are treated to a dolphin training session and from the accompanying commentary, students learn about marine mammals and training techniques.²⁰

4.22 Publicity for Atlantis Marine Park in Western Australia, produced in newspapers and on television and radio, advertises: 'Kids, how would you like to teach a dolphin to jump, to leap and to somersault? Come to Atlantis during the August school holidays and get your chance to be a dolphin trainer'. A publicity handout from Atlantis shows three people standing on the backs of four dolphins. An issue of Atlantis Dolphin Log, a quarterly newsletter for children published by Atlantis, devoted over half of its space to aspects of dolphin training. Less than one column was given to providing information about the natural history of cetacea.

4.23 Many critics, who oppose the exploitation of cetacea in oceanaria for profit, advocate the extension of facilities for viewing cetacea in the wild. However, this also has been seen as a form of exploitation. Dale Jamieson and Tom Regan have stated:

'similarly unacceptable, though for different reason is the fledgling whale watching industry. Whales do not exist as visual commodities in an aquatic free market, and the business of taking eager sightseers into their waters, though non-consumptive, is exploitative nonetheless, morally analogous to making a business of conducting tours of human beings who either cannot or do not give their consent to be looked at.'²¹

4.24 Whale watching in the wild has been developed into a lucrative industry. In California in 1981 it accounted for 255 730 passengers and gross revenues exceeding US\$2 167 000. In New England in the same period 73 250 thousand passengers

generated a gross revenue of over US\$1 million²² At the International Marine Mammal Conference held in Bergen, Norway in 1976, it was estimated that 'the dollar importance of whale watching in the wild and in captivity, of television shows and movies about whales, of whale books, of the recorded music of whales, and of art works inspired by whale shapes and rhythms, amounts to 200 million dollars a year'.²³

4.25 Against critics who consider that the role of oceanaria, in raising public awareness, has been superseded by the impact of the conservation movement, it has been asserted that an active educational component is offered in oceanaria which teaches viewers about cetacean welfare and preservation. It has been stated that there has been a 15-fold increase in the education staffs of zoos and aquariums in the United States since 1976 with between five and ten per cent of annual operating budgets allocated specifically for educational programmes²⁴ A survey of 112 institutions in the U.S.A. and Canada in 1983 indicated that:

'in addition to their basic display programs, [most] supported either specific education departments and staff or co-operated in in-house and out-reach classes in conjunction with local schools and universities. Many were associated with internship and special education programs and published a regular bulletin or newsletter containing natural history information.'²⁵

4.26 No qualitative assessment of the aim or content of these educational programmes was undertaken by the survey. Paul Watson of Fund for Animals in the U.S.A. stated:

'We are not happy with the way the orcas are presented at Sea World, although it is true that 7 million people a year are able to experience the whales at Sea World. We do not believe that they are exposed to Orcinus orca in a way that will properly convey the natural behaviour of this particular species. Whereas the Vancouver Public Aquarium places emphasis on natural behaviour, Sea World is

more inclined to provide entertainment than education. Sea World advertisements stress the entertainment aspect of a visit to Sea World. Not much is said about the educational benefits.'²⁶

4.27 In Australia a summary of the educational programmes offered by each oceanarium is given below.

Education Programmes in Australian Oceanaria

African Lion Safari, Warragamba, N.S.W.

4.28 No educational programme is offered. Ms Fiona Smith worked as an animal trainer at Warragamba and was hired in 1983 to develop an educational centre there. She has stated:

'Warragamba is purely an entertainment facility. There is no educational component offered, even though the vet and various trainers have urged management since the late 70s to develop this side of the presentation. I was asked by the vet if I would be interested in developing an Educational Centre and was hired by Mr De Chellis in December 1983 on that basis. In six months, one meeting was held between Mr S. Bullen, Mr P. De Chellis and myself to discuss that matter and the proposed classroom was emptied of pinball machines, which have since been returned.'²⁷

The proprietor of Warragamba stated:

'... there is not as such, an educational programme, apart from looking at the animals. We are fixing up a small theatre at the moment where we are going to show films and slides, and it will be controlled by tape recorder ...'²⁸

Final year students at the Faculty of Veterinary Science, University of Sydney, have accompanied Dr Hyne for routine checks of the animals and are involved in a preventative medicine programme using Warragamba's captive marine mammals. A Wildlife Diploma (a post-graduate qualification of the Faculty) requires access to animals in captivity.

Atlantis Marine Park, Yanchep Sun City, W.A.

4.29 The management states that aspects of the educational programme include structural tours for school groups to enjoy a 'behind the scenes' experience of the marine mammal and aquarium facilities. At training and feeding activities for different species, a member of the marine animal staff shares information on habitat, husbandry, diet and general behaviour of each species. Educational tapes run continually at key locations and these complement information signs which describe the history and distribution of each species. Work experience programmes in the aquarium or with marine mammals have been conducted with over 40 secondary school students. Twenty veterinary students from Murdoch University have undertaken projects or gained professional experience. Senior staff of Atlantis lecture on marine mammal biology at tertiary institutions and professional associations. Atlantis has acted as host to the Wildlife and Fauna Group of the XXII World Veterinary Congress held in Perth in 1983 and staff have participated in national radio and television productions dealing with marine animals.²⁹

Marineland of South Australia, Adelaide, South Australia

4.30 No educational programme is offered. The General Manager of the oceanarium stated that Marineland was primarily an entertainment venue although it has always been felt by the management that there was a place for an educational programme as 20 per cent of attendances were by structured school groups.³⁰

King Neptune's Park, Port Macquarie, New South Wales

4.31 The proprietor claimed that, as this oceanarium was situated at the end of the Oxley Highway, it attracted visitors from western New South Wales, many of whom had never seen the ocean. This was also their first contact with live dolphins. Trainers gave information on the species during performances. Students from science classes in schools from within the area experienced an 'eye to eye' definition and description of the cetacea. Project sheets were distributed to schools.³¹

Pet Porpoise Pool, Coffs Harbour, New South Wales

4.32 The oceanarium provides a programme on dolphins for schools within a fifty mile radius. Lectures are offered, depending on age group. Audio-visual material includes autopsy slides, photographs of cetacea in the wild and material on diseases. Other materials are a basic essay on dolphins, posters and a question and answer sheet for school children as well as information supplied during the display. The oceanarium has a collection of marine scientific papers and books. It liaises with Australian and overseas scientific institutions and exchanges information. The management stated that the Pet Porpoise Pool has been used as a model for other programmes by ANPWS.³²

Hamilton Island, Queensland

4.33 No educational programme is offered.

Sea World, Surfers Paradise, Queensland

4.34 Sea World provides a programme for primary and secondary schools which includes audio-visual presentations, lectures on marine mammals by staff and the veterinary

consultant, and provision of educational material for project use, including question and answer fact sheets, posters and a general essay on dolphins.³³

4.35 Proponents of oceanaria consider that one of their most important functions is 'to continually expose the public to the animals to develop concern and awareness of their welfare and environment'. This has not always been implemented in Australian oceanaria. Three of the seven oceanaria exhibiting cetacea have no educational component at all. Programmes offered by oceanaria provide some information about cetacea both in captivity and in the wild but less opportunity is provided for the general public to learn about issues of cetacean welfare generally and about specific conservation and preservation problems facing cetacea.

4.36 Critics of oceanaria have questioned the extent to which a display in an artificial setting can teach about the animal in its natural environment. One critic has stated:

'A paramount goal of environmental education is to establish in its target audiences of learners an appreciation of the ecological subtleties and balances of whatever biophysical system is being taught. There is no way that the dolphinarium that I have seen elsewhere could be argued to be a reasonable approximation of the natural eco-system of dolphins.'³⁴

4.37 There has been an attempt to make captive conditions simulate more closely the natural eco-system of the animal being exhibited. A workshop of the American Association of Zoological Parks reported that:

'Those who work with captive animals in aquariums and zoos have a special obligation to convey knowledge of the natural world to the public and to interpret the lives of animals accurately. Aquariums and zoos are obligated to portray animals as they are, to display animals under conditions that, so far

as possible, allow them to behave naturally.
and to offer them adequate social contact,
ideally with others of their species ...³⁵

Conditions of display in Australian oceanaria in the majority do not simulate a natural environment. Facilities at Atlantis Marine Park, Marineland of South Australia, Pet Porpoise Pool, King Neptune's Park and African Lion Safari are unlandscaped concrete pools which bear no resemblance to the cetacean's natural marine environment. Atlantis, situated near the sea and constructed recently, could have been expected to make a more significant contribution to simulating a natural habitat. Sea World, also situated near the sea, has a landscaped shelving pool with sandy bottom which, more adequately represents a marine environment.

4.38 Saayman and Taylor have commented:

'... while it is relatively practicable to provide many terrestrial mammals with favorable seminaturalistic conditions in game reserves, it is difficult, if not impossible, for the majority of institutions to reproduce in captivity the necessary prerequisites to cater for the unique socioecological adaptations which the dolphin has made over millions of years.'³⁶

4.39 Some of the tricks cetacea are trained to perform, such as jumping for balls or using sonar to locate objects, are extensions of their natural behaviour in the wild. However, other tricks, such as having people ride on the back of the dolphin, jumping through fiery hoops, or emulating human conversation out of water, are obviously devised solely for entertainment.

Viewing Cetacea in the Wild

4.40 Marine mammals appear, in their own habitat, at the Penguin Parade at Phillip Island, at Monkey Mia, where dolphins visit, and at Warrnambool, where Southern Right whales may be seen about July each year.

4.41 However, there are a number of problems associated with viewing cetacea in their own habitat as an alternative to seeing them displayed in an oceanarium. In Australia, this form of viewing of cetacea is just starting to become popular. Facilities which can sustain large attendances have not been developed for whale watching from the shore although plans are underway at Warrnambool. Watching whales from boats off the shore has not been taken up as a commercial proposition. Monkey Mia is in an isolated area of Western Australia. Attendances at oceanaria in Australia last year exceeded one and a half million and have been, on the average, increasing. The present conditions for viewing of cetacea in natural surroundings could not sustain the numbers of people who visit oceanaria. Furthermore, there is no guarantee that the cetacea will be present when people go to see them. At Monkey Mia, the dolphins often remain away from the site for three to four days. At Warrnambool, the whales may only be seen around July. Watching from the coast or even in boats has the disadvantage that what can be seen of their behaviour above the water is a small part of the activity occurring underwater and, unless feeding or breeding, they are unlikely to remain in the same position for long.

4.42 There is also the danger that watchers may, inadvertently or otherwise, harass the animals - an offence under the Whale Protection Act, 1980. This is a problem in the U.S.A. where many boats go out to sea to enable people to see cetacea. Although harassment of cetacea in the wild has not been a major problem in Australia, some incidents have been reported

at Monkey Mia. The ANPWS is currently considering guidelines aimed at developing '... an educated and sympathetic public able to derive the most from their experience without unnecessarily affecting the cetaceans with which they interact'.³⁷

4.43 Hec Goodall considers that the pressure of the growing number of visitors at Monkey Mia could affect the area and concludes:

'... we frankly see no easy solution and have to realistically concede that the delightful dolphin situation at Monkey Mia may sadly have a limited future ...'³⁸

He believes that it is almost impossible to duplicate anywhere else in Australia the favourable circumstances at Monkey Mia of an isolated, unpolluted, sparsely populated area with a few interested, gentle people who had access to ample fresh fish and a lot of leisure to patiently and slowly cultivate the dolphins' initially hesitant interest.

4.44 No studies have been carried out which compare the educational impact of seeing cetacea live in oceanaria with viewing them in the wild. Many whale enthusiasts attest to the strong effect of seeing live cetacea for the first time, whether this occurred in an oceanarium or in the wild. It has been stated that:

'there is something about the experience of being close to a whale or dolphin that continues to draw thousands of people each year to aquariums and the ocean ... This is the lure of oceanariums, whale watching trips and dolphin shows.'³⁹

4.45 Both forms of viewing require supplementary interpretive and educational programmes to teach people about what they are seeing. In the U.S.A., when whale watching changed from being the recreation of a few enthusiasts to a business for

thousands of visitors, entertainment and educational facilities were added and experienced naturalists accompanied excursions to answer questions.⁴⁰

4.46 A study of whale watching in the U.S.A. concluded that seeing cetacea in their own environment has fostered awareness of and concern for the marine environment generally. It stated that:

'many people who go whale-watching out of curiosity or enthusiasm for whales have little or no interest in other marine life. But the experience of seeing whales in their natural habitat leads many to take an active interest in the marine environment.'⁴¹

The move among many institutions to display animals in environments approximating their natural habitat indicates that there is a perception that the impact is greater when animals are seen in their own environment.

Audio-Visual Displays and Models

4.47 Some critics of oceanaria have argued that the advanced technology of underwater filming makes live display unnecessary anyway. Sidney Holt has stated that:

'we are now in an era when film and video, camera and typewriter, handled by dedicated naturalists, can at last reveal to us and show to the public what wild animals really look like and how they behave and live ... If intentions are educational then it would be far better to invest in securing and widely distributing more such material than in constructing yet more oceanaria.'⁴²

4.48 Television and other audio-visual programmes can present the characteristics and behaviour of cetacea more effectively than any other medium of display through the use of sophisticated underwater technology. They can also have a strong

impact on viewers. For example, a television station in San Francisco, which broadcast a locally produced documentary on whales, was pledged \$35 845 for the whale in the 17 minute break that followed the screening of the film.⁴³ Critics of television as an educational resource state, however, that there is a loss of information in half-hour specials which reveals the animals entire life in a matter of minutes. The complexity of content, scale and dimension of the environment, the actual presence of the animal and the sense of interaction with it cannot be adequately conveyed through this medium.⁴⁴

4.49 School education programmes and displays such as the 'exploratorium', housing full-scale models of the blue whale and sperm whale, proposed by Project Jonah⁴⁵ are also excellent educational resources. However, it is obvious from attendances at oceanaria and at areas for viewing in the wild, that people wish to experience cetacea live. It seems that people wish to see live displays after their curiosity has been aroused by an audio-visual programme or they seek more information about the animal after seeing it live.