# 11 Marine ecotourism in the New Zealand urban context: Emerging trends, new challenges and developing opportunities

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## INTRODUCTION

The marine tourism industry has experienced rapid growth over the last two decades (Orams, (1999). In New Zealand marine wildlife has emerged as a popular focus of ecotourism development (Higham, Carr, & Gale, 2001). The marine environment in New Zealand offers a number of recreational opportunities, including a large variety of wildlife, such as whales, dolphins, seals, penguins, and pelagic birds. Interestingly, many ecotour operators offering tours to view or interact with marine wildlife are located in New Zealand's urban or urban fringe areas. By most definitions the very term 'urban ecotourism' is an oxymoron. However, it was noted that urban and urban fringe areas in New Zealand have been at the forefront of recent developments within the ecotourism sector. This paper challenges the plethora of definitions of (marine) ecotourism by presenting a case-based assessment of urban ecotourism development in New Zealand. The cases presented in this paper show enviable performance records as measured in terms of operation development, economic performance, local and regional tourism development, contributions to conservation projects of national interest, restoration of indigenous natural resources, research and education. It concludes that urban ecotourism in marine settings, while at odds with most definitions and much research in the field of ecotourism, may in fact provide valuable insights into operationalising the otherwise largely inoperable definitions of ecotourism.

## NEW ZEALAND'S LEGISLATION FOR MARINE TOURISM

Due to the tremendous growth of the marine wildlife watching industry and the potential impacts this brings with it, researchers recognise the urgent need for appropriate planning and management (Wilson, Garrod, & Bruce, 2001). Wilson *et al.* (2001) claim that many of the problems and conflicts in marine and coastal management can be found in overall procedural, planning, policy and institutional weaknesses. The Fourth Labour Government in New Zealand (1984-1990) initiated a major review of the management of resources and the legislation for their management. This review resulted in the proposal

of the Resource Management Act (RMA), which was passed by the government in 1991 (Collier, 1994). The RMA replaced a variety of older statutes, for example the Water and Soil Conservation Act 1967, and the Town and Country Planning Act 1977. The RMA identifies five types of resource consent, including land use consents, subdivision consents, coastal permits, water permits, and discharge permits (Collier, 1994). In addition to the RMA, New Zealand has quite rigorous rules and regulations for the management of any use of marine mammals, including the use for tourism purposes. Management of marine mammals in New Zealand is based on two major pieces of legislation: the Marine Mammals Protection Act (1978), and the Marine Mammals Protection Regulations (1992). In many parts of New Zealand ecotourism management is also subject to voluntary codes of conduct implemented by operators.

Any commercial business operating within New Zealand's conservation estate is required to hold a permit, issued by the Department of Conservation (DoC). The requirements to obtain such a permit are manifold, and the Department of Conservation assesses the applications carefully. The proposed operation should not be contrary to conservation management strategies or have significant adverse effects on the species targeted. In contrast, they should be in the interest of conservation and protection of the mammals. In addition, it is required that the operator has sufficient experience with the species in question, and that education is a vital part of the venture (Constantine, 1999). Permits in New Zealand are very limited, in order to keep the stress and negative impacts on wildlife as low as possible, and in order to run operations viably. Limiting the number of permits, and therefore the number of tours and tourists, is meant to ensure that the wildlife populations maintain healthy and stable. Referring to the Marine Mammals Protection Act and the Marine Mammals Protection Regulations in New Zealand, Markowitz and Associates (1999:12) refer to Hardin (1968) and state that 'by restricting the access of capitalist enterprises to this natural resource, the New Zealand Department of Conservation has effectively avoided the "Tragedy of the Commons", greatly increasing the long-term benefit to the Kaikoura community and protecting the dusky dolphins population from unsustainable harassment'. They suggest that the DoC model in New Zealand could be a role model for the management of marine mammal tourism at other locations around the globe.

Notwithstanding these comments, it is noteworthy that the management of marine ecotourism in New Zealand remains fraught with difficulty. One particular challenge relates to the inability of the Department of Conservation to police permitted and non-permitted tour vessel operators in the vicinity of marine wildlife. This is a particular issue in instances where permitted marine mammal operators carry visitors in the same waterways as non-permitted operators including scenic cruises, fishing charters andprivate/recreational boat users. Lusseau's (2002) research confirms that in many cases the latter (non-permitted operators) spend more time in contact with marine mammal populations than their permitted counterparts.

Furthermore a range of socio-cultural barriers exist in this field. The fact that legislation governing marine ecotourism is developed at the central government level has resulted in resentment and resistance when implemented in regional and peripheral locations

(Lusseau, 2002). Local management authorities are therefore often perceived by peripheral communities as prioritising central government concerns over the economic development interests of remote communities. The alienation of management agencies and tourism operators has emerged as a significant barrier to effective management in many marine ecotourism contexts (Higham & Lusseau, in press). Orams (2002) also notes the complexities of whale-based tourism management given the divergence of indigenous Māori and non- Māori cultural values associated with whales in New Zealand.

## DEFINING ECOTOURISM

By definition ecotourism takes place in natural, relatively undisturbed areas (Ballantine & Eagles, 1994; Blamey, 1997; Ceballos-Lascurain, 1987; Eagles & Cascagnette, 1995; Fennell, 1999; Holmes, 1993; Krippendorf, 1987b; Ross & Wall, 1999; Sirakaya, Sasidharan, & Sönmez, 1999; Valentine, 1993; Weaver, 2001; Weiler & Richins, 1995), and contributes to the conservation of those areas (Boo, 1990; Buckley, 1994a; Fennell, 1999; Holmes, 1993; Honey, 1999; Jones, 1992; McArthur, 1997; Ross & Wall, 1999; Valentine, 1993; Wight, 1993). A third major focus of ecotourism is on the well-being of the host communities. Ecotourists want to interact with (local) people and/or the local natural environment (Ballantine & Eagles, 1994; Butler, 1990; Jones, 1992; Krippendorf, 1987b; Macleod, 1998; Sirakaya *et al.*, 1999; Weiler & Richins, 1995), and at the same time ecotourism is supposed to generate an income and other benefits for the residents (Boo, 1990; Fennell, 1999; Honey, 1999; Jones, 1992; McArthur, 1997; Norris, 1995), while ecotourists respect and appreciate local cultures (Butler, 1990; Ceballos-Lascurain, 1987; Gilbert, 1997; Honey, 1999; Jones, 1992; Macleod, 1998; Ryan, 1998; Sirakaya *et al.*, 1999; Wight, 1993). In order to achieve those goals, ecotourism best conceived as being small in scale (Gilbert, 1997; Jones, 1992; Khan, 1997; Krippendorf, 1987a; Lindberg & McKercher, 1997; Lück, 1998; Orams, 1995; Pleumarom, 1993; Thomlinson & Getz, 1996; Warren & Taylor, 1994; Wheeller, 1994), and, therefore, more likely to be benign in terms of negative impacts on the host communities and the natural environment (Acott, La Trobe, & Howard, 1998; Fennell, 1999; Gilbert, 1997; Honey, 1999; Lindberg & McKercher, 1997; Mathieson & Wall, 1982; Orams, 1995; Pleumarom, 1993; Ryan, 1998; Swarbrooke & Horner, 1999; Valentine, 1993).

Many argue that ecotourism should include an educational component (Ballantine & Eagles, 1994; Blamey, 1997; Boo, 1990; Ceballos-Lascurain, 1987; Eagles & Cascagnette, 1995; Fennell, 1999; Gilbert, 1997; Honey, 1999; Krippendorf, 1987a; Macleod, 1998; Orams, 1995; Ryan, 1998; Weaver, 2001). Only over the last decade, after the Earth Summit in Rio de Janeiro in 1992, has sustainable development become an additional part of many ecotourism definitions (Beaumont, 2001; Blamey, 1997; Dowling, 2000; Fennell, 1999; Ross & Wall, 1999; Ryan, 1998; Valentine, 1993; Weaver, 2001). Although, or because, there exist a vast number of ecotourism definitions, 'there still seems a general lack of agreement on a single, accepted definition of ecotourism, as well as on standards and sound certification processes in the wide world of ecotourism' (Ceballos-Lascurain, 2002:168). Definitions range from very broad to very detailed, depending on context and purpose.

## CONSTRAINTS AND CONTRADICTIONS ASSOCIATED WITH ECOTOURISM

In addition to numerous attempts to define ecotourism and the recognition of many positive aspects about ecotourism, discourse focuses on the problems associated with the implementation of those definitions. Higham and Lück (2002) argue that there are a number of contradictions and constraints associated with many of these definitions, which result in the general inoperability of ecotourism.

According to most definitions, ecotourism takes place in natural and/or undisturbed areas (Blamey, 1997; Boyd & Butler, 1996; Ceballos-Lascurain, 1987; Fennell, 1998). Cater (1993) notes that many researchers addressed environmental impacts in classic enclaves of mass tourism. However, Cater argues that prime ecotourism attractions and sites experience concentrated use by ecotourists, who put the natural environment under stress. Overuse results in an unacceptable level of degradation (Cater, 1993). Lindberg and McKercher (1997) state that there is still only little knowledge about the environmental impacts of ecotourism. Due to the fact that ecotourists tend to discover new and undisturbed areas, 'try to avoid the beaten track' and 'want to go to places where nobody else has set foot before them' (Järviluoma, 1992:118), effects on the natural environment are more severe than, for example, in tourist destinations which are already developed and hardened. It is therefore warned that ecotourism, with all its good intentions, is the worst form of tourism and destroys the very resource base it depends on (Gray, 1997; Järviluoma, 1992).

Another, often neglected aspect of ecotourism is that most research examines the possible environmental costs and benefits from a destination perspective. Flognfeldt (1997) divides the term ecotourism into 'destination eco-systems' and 'eco-route systems'. With the use of these terms, Flognfeldt clearly distinguishes between the perspectives from just a destination's view on one hand, and the whole trip on the other. Cater (1993) notes that for various reasons, many Third World destinations are primary ecotourism destinations, while most ecotourists originate from more developed countries (MDCs). Thus, in order to get to an ecotourism destination, most ecotourists travel by airplane to their destination (Weaver, 2002). Air travel is the least environmentally friendly form of travel, and the ratio between energy consumption for travelling and the energy consumption for the stay at the destination increases dramatically with the airplane as mode of transport (Gwinner, 2001). Such environmental travelling costs are often not calculated in parochial local accounts of ecotourism impacts (Weaver, 2002).

The demand that ecotourism is supposed to operate in natural areas, away from developed areas (Boyd & Butler, 1996), is contradictory. Ecotourism needs a minimum of infrastructure including access, accommodation, amenities and activity-based services. Although 'degrees of naturalness' does not necessarily exclude all 'anthropocentric change', the existence of one would have detrimental effects on the other (Higham & Lück, 2002). In favour of naturalness and at the exclusion of an anthropocentric view, Boyd *et al*. (1995) attempted to map ecotourism areas in Ontario, Canada, using a Geographical Information System (GIS) method. The results showed that only a few

areas were suitable for ecotourism, because most areas in Ontario are located within some distance to major roads or other human constructs. Higham and Lück (2002) argue that this shows the value of GIS as a research tool, but highlights the inadequacy of many ecotourism definitions. A minimum of infrastructure is necessary for an ecotour operation and crucial for the survival of the operator. Here, the definitions often overlook basic operational requirements of any ecotour operation.

There are problems related to the demanded small scale of ecotourism businesses. The majority of all tourism businesses are of small or medium size (Sasidharan, Sirakaya, & Kerstetter, 2002). In fact, it is claimed that 99% of the European tourism businesses employ fewer than 250 staff and 92% qualify as micro-operators with 10 staff or less (Clarke, 2002). Warren and Taylor (1994) observe that indeed the majority of ecotourism businesses in New Zealand are small and family operated. If staff are employed, those are usually family members and only employed part-time or seasonal. The majority of business owners have set up a tour operator business primarily because of their personal interest in the environment (Thomlinson & Getz, 1996) or for lifestyle reasons, i.e. they want to earn a living from a passion for, for example, kayaking or wildlife (Warren & Taylor, 1994). Thus, many entrepreneurs are inexperienced in running a business. This results in the common problem of under-capitalisation and it is observed that lending institutions tend to look unfavourably to small businesses without secure income and a perceived high risk. Furthermore, it is argued that ethical considerations of the business owners in the ecotourism sector result in an 'income-bias' and the reluctance to put a monetary value on natural resources. Thus, these entrepreneurs often refuse decision-making on economic self-interest grounds (Garrod, 2002).
In many parts of the world, small ecotourism operators are highly seasonal and have to generate an income over the peak season that secures survival over the off-season. In particular, over the first three to five years, the turnover is relatively low and many operators are not able to generate the necessary income (Warren & Taylor, 1994). Small operators are often less profitable because the provision of environmentally responsible facilities and a high standard of quality tend to be more cost-effective for larger companies (Thomlinson & Getz, 1996). The demand for a lower guide-to-group ratio brings with it further financial constraints. Ecotourists will have to pay higher prices, but prices must still be reasonable enough to attract enough visitors (Gilbert, 1997; Higham & Lück, 2002). As a result, small operators are forced to compromise in order to survive. In many cases, the owners of ecotourism businesses pursue further employment during off-season and probably part time during high season. Other operators have to compromise in the quality of their product. Warren and Taylor (1994:6) report that as a result of those economic constraints one operator considered that 'he would be better-off being on the dole'.

## CASE STUDIES

Given the constraints discussed in the previous section, ecotourism may include the development of operations in environments that provide elements of 'naturalness' in areas that may otherwise be barely recognisable as 'natural'. Three case studies are

employed to demonstrate the potential and explore the possible merit of marine ecotourism development in urban contexts. The selected case studies offer the contrasts of an established ornithological operation, a dolphin watching venture and a whale watch operator**.** The case studies share in common the fact that they are located in inner city areas, and operate in urban or urban fringe environments (Figure 1). All three operate with resources that have been historically used primarily for utilitarian purposes, such as fisheries and transportation industries.

**Case Study 1: Royal Albatross Colony (Dunedin)**

The Royal Albatross Colony is situated at Taiaroa Head (Otago Peninsula), a site that lies within the city limits of Dunedin (population 120,000). Taiaroa Head has a rich cultural history having been developed in pre-European times as a defended *Pa* settlement by local Maori. This site is also a rich breeding environment for colonial nesting seabirds (Little Blue and Yellow Eyed Penguins, Stewart Island and New Zealand Spotted Shags, the Northern Royal Albatross and various Gull species) and a haul out site for a range of marine mammals (particularly New Zealand fur seals) (Department of Conservation 1992). A small breeding colony of Northern Royal Albatrosses (*Diomedea epomorphora sanfordi*) was established at Taiaroa Head by seven colonising birds in the 1918-1919 breeding season (Southern hemisphere summer).

The first Albatross egg was laid at Taiaroa Head in 1919, attracting much local visitor attention. Throughout the 1920s and early 1930s the same few birds returned each year to the headland to attempt to breed without success (due to human interference and predation). After seventeen years of failed breeding, the first Albatross egg was hatched in February 1936. This chick was killed by a stoat (Department of Conservation 1992). During the 1937-1938 breeding season Dr. Lance Richdale, a local ornithologist, camped at Taiaroa Head to protect the breeding pairs and initiate the collection of the first detailed scientific notes on the breeding behaviour of the Great Albatross. Having camped on the site for 120 days, through the autumn and winter of 1938 Richdale observed the first successful Albatross fledging in early spring (September 1938). The colony now has a population of over one hundred birds. The Northern Royal Albatross has a UNCN rating of endangered (Department of Conservation 1992) and its breeding range is, aside from the small Taiaroa Head colony, limited to two extremely remote outlying islands of the Chathams group to the east of the New Zealand mainland. Taiaroa Head is, therefore, the only mainland breeding colony of Northern Royal Albatross and indeed any of the family of Great Albatrosses.

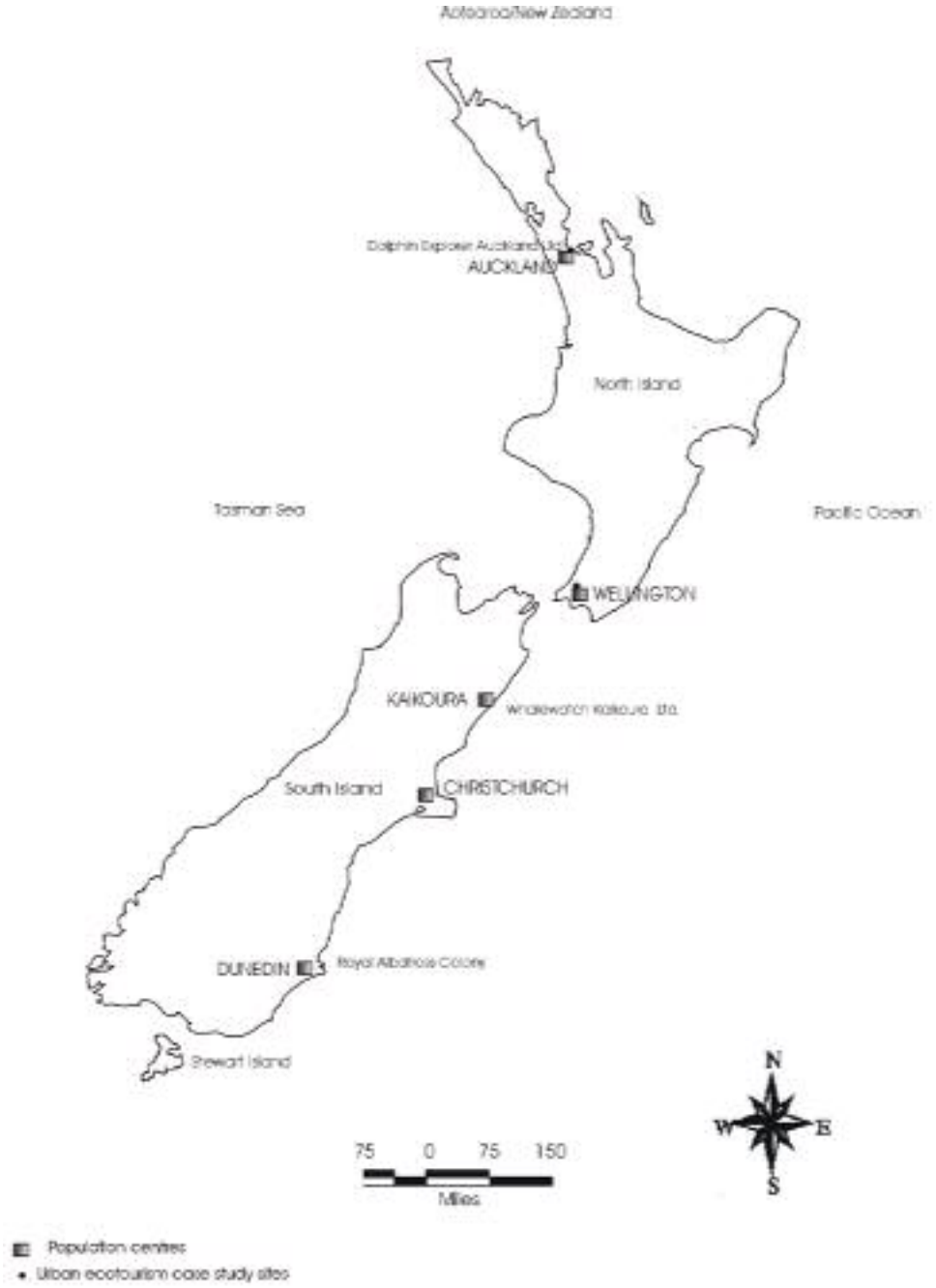


Figure 1. Location map of marine ecotourism case studies situated in urban and urban-fringe contexts

Taiaroa Head was designated a Flora and Fauna Reserve in 1964. Guided tours of the Royal Albatross Colony, which involves taking visitors into the Reserve, have been conducted since 1972. The right to operate guided tours on a restricted basis was granted

in that year to the Otago Peninsula Trust (OPT) which was formed in 1967. A specialised viewing facility, the Richdale Observatory, was completed in 1983, and an interpretation centre was constructed at the site in 1988-89. During the 1990s the Royal Albatross Colony developed into a high profile ecotourism attraction. The site receives upward of 140,000 visitors per annum. This course of development has raised numerous visitor and wildlife management issues. The welfare of all marine species resident on the headland is a foremost priority. The Department of Conservation maintains scientific programmes of research into the biological significance of visitor impacts upon the Northern Royal Albatross at Taiaroa Head, and other species, particularly the Little Blue Penguin, that are subjects of visitor interest. The long term monitoring of the breeding colony of Albatross began in 1936 and continues in 2003. The monitoring programme provides insights into visitor impacts that are incorporated into the management framework for tourism at Taiaroa Head.

Visitor impacts upon the site ecology are also closely monitored and managed. All visitors begin their tour by attending an education programme that includes a lecture and interpretative video. Access to the Richdale Observatory is guided and visitors are required to remain on a hardened access path. Visitor conduct in the observatory is closely supervised by at least one tour guide (depending on the size of the group). The Otago Peninsula Trust is also committed to raising visitor awareness of environmental issues of relevance (Higham *et al.*, 2001). A display titled 'Albatrocities' highlights the by-catch of seas birds (including Albatrosses) associated with the tuna long-line fishing industry in the Southern Ocean. Contributions to conservation are also pursued at this site through opportunities to make donations, sign petitions and fund the conservation of the Royal Albatross. This ecotourism business provides insights into the potential for collaboration between conservation and ecotourism organizations in a peri-urban marine tourism context.

**Case Study 2: Dolphin Explorer Auckland**

The city of Auckland, New Zealand's largest city a population of over one million, is situated in the north of New Zealand's North Island. In the year ended March 2000, more than 1.1 million visitors arrived in New Zealand through Auckland, which is 70% of the total visitor arrivals to New Zealand (Statistics New Zealand Te Tari Tatau, 2001).

Adjacent to the east of the city is the Hauraki Gulf, which is one of the lifelines of commerce, serving a major port and significant fishing and transport industries. The Hauraki Gulf features rich biological diversity, naturalness and outstanding land and seascapes (Department of Conservation, 2000). It hosts a variety of marine mammals, such as Common and Bottlenose Dolphins, Orcas, and various species of whales (Dolphin Explorer, 2000). In February 2000, the Hauraki Gulf Marine Park was established by special legislation. The park protects the natural and historic features of the Gulf, including numerous islands. The Hauraki Gulf Marine Park is unique in terms of its administration, as local authorities can add reserves to the park while retaining ownership and control. In addition, the park features private owned Maori land, which identifies opportunities for Maori to contribute to management in close association with

the local councils and the Department of Conservation (Department of Conservation 2000).

Dolphin Explorer operates two daily tours from Pier 3 downtown Auckland. This venture is privately owned and operated and offers swimming with dolphins and whale watching experiences as the main foci of the operation. Two goals provide a central focus of the operation. Firstly, the company places great emphasis on the educational value of the tours. All staff are experienced and have extensive knowledge of all marine mammals encountered in the Gulf. Interpretation on marine mammals, birds and their habitat is provided on board. Children have the opportunity to enjoy a specifically designed education programme with activities and games. Secondly, Dolphin Explorer is dedicated to preserve the Hauraki Gulf and the wider marine environment. The company provides financial and logistical support for four major research projects, including two Masters projects researching Common Dolphins and the effectiveness of educational programmes, and two Doctorate theses focussing on Brydes Whales in the Gulf and tourist interactions with gannets. Visitor education and research sponsorship are central to the goals of this operation. They are designed to enhance people's understanding of the marine environment and respect for marine mammals, and benefit the survival of whale and dolphin species in the long term.

**Case Study 3: Whalewatch Kaikoura**

The small town of Kaikoura on the east coast of New Zealand's South Island has experienced a fascinating economic redevelopment. The implementation of new fishing regulations in the 1980s led to job losses in the crayfishing industry and the restructuring of governmental departments resulted in further redundancies of state employees (Warren & Taylor, 1994). Young residents left the town and region in order to find employment in the larger cities. At that time, about 10,000 tourists came through Kaikoura every year, mostly because it is on the main road between Picton (ferry port to/from the North Island) and Christchurch, the largest city on the South Island (Orams, 1999). Kaikoura is in the unique situation of having a deep-sea trench close to shore and two main ocean currents converge at this point along the eastern New Zealand coastline. This combination brings with it nutrient-rich waters and attracts a large variety of marine life, including dolphins, whales, seabirds, seals, and many more. Nowhere else in the world can sperm whales (*physeter macrocephalus*) be seen as close to shore as in Kaikoura (Gill & Burke, 1999).

Kaikoura also is a very important place in Maori culture. According to Maori mythology Maui fished up the North Island from this location. In 1987, first plans for a whale watching venture were developed, with commercial operations initiated in 1988 and full operations from 1989. The fully Maori owned company started with one boat and ten staff. The second year attracted 1,000 whale watching passengers to Kaikoura and the company grew rapidly. Today, Whalewatch Kaikoura accepts about 100,000 reservations per year, however, due to cancellations and poor weather conditions, around 60-62,000 passengers are taken out on tours (Carr, 1998). The impact of Whalewatch Kaikoura on the community is comprehensive. Not only does the operator employ around 50 full time staff and operates four large vessels, but there have also been a variety of businesses established (eateries, accommodation, minibus and taxi operations to name but a few) to

cater for the large numbers of visitors (Orams 1999, Warren & Taylor 1994). In addition to Whalewatch Kaikoura, a variety of operators offer wildlife tours. Swimming with dolphins and seals, observing pelagic birds, and kayak tours to see seals and penguins are now well established. Kaikoura managed to coin a reputation as the marine wildlife spot in New Zealand, if not in the South Pacific. Tourism based in marine wildlife transformed Kaikoura from a declining fishing village to a prospering town.

The increase in visitor numbers of 14% per year brought with it concern about the well being of the marine mammals (Orams, 2002). The operating conditions of Whalewatch Kaikoura, issued by the Department of Connservation, are based on the known biology and behaviour of the whales, and thus aim to protect them from the day-to-day effects of the operation (Baxter, 1993). Similar regulations exist for operators interacting with dolphins and seals. However; Orams (2002) notes that Kaikoura is at a crossroads regarding its development. It is the challenge for Kaikoura to address environmental and social sustainability. Since the majority of Kaikoura's operators see themselves as ecotour ventures, they are aware of the possible threat to the marine wildlife, and ultimately their very own businesses (Orams, 2002). Thus, protecting marine mammal habitat and sustaining the populations of focal species is a central focus for the operators involved at this time.

## DISCUSSION

This paper considers a variety of constraints associated with the attempts to define ecotourism. It also illustrates the recent emergence of the seemingly contradictory notion of marine ecotourism in urban and urban-fringe contexts and provides an analysis of three case operations. Other examples of urban marine ecotourism operations in New Zealand include Penguin viewing (e.g., Penguin Place, Dunedin), which offers a close-up view on wild Yellow Eyed Penguins in their natural habitat, while protecting this rare and endemic bird through rigorous predator control. Monarch Wildlife Cruises operate a traditional vessel and offer daily cruises within the Dunedin Harbour and along Otago Peninsula. With interpretation by experienced guides, passengers have the chance to view Royal Albatross, several species of shag (cormorant), New Zealand fur seals, Blue Penguins and various other marine wildlife species. Pelagic birds can be observed at various points in New Zealand with commercial tours operating from Kaikoura. "Ocean Wings", for example, offer marine bird watching tours in Kaikoura. Cape Kidnappers, at the doorstep of Napier and Hastings on the North Island, offers one of the largest Gannet colonies in the world.

Ironically, in most regards these ecotourism operations contradict the requirements of ecotourism operations as defined in the tourism literature. However, the cases outlined in this article offer greater ecological benefit and less potential for environmental impact than most. Ecotourism in urban environments takes place in areas that offer some degree of naturalness in settings that have otherwise been heavily modified by previous human activities. These areas provide much potential for the habitat restoration and habitat creation at sites that have previously been degraded, impacted or destroyed by industrial

and commercial activities. This is an important form of nature conservation that offers much potential for the ecotourism sector (Chirgwin and Hughes 1997). Tourism in natural areas often places considerable stress on the environment, such as erosion, noise and air pollution, due to issues of access (Mathieson & Wall, 1982). Contrary to definitions of ecotourism, the case studies present in this article are preferable in terms of the environmental impacts of transportation. Tourists participating in urban ecotours may use existing infrastructure, including public transport to and from sites or departure points. Many such tours use 'hardened' environments that are regularly used by the local population. One operation profiled in this article is experienced only on foot, with 'Dolphin Explorer' and 'Whalewatch Kaikoura' transporting all visitors collectively on vessels.

Interpretation and education is, according to some observers, a crucial part of ecotourism (Buckley, 1994b; Eagles, 1997). Many see education as the feature that distinguishes ecotourism from other forms of nature-based tourism (Orams, 1995). The highest aspirations of the ecotourism sector relate to changing the attitudes and values of visitors in an attempt to foster and encourage pro-environmental behaviour (Beaumont, 1998; Boo, 1990; Orams, 1995, 1997). The majority of visitors to marine ecotourism attractions in New Zealand consider it important to learn about the subject of their attention (Lück, 2003). Bearing this in mind, urban marine ecotours present an important opportunity for the education of sizeable audiences. The study operations offer the opportunity for conservation issues to be communicated to a wider audience.

Demand for ecotours in an urban environment also offers a wide catchment of potential participants, moreso than ecotours in remote areas. This can be explained by relatively easy access to the site or departing point. The time and cost commitments of access dictate distance decay thresholds associated with travel to ecotourism operations in remote areas. However, once in the city during a holiday, a large number of tourists may add an urban ecotour to their general sightseeing schedule. This suggests that capacity rates for such operations may be higher and more reliable. Higher capacity rates brings with it the opportunity to increase the guide-guest ratio and therefore provide a higher standard of visitor operation.

Seasonal patterns of urban tourism are generally less extreme than is the case at nature-based tourism operations. Tourism at urban destinations is usually dictated more by human, or institutional factors, than natural phenomena associated with seasons and climate. It is worthy of note that all three operations presented in this article operate throughout the year. As such operational loadings are dictated by urban tourism patterns rather than the state of the focal species. This is likely to result in less extreme seasonal patterns of visitation to urban ecotourism operations, allowing operators the chance to employ permanent staff and operate year round. These factors act to increase the financial viability of ecotourism operations.

## CONCLUSIONS

This article presents a critical analysis of definitions of ecotourism in an attempt to demonstrate their limitations. The recent emergence of ecotourism operations set in urban marine environments highlights these limitations. According to definition, this form of ecotourism cannot exist due to the fact that it contradicts the notion that ecotourism takes place in wilderness/undisturbed environments. It is not biocentric, few such operations are small scale, and urban ecotourism activities do not take place in unmodified, natural, or pristine environments. Indeed in the cases presented in this article the opposite is generally the case. Furthermore, the profiled businesses have made contributions to conservation and/or the development of sustainable marine-based businesses.

The authors discuss the various benefits of ecotourism operations based in urban marine environments. These benefits relate to the restoration of natural areas, the transportation of visitors, interpretation and education directed at changing attitudes and values so as to foster pro-environmental behaviour and, finally, the financial viability of ecotourism operations. These conclusions provide insights into current issues such as how to meet growth in demand for marine ecotourism experiences. This may necessitate broadening the scope of ecotourism and recognising the diversity that exists within the sector. Part of the solution may be to develop attractions at sites that offer degrees of naturalness in areas that are otherwise developed to meet the infrastructural requirements of the tourism industry. This article identifies that these avenues of development are being pursued currently in New Zealand, perhaps to an extent that heightens the need to systematically and comprehensively manage the burgeoning marine ecotourism industry. While this has emerged as an important issue in New Zealand tourism, the case studies presented herein suggest that these operations are more able than most to meet the demanding criteria that continue to define, albeit contentiously, the ecotourism sector of the tourism industry.

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