

Urban Ecotourism: A Contradiction in Terms?

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This article examines recent developments in the New Zealand ecotourism sector that highlight the limitations of definitions of ecotourism. It considers the contemporary development of commercial ecotourism operations in urban contexts in New Zealand. The phenomenon of urban ecotourism demonstrates various inherent contradictions relating to definitions of ecotourism. Selected definitions are considered in an attempt to review an extensive and voluminous, but important, literature. Three case studies are then presented to demonstrate the praiseworthy nature of ecotourism development initiatives in urban contexts. The authors conclude that notwithstanding the contradictions, urban ecotourism developments are more able than most to fulfil the lofty ambitions to which ecotourism operators are required to aspire.

Introduction

In 1976 Gerardo Budowski, then Governor General of the IUCN, observed that the relationship that prevails between tourism development and environmental conservation may be one of symbiosis, coexistence or conflict. At the time Budowski commented that most cases demonstrated a situation of coexistence moving towards conflict. Twenty-five years later, through a period that has witnessed the modern development of the ecotourism phenomenon, Budowski's (1976) observations still apply. To date the search for symbiosis has in the majority of cases been futile. The international context is replete with examples of rapid development, proliferation and diversification of ecotourism operations (Boo, 1990). This has led some to speculate that ecotourism may be the leading edge of mass tourism rather than an alternative to it (Burton, 1998). However, isolated cases exist that demonstrate the seemingly unlikely but nonetheless plausible goal of achieving a situation of symbiosis.

This article supports the philosophy that the relationship between tourism and the environment is one that offers great potential. However, this potential is unlikely to be realised while constrained by definitions that are largely inoperable. It presents a critical analysis of the definitions of ecotourism. This is used to demonstrate that ecotourism comprises many inherent contradictions, constraints that are intolerable, and challenges that are insurmountable for ecotourism operators. The authors then present a case in support for the development of urban ecotourism. By most definitions the very term 'urban ecotourism' is an oxymoron. However, urban, urban fringe and formerly industrialised sites in New Zealand have been at the forefront of recent development within the ecotourism sector. This article further develops the research findings reported by Chirgwin and Hughes (1997). Their study of visitors to nature based operations in Australia identified ironically that respondents who rated 'natural area' highly were in fact reporting satisfaction from experiences achieved in areas that

were in fact not natural. This suggests that modified areas can be 'acceptable as an ecotourist venue if they are well presented and managed, aesthetically pleasing and provide the opportunity to observe wildlife' (Chirgwin & Hughes, 1997: 7).

The authors challenge the plethora of definitions of ecotourism by presenting a case-based assessment of urban ecotourism development in New Zealand. The cases presented demonstrate varied and 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, repopulation of rare or endangered species, research and education. It is proposed that these operations may offer valuable insights into the development of ecotourism. It concludes that urban ecotourism, 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: An Exercise in Contradiction

In 1987, Ceballos-Lascurain coined one of the first of many definitions of ecotourism. He stated that:

we may define ecological tourism or ecotourism as that tourism that involves travelling to relatively undisturbed or uncontaminated natural areas with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (both past and present) found in these areas. (Ceballos-Lascurain, 1987: 13)

At that time ecotourism was not a new phenomenon. In fact, train journeys to the first North American national parks in the late nineteenth century were what we now call ecotourism (National Audubon Society, 1991). The associated impacts are not a recent development either. As early as 1967, Johnson reported heavy over-use in the North American national parks with traffic congestion and resulting impacts, such as erosion and the loss of wilderness. At that time, Yosemite National Park attracted 1.7 million visitors per annum (Johnson, 1967).

In recent years many researchers have modified, extended and developed numerous ecotourism definitions including Blamey (1997), Fennell (1998), Fennell and Eagles (1989), Orams (1995), Swarbrooke and Horner (1999) and Valentine (1993) to name a few. Opinions are generally divided on the merit and importance of literature relating to the definition of ecotourism. Authors argue that *definitions* of ecotourism, as it exists in various national and regional contexts, are important to both the supply and demand sides of the ecotourism phenomenon. Contributions to the literature addressing the definition of ecotourism are broad in scope and varied in merit. However, it is important that it is defined in order to foster robust and widely recognised industry standards (supply side) while also serving visitor interests in achieving the ecotourism experiences that they seek (demand side).

A review of ecotourism definitions confirms that many make some mention of conservation, education, local ownership, small-scale, economic benefit for local communities, the relevance of cultural resources, minimum impacts and

sustainability. Most definitions encompass key aspects, such as 'host community participation', 'natural areas', 'low impact', 'culture', and 'small-scale'. These points justify a critical evaluation of the plausibility of developing ecotourism operations in accordance with definition. Two definitions are presented in this article to demonstrate the scope that has emerged in this field.

Ballantine and Eagles (1994) evaluated Canadian tourists to Kenya against a definition consisting of three criteria. Their criteria were established to determine a visitor's status as an 'ecotourist' and encompass three dimensions: the social motive (educational component); the desire to visit 'wilderness/undisturbed areas'; and a temporal commitment. The three criteria presented by Ballantine and Eagles to serve this evaluation are as follows:

- (1) The respondent must answer 'very important' or 'somewhat important' to 'learning about nature' as a motivation when planning a trip to Kenya.
- (2) The respondent must answer 'very important' or 'somewhat important' to 'wilderness/undisturbed areas' as an attraction when choosing a trip to Kenya.
- (3) The respondent must spend at least one-third of their Kenyan vacation days on safari.

These are very broad criteria and it is no surprise that 84% of Canadian visitors to Kenya who were surveyed qualified as ecotourists. It may be argued that under these criteria the definition of the ecotourist is so general to be meaningless. Orams (1995) takes this scenario to its logical extreme stating that by its most general definitions all tourism can be 'ecotourism'. However, the value of this definition is to illustrate the scope of ecotourism, rather than simply define the ecotourist.

Butler (1992), by contrast, presented a paper to the IVth World Congress on National Parks and Protected Areas with a more detailed check-list for ecotourism (Table 1). The check-list highlights the opposite pole of the definitional scale. These criteria cover most aspects of the numerous definitions found throughout the literature. However, these check points place almost intolerable constraints on ecotourism operators. This is certainly the case in New Zealand where operators within the ecotourism sector face many of the operational constraints identified by Warren and Taylor (1994). They report that many ecotourism operations in New Zealand are small-scale, family-owned, undercapitalised and barely commercially viable. Such definitions also require ecotourism operations to limit the development and growth of their commercial operations so as to remain faithful to the ideals of ecotourism. The logical extension of this definition, as identified once again by Orams (1995), is to assume that ecotourism is impossible (that no tourism development can fulfil the lofty aspirations of the most purist definitions).

Clearly, even the 'softest' form of tourism generates both positive and negative impacts. Therefore, Ceballos-Lascurain (2001) states that he believes in ecotourism and not in 'eco-purism'. The aim is to match as many of the criteria as possible and, as Lindberg and McKercher (1996: 65) suggest, sustainable tourism is 'postulated from a positive overall balance in environmental, experiential, sociocultural and economic impacts'. Herein lies some of the first attainable aspirations for the ecotourism sector. They indicate a maturing of the academic study

Table 1 Principles and characteristics of ecotourism (after Butler, 1992, in Acott *et al.*, 1998)

1. It must be consistent with a positive environmental ethic, fostering preferred behaviour.
2. It does not denigrate the resource. There is no erosion of resource integrity.
3. It concentrates on intrinsic rather than extrinsic values.
4. It is biocentric rather than homocentric in philosophy, in that an ecotourist accepts nature largely on its terms, rather than significantly transforming the environment for personal convenience.
5. Ecotourism must benefit the resource. The environment must experience a net benefit from the activity, although there are often spin-offs of social, economic, political or scientific benefits.
6. It is first-hand experience with the natural environment.
7. There is, in ecotourism, an expectation of gratification measured in appreciation and education, not in thrill-seeking or physical achievement. These latter elements are consistent with adventure tourism, the other division of natural environment (wildland) tourism.
8. There are high cognitive (informational) and effective (emotional) dimensions to the experience, requiring a high level of preparation from both leaders and participants.

of ecotourism and they point towards the abandonment of unattainable aspirations for the ecotourism sector to which this article seeks to contribute.

Contradictions and Constraints of Definition

The contradictions and constraints that are embodied in many definitions of ecotourism confirm its general inoperability. These contradictions may be overviewed with emphasis placed on the economic and environmental dimensions of ecotourism. Notwithstanding the rhetoric of sustainable tourism development, economic viability is the bottom line of sustainable tourism operations. Ecotourism operations in New Zealand and elsewhere face challenging and perplexing barriers to commercial viability. By definition they should be small-scale (Butler, 1990, Ryan *et al.*, 2000; Thomlinson & Getz, 1996), resolute in limiting the growth of commercial operations (Butler, 1990) and, by implication, blinkered to economic theory relating to economies of scale. The recommendation that visitors are managed by maintaining an appropriate ratio of guides to visitors again brings with it economic challenges relating to pricing and commercial viability.

A range of environmental challenges also exist under current definitions of ecotourism. Not the least of these relates to the fact that ecotourism operations should take place in unmodified (Ceballos-Lascurain, 1987; Valentine, 1993); natural (Blamey, 1997; Boyd & Butler, 1996; Fennell, 1998; Orams, 1995; Swarbrooke & Horner, 1999; Valentine, 1993) or pristine (Ceballos-Lascurain, 1987) areas. With this emerges a raft of challenges that hitherto have not been adequately addressed. These challenges relate to the management of visitor

activities in environments that are fragile, finite and valued primarily for conservation. This operational environment is difficult to reconcile with the further definitional requirement that ecotourism visitor operations and activities should be low in impact (Acott *et al.*, 1998; Honey, 1999; Orams, 1995; Lindberg & McKercher, 1997; Wight, 1993).

Furthermore, ecotourism operations, according to definition, should take place in natural areas removed from the accoutrements of civilised life (Boyd & Butler, 1996). If this is so then as a consequence ecotourism operations are either removed from, or required to develop, the infrastructures that Cooper *et al.* (1998) identify to be critical to tourism viability; those relating to transportation, accommodation, services and activities. The viability of ecotourism operations clearly hinges on two fundamental requirements: (1) a resource base that demonstrates some degree of naturalness; and (2) the infrastructures that are fundamental to commercial tourism operations. Herein lies a contradiction in terms because one cannot comfortably exist in the company of the other, yet both are required to facilitate a viable ecotourism operation. While 'degrees of naturalness' is not the same as a total absence of 'anthropogenic change', one clearly exists in degrees that increase to the detriment of the other.

However, placing priority in the former at the exclusion of the latter presents a partial and potentially misleading picture. Boyd *et al.* (1995) adopt a definitional approach to mapping ecotourism resources in Northern Ontario employing GIS. This exercise demonstrates the value of GIS as a research tool but perhaps also the inadequacy of definitions in the field of ecotourism. It incorporates into the GIS areas of relative naturalness while excluding and buffering all human constructs, many of which are pivotal to the viability of tourism operations. This procedure, one might argue, overlooks the operational necessity of tourism infrastructure. Taken to its logical extreme, this begs the question: should urban ecotourism operations be included in ecotourism definitions? The following case studies provide the basis of a discussion of the extent to which measures of naturalness, among various other criteria, should be part of the definition of ecotourism.

Case Studies

Such an approach may include the development of ecotourism 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 ecotourism development in urban contexts. The selected case studies offer the contrasts of an established ornithological operation, a recently developed marine mammal venture and a wildlife sanctuary that is currently in the planning and development phase (due to be opened to visitation in 2001). The case studies share in common the fact that they are located in inner city areas, and operate in urban or urban fringe environments. All three operate with resources that have been historically used primarily for utilitarian purposes including quarrying (mineral extraction), reservoir water control, fisheries and transportation industries.

Case Study 1: Oamaru Little Blue Penguin Colony

Urban nature conservation based on the restoration of industrial sites (e.g. mines and quarries) has given rise to diverse interests in habitat creation, recreation and tourism (Cowell, 1997). Habitat creation is an important form of nature conservation and one that demonstrates great relevance to urban tourism and ecotourism. The Oamaru Little Blue Penguin Colony is a case in point (Figure 1). Oamaru is a regional town, population 12,950 (Statistics New Zealand Te Tari Tatau, 2000a) on the east coast of New Zealand's South Island. The Oamaru Blue Penguin Colony is situated in a harbour-side quarry that was operational from 1865 until its closure in the mid-1980s. The first Blue Penguins nested at the site in the 1970s and, despite being viewed as a pest by quarry owners as recently as 1985 (Houston & Russell, 2000), the current visitor operation was initiated in 1993.

The Oamaru Blue Penguin Colony ecotourism operation is managed by a community-based group. Since 1993 over 100,000 people have visited the colony. Viewing facilities and physical barriers are used to manage visitors within a designated viewing area 20 m from the entry point for birds returning to the colony. Blue Penguins return to their nests at dusk each evening throughout the year. An interpretative commentary is provided and nocturnal viewing is facilitated by sodium vapour street lighting which provides 'orange-yellow light of 589.0 and 589.6nm wavelengths (which) provides enough light for humans to see penguins, but is outside the spectral range to which penguin eyes are most sensitive' (Houston & Russell, 2000: 4). The evening penguin parade is considered particularly significant to the wider visitor industry in Oamaru as in most cases it necessitates the use of overnight accommodation. In the last five-year period annual visitor numbers to the Oamaru Blue Penguin Colony have doubled from 13,067 in 1994/95 to 26,387 in 1999/2000 (Houston, 2000).

The welfare of penguins breeding at the colony is the subject of daily monitoring which is undertaken by the Department of Conservation working in close collaboration with the visitor operation staff. Various items of data are collected on a continual basis and these provide detailed insights in the breeding success of Blue Penguins. A second Blue Penguin colony situated nearby is closed to public visitation and used as a monitoring control site. This allows valuable insights into the impacts of tourism on nesting Blue Penguins to be achieved. All adult penguins are marked with flipper bands to allow accurate monitoring of the colonies. Predator control takes place at both colonies when required. Weekly monitoring records adult attendance at nest sites, egg and chick presence, time/cause of egg loss and chick weight (Houston & Russell, 2000) (Table 2).

These data confirm that penguins nesting at both sites achieve a high level of reproductive success. The number of occupied nesting sites at the project colony has increased from 33–103 in the public visitor sequence (1993–1999). Table 2 outlines seven key indicators of breeding success that are monitored at the project and control penguin colonies. Table 2 confirms that the project population consistently outperforms the control colony on most counts. Houston and Russell (2000: 2) conclude that 'there is no evidence to indicate that the controlled public viewing of blue penguins at the project site has provided any negative impact on either the breeding success or site fidelity of the project population'.

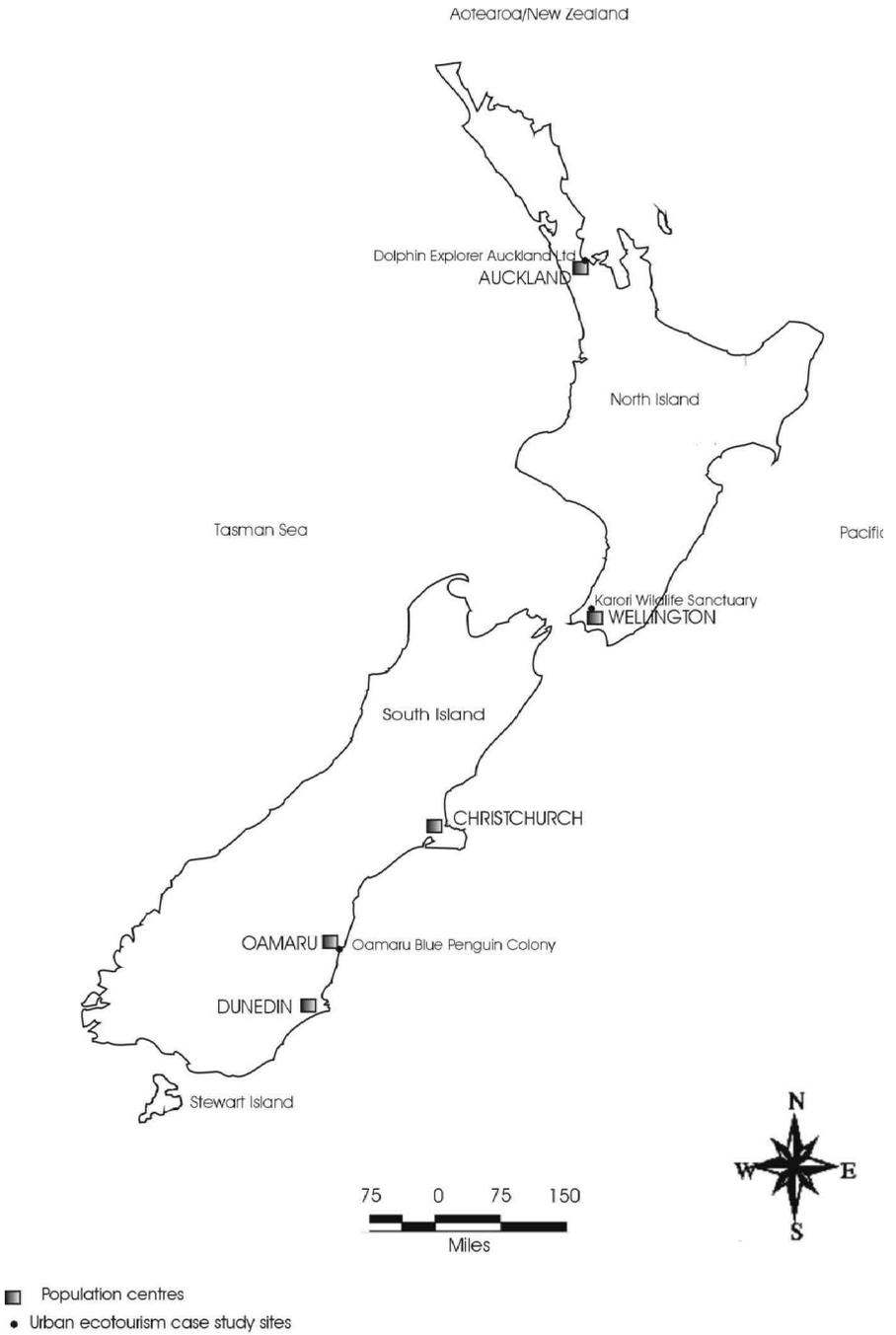


Figure 1 Location map identifying case study sites

Table 2 Comparative data relating to penguin breeding rates: Oamaru Blue Penguin Colony (project) and control colony (1993–1999)

<i>Indicator</i>	<i>Colony</i>	<i>93/94</i>	<i>94/95</i>	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>
Breeding pairs	Project	33	43	63	81	95	103
	Control	57	53	69	79	83	77
Pairs double-breeding (%)	Project	42.4	34.1	36.5	28.0	83.3	0.0
	Control	21.1	22.6	39.6	21.3	27.7	0.0
Eggs laid per pair	Project	2.94	3.00	2.98	2.68	2.84	2.13
	Control	2.42	2.55	3.07	2.71	2.67	2.14
Eggs hatched (%)	Project	80.4	72.9	72.3	75.5	74.1	70.3
	Control	69.6	66.7	73.6	74.8	68.9	72.1
Chicks fledged (%)	Project	87.2	92.6	88.2	95.2	91.0	93.5
	Control	84.4	96.7	83.3	86.9	94.8	85.7
Reproductive success (%)	Project	70.1	67.4	63.8	71.8	67.4	65.8
	Control	58.7	64.4	61.3	65.0	65.3	61.8
Chicks fledged per pair	Project	2.06	2.02	1.90	1.95	1.92	1.40
	Control	1.42	1.64	1.88	1.76	1.75	1.32

Source: Houston and Russell (2000).

Case Study 2: Dolphin Explorer Auckland

The city of Auckland is situated in the north of New Zealand's North Island. Auckland is the largest city in New Zealand with a population of over one million. 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, 2000b).

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 privately 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).

In September 2000, Dolphin Explorer started with two daily operations from Pier 3 in 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; two Masters projects researching Common Dolphins and the effectiveness of educational programmes, and two Doctorate theses focusing 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: Karori Reservoir Wildlife Reserve

Wellington, population 346,500 (Statistics New Zealand Te Tari Tatau, 2000a) is New Zealand's national capital. The Karori Reservoir Wildlife Reserve is situated in Wellington's central suburb of Karori, less than three kilometres from the city's central business district. Formerly the single source of city water, the 250 hectare sanctuary is now controlled and managed by a community-based Trust. With over 5000 members and 300 active volunteers, the Trust has completed the construction of a nine-kilometre predator proof fence, undertaken predator eradication and commenced a 500 year ecological restoration project. The aim of the project is to undertake a species translocation programme that will reintroduce to Karori over 50 of New Zealand's most rare and endangered avian and reptilian species, many of which are extinct on the New Zealand mainland. This operation has been titled 'Reclaiming the Mainland'.

The species translocation programme is currently underway. The sanctuary is entirely free of predators which is considered a first for any urban site in the world (Karori Wildlife Sanctuary, 2000). In July 2000 'twenty endangered Little Spotted Kiwi were relocated from Kapiti Island to the Karori Sanctuary in the centre of the nation's capital ending over 125 years of local extinction' (Karori Wildlife Sanctuary, 2000: 6). This has been widely recognised as a national triumph for conservation, community involvement in conservation and ecotourism. The critically endangered Brown Kiwi and another 50 endangered species will be transferred to the sanctuary in the next decade. These will include native lizards including skinks and geckos, frogs, the Tuatara, giant New Zealand snails and native fish. Scientific staff at the sanctuary will contribute to the development of ecological restoration technologies and the captive recovery of critically endangered species.

The commencement of visitor operations is scheduled to take place in 2001. Access to the sanctuary will be limited to one gateway to ease biosecurity controls. All visitors will have their bags unpacked before entering the sanctuary to minimise the risk of predator reintroduction. A range of guided tours will be available utilising well formed paths, hides and interpretation facilities. Specialised nocturnal and 'dawn chorus' tours will be a feature of the Karori visitor operation. The sanctuary Visitor Centre will cater for local families, domestic and international tourists and school parties, assisting visitors to learn about the geological, natural and human history of the sanctuary. Active scientific and student research programmes will be integrated into these processes.

Visitors will have the opportunity to become involved in the conservation project by becoming members of the Karori Sanctuary Trust or involving themselves in a wide variety of conservation volunteer projects. Trust membership will contribute to the funding of the sanctuary with additional funding sources including local community grants and sponsorship, corporate sponsorship, private philanthropic trusts, local government grants and visitor revenue (Karori Wildlife Sanctuary, 2000). A point of particular relevance to this article relates to the process of site selection when the proposed development of a mainland wildlife sanctuary was under initial investigation. Accessibility and proximity to the city were two leading factors in the selection of Karori as the site for the natural wildlife sanctuary (Karori Wildlife Sanctuary, 2000).

Discussion

This article considers the recent emergence of the seemingly contradictory notion of urban ecotourism and provides an analysis of three case operations. Other examples of urban ecotourism operations in New Zealand include Auckland GeoTours which offers unique geological tours to fields of volcanoes within the suburbs of the city. It features more than 40 eruption centres, cinder cones and lava flows, explosion craters and volcanic ash layers (GeoTours, 2000). Numerous ecotourism operations exist within the defined city limits of Dunedin. 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, shags, seals, Blue Penguins, Yellow Eyed Penguins and various other marine wildlife species (Monarch Wildlife Cruises, 2000). Wild Earth Adventures offers similar tours in the same area by sea kayak (Wild Earth Adventures, 2000).

Similar examples of city-based ecotourism operations are emerging in the international context. A number of pedestrian 'alternative guided city tours' exist in many large European cities. Dolphin watch tours in Hong Kong and whale watch tours in Seattle and Vancouver are other examples. 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. The rationale for this statement is expounded below.

Restoration of natural areas

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 (Table 3). These areas provide much potential for the restoration of sites that have previously been degraded, impacted or destroyed by industrial and commercial activities. 'Habitat creation' (Cowell, 1997) has taken place in two of the three cases outlined in this article. This is an important form of nature conservation that offers much potential for the ecotourism sector (Chirgwin & Hughes, 1997). In all three cases presented herein the conservational values of these areas are being restored allowing populations of floral and faunal species to regenerate. In the case of the Karori Reservoir Wild-

Table 3 Urban ecotourism operation contributions of conservation

<i>Case operation</i>	<i>Previous human activities</i>	<i>Contributions to conservation</i>
Oamaru Blue Penguin Colony, Oamaru	Commercial port activities Quarrying materials Transportation	Restoration of breeding environment Species research Comparative monitoring of breeding colonies Predator eradication Research reimpacts of tourism on focal species Visitor interpretation
Dolphin Explorer, Auckland	Maritime transportation Commercial shipping lanes Transport and communications Recreation	Data collection and monitoring Marine mammal research Ornithological research Research Funding Visitor education Educational programmes for children
Karori Wildlife Sanctuary, Wellington	Reservoir Recreation	Captive recovery of endangered species Species translocation Scientific research Predator eradication Restoration of native plant species Visitor interpretation Educational school visits Volunteer programmes Fund raising for conservation

life Reserve a fallow lying city reservoir has been restored to provide a sanctuary for native fauna and flora. Evidence to date suggests that this sanctuary will, in the not-too-distant future, be at the forefront of Department of Conservation efforts regarding the captive recovery of critically endangered species, scientific research, ecotourism and conservation advocacy.

The environmental impacts of ecotourism

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, 1987). Contrary to definitions of ecotourism, but creditworthy nonetheless, urban ecotourism is preferable in terms of the environmental impacts of transportation. Flognfeldt (1997) is critical of the 'green veneer' of ecotourism in remote areas of Norway due to the environmental impacts of transporting visitors. In New Zealand many visitors to natural areas are transported by tour coach, fixed wing aircraft, marine vessels and helicopter, or transport themselves via private/rental vehicles and campervans. These means of transportation bring with them to natural areas issues of air pollution, noise and the development of infrastructures such as air strips, coach terminals, car parks and associ-

ated services (Kearsley & Higham, 1997). Where new areas are developed for recreation and tourism, compromise of aesthetic values and degradation of the environment often follow. All are considered to degrade the naturalness of the very resource that is attracting visitors in the first instance (Krippendorf, 1994).

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. Two of the three operations profiled in this article are experienced only on foot. The exception, 'Dolphin Explorer' transports all visitors collectively in one vessel.

Education

Interpretation and education is, according to some observers, a crucial part of ecotourism (Buckley, 1994; 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 ecotourism attractions in New Zealand consider it important to learn about the subject of their attention (Lück, 2000). Bearing this in mind, urban ecotours present an important opportunity for mass education. Orams (1995: 5) suggests that ecotourism should move 'beyond mere enjoyment to incorporate learning and to facilitate attitude and behaviour change'. In order to influence the travellers' attitudes and behaviour towards issues of conservation and protection, Markwell and Weiler (1998) argue that ecotours must be intellectually challenging and emotionally stimulating. It has been noted that ecotourism in pristine natural environments is an exercise in 'preaching to the converted' (Beaumont, 1998). However many participants in urban ecotours are not ecotourists per se but rather a more 'generalist' visitor type (Duffus & Dearden, 1990). This offers the opportunity for conservation issues to be communicated to a wider audience.

Financial viability

Demand for ecotours in an urban environment 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 bring 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 with no period of closure to

visitation. 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.

Social impacts

Fennell (1999) presents a consideration of the social impacts of tourism and their relevance to ecotourism. He cites the work of Ryan (1991) who contributes a catalogue of factors that determine the extent to which social impacts associated with tourism are likely to occur. These include accessibility of the tourist destination, differences in cultural norms between tourist generating and tourism receiving zones, degree of exposure to other forces of technological, social and economic changes, size of the destination area and, therefore, density of the tourist population. Fennell (1999) proceeds to observe that 'as ecotourism continues to diversify and exploit relatively untouched regions and cultures, there is the danger that (negative social impacts) will occur'. These factors suggest that urban destinations are less likely to generate negative social change than apply in the scenario described by Fennell (1999).

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 significantly modified (Butler, 2001, Lawton & Weaver, 2001) and urban (Dwyer & Edwards, 2000) 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 (Ballantine & Eagles, 1994). It is not biocentric (Butler, 1992), few such operations are small scale (Butler, 1990; Thomlinson & Getz, 1996) and urban ecotourism activities do not take place in unmodified (Ceballos-Lascurain, 1987; Valentine, 1993), natural (Blamey, 1997; Boyd & Butler, 1996; Fennell, 1998; Orams, 1995; Swarbrooke & Horner, 1999; Valentine, 1993) or pristine (Ceballos-Lascurain, 1987) environments. Indeed in all three cases presented in this article, precisely the opposite is the case. Furthermore, rather than being low in impact (Acott *et al.*, 1998; Honey, 1999; Lindberg & McKercher, 1997; Orams, 1995; Wight, 1993), the case operations presented in this article have made significant contributions to conservation through the restoration of natural areas degraded to various degrees by previous human activities.

The authors discuss the various benefits of ecotourism operations based in urban environments. These benefits are considered as they relate to the restoration of natural areas, the issue of impacts relating to 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. The authors are able to support the work of Chirgwin and Hughes (1997: 7) who state that 'if 'nature-based' is a more appropriate criterion than natural, then this offers a wider range of options for those planning and promoting ecotourism experiences'.

These conclusions provide insights into current issues such as how to meet growth in demand for 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. 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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