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Graham Barwell

University of Wollongong, gbarwell@uow.edu.au

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CHAPTER 18

Uses of the albatross: threatened species and sustainability

Graham Barwell
School of Social Science, Media and Communication
University of Wollongong, NSW, Australia

Email: gbarwell@uow.edu.au

Keywords

threatened species; albatross; use value; cultural attitudes; sustainability; tourism

Abstract

Since first encounters with albatrosses in the early modern period, western cultures have reacted with amazement and wonder at the birds' flight, while taking a more pragmatic attitude towards them as creatures whose worth can be measured in their use value. In 19th and early 20th century western discourse the birds featured as objects of sport, as saviours of various kinds – whether as food for hungry sailors or victims of shipwreck in the southern oceans, as messengers, or as lifebuoys – as well as predators, and as objects to be collected for scientific inquiry. In non-western traditions, such as the Maori of New Zealand, albatrosses also had a use value, but it was of a different nature. As human societies have changed – in terms of the view of what constitutes use value, or in terms of advances in material culture, or extensions of practices of harvesting ocean resources – so too have attitudes towards the birds, although these are still based on use value. Today albatrosses have become icons of conservation movements, and are protected by legislation and international treaties. While this may appease those concerned about our relationship with the oceanic environment and our responsibilities towards it, and hence provide a form of comfort and personal well-being, a more fundamental rethink of our relationship with the natural world represented by these birds is required. Their iconic status is part of the reason for increased tourism in the southern oceans, which brings new threats to their existence. A way of engaging with them that moves away from seeing them in terms of use value will help to achieve a more sustainable relationship between humans and the environment with valuable consequences for the well-being of both humans and birds.

* * * * *

Introduction

During this storme, certaine great fowles, as big as Swannes, soared about vs, and the winde calming, settled themselues in the Sea, and fed vpon the sweepings of our Ship; which I perceiving, and desirous to see of them, because they seemed farre greater then in truth they were, I caused a hooke and lyne to be brought me; and with a peece of a Pilchard I bayted the hook, & a foot from it, tyed a peece of corke, that it might not sinke deepe, and threw it into the Sea, which, our ship driving with the Sea, in a little time was a good space from vs, and one of the Fowles being hungry, presently seized vpon it, and the hooke in his vpper beake

...

By the same manner of Fishing, we caught so many of them, as refreshed and recreated all my people for that day. Their bodies were great, but of little flesh and tender; in taste answerable to the food whereon they feed ...

[F]rom the poynt of one wing, to the poynt of the other, both stretched out, was about two fathomes (Hawkins 1970, pp.71-72).

The first encounters between Europeans and albatrosses in the early modern period must have been something like what Sir Richard Hawkins reports of his experience with these birds off southern South America in early 1594. Of those mariners whose accounts of their voyages survive, comments on the size of the birds and their powers of flight form a constant refrain. It was a source of continual amazement that these birds could be unaffected by the severe weather conditions of the Southern Oceans, being able to keep aloft with minimal effort and fly into the wind in a way that no European ship of the period could do. Peter Mundy (1967, vol.5, p.35), who met the birds in the South Atlantic in June 1655, notes their “extraordinary large size,” and remarks how

[i]t maketh mee wonder how these and others [fly] with continuall steady outstretched wings, nott seeming to us to moove them att all in a long space, as wee see hawkes and kites to soare aloft: some allead[g]ing the depth of aire supports them, butt these flew close to the water and never farre from it.”

While the birds were a source of wonder, the instincts of the sailors drove them, nevertheless, to assess these unfamiliar creatures in terms of their use value, and thus the birds Hawkins and his men caught finished up in the pot. Such attitudes are deeply ingrained in the western tradition of human relationships with the environment. In this paper I will give an historical overview of the way in which both western and non-western cultures have treated this group of birds. I will do this by examining representative examples of this treatment, and show that in both western and non-western cultures the treatment of albatrosses has been based on the use value of the bird to those human cultures. I will argue that, despite changes in human societies and attitudes to the birds, including what they represent, they are still measured in terms of their use value, but that circumstances are such today that it is incumbent upon us to engage in a fundamental rethinking of our relationship with the natural world represented by these birds. Such a rethinking may help to achieve a more sustained relationship between humans and the environment, with valuable consequences for the well-being of both humans and birds.

European attitudes towards and treatment of albatrosses from the 17th to the 19th century

The unfamiliar birds which those first European adventurers encountered in Southern Hemisphere waters are known in English as albatrosses or sometimes, in the case of some of the smaller members, as mollymawks. In the early literature they are referred to in terms of birds familiar to Europeans, such as “extreame great Sea-Mewes [sea gulls]” (Schouten 1619, p.22), or, using a word which derives from the Portuguese for *pelican*, as “Alcatrazes” (Mundy 1967, vol.3, part 2, p.359) or “Algatrosses” (Dampier 1697-1703, vol.1, p.531). The birds were known to sailors travelling in southern waters, but not to others. Linnaeus published the first formal scientific description of an albatross in 1758, though he had no direct experience of the species, relying instead on the descriptions and illustrations published by others (Linnaeus 1758-59, vol.1, p.132). But it was not until the three expeditions of exploration led by Captain James Cook in the latter part of the 18th century that European

science began to become more familiar with the large seabird characteristic of the open oceans of the Southern Hemisphere.

Europeans in general gradually came to know albatrosses as the 19th century progressed. For English speakers and lovers of literature, Samuel Taylor Coleridge's poem (2001, vol.1, part 1, pp.365-419), "The Rime of the Ancient Mariner," first published in 1798, became so well-known in the years after its publication that an incident in the narrative of the poem passed into common speech and the albatross became identified with a heavy and unwanted burden (*Oxford English Dictionary* 1989, "Albatross" sense 2b). As the century progressed and immigrant and trading ships began regular voyages to and from Australia and New Zealand, the birds became part of the experience of travelling in the windy latitudes of the Southern Ocean.

It is worth investigating some of the ways in which this bird featured in western discourse of the 19th and early 20th centuries, since this will throw some light on how it was regarded. As might be expected, the bird was treated in a wide variety of ways.

For some it remained, as it did to the mariners of earlier periods, an object of awe and wonder. When Louisa Meredith (1973, p.26) saw one during a passage to Australia in 1839 she wrote that the "great white albatross (*Diomedea exulans*) fully realized all my ideas of its grandeur and solemnity" and described it as a "melancholy, grave, and most majestic bird." Alfred Fell (1926, p.55), who sailed to New Zealand in 1841-42, called it "a noble looking bird." But it was the novelist, Herman Melville (1963, vol.1, pp.236-237n), who reports the most extreme reaction. He had worked on a whaling ship on a voyage from New England to the South Pacific in 1841-42 and describes the first albatross he saw as "a regal, feathery thing of unspotted whiteness" before which, "[a]s Abraham before the angels, I bowed myself." For some voyagers the appearance of an albatross indicated that they had now entered unfamiliar southern waters (e.g. Guillemard 1887, p.iv), or it provided a mark of proximity to a particular location, such as the Cape of Good Hope.

But for many people, the birds were valued for much more pragmatic reasons. From the time of Richard Hawkins onward, albatrosses were caught by a variety of means. Shooting the birds with firearms for sport was a popular activity in the 19th century. Members of the French expedition led by Nicolas Baudin (2004, p.82) enjoyed this in the southern Atlantic in January 1801: "We amused ourselves by firing at several of them, but did not hit one, although they were well within range." On the emigrant ships it seems to have been a very common diversion to shoot at the birds following the ship. Louisa Meredith (1973, p.25) laments that "[e]very one possessed of a gun, powder, and shot aids in the slaughter, or at least does his worst." James Froude (1886, p.67) noted that on his ship in 1884-85, when albatrosses approached, the "passengers' chief anxiety was to shoot [them]." Such birds, if hit, could not be retrieved from a sailing vessel, and this wanton destruction sometimes occasioned debates among the passengers as to the merits of the activity. Alfred Fell (1926, p.55) gives an idea of how the debate might have been framed:

We had an interesting discussion at lunch, whether it was justifiable to shoot these birds merely for wantonness and amusement, when it is impossible to reach them after they are dead. I had only Mr. Otterson and Mr. Barnicoat on my side of the question, so it was agreed by the sportsmen that they were justified to continue the sport if only for practice.

Froude (1886, p.67) muses on the motivation for such behaviour, declaring that it arises from “some combination of motives difficult to analyse”.

Whether birds were obtained by fishing à la Richard Hawkins or by shooting, they were put to a variety of uses. Many writers commented on the tastiness of albatross flesh, with James Cook (1955-67, vol.2, p.52) noting in 1772 that it “were not thought dispiseable food even at a time when all hands were served fresh Mutton.” Sometimes birds were a source of eggs; James Harry writes in his journal of shooting birds in the Southern Ocean in 1853 “for the eggs contained in them” (NSL: Harry; zA2047; p.107). Their body parts had a variety of uses as enumerated by JF Green (1887, p.9):

Everyone knows the final uses the specimen may then be put to. Its webbed feet make capital tobacco-pouches ... The wing-bones make excellent pipe-stems; the breast ... a warm though somewhat conspicuous muff; and the beak, in the hands of a skilled artificer, a handsome paper-clip.”

At their nesting places, such as Albatross Island off northwest Tasmania, birds were killed for their feathers which were then used for stuffing mattresses (Backhouse 1967, p.102; Robinson 1966, pp.663-67).

In some circumstances they were regarded as saviours. To the crew and passengers of the *Strathmore*, wrecked on the Crozet Islands in 1875, albatrosses provided food, fuel, clothes, shoes and soap (Turner 1878). To the French sailors wrecked on the same islands in 1887, an albatross offered the possibility of salvation in that they attached a message to it in the hope that this might lead to their rescue. The bird and message turned up in Western Australia but the sailors seem to have perished trying to sail from one island to another (*West Australian*, 20 Sept. 1887, p.3; 27 & 28 March 1888, p.3; 6 Sept. 1888, p.3). For one seaman who fell overboard in the Southern Ocean in 1881, an albatross which came to investigate proved to be a literal saviour. The resourceful sailor seized and drowned the bird, then clung to it, using it as a lifebuoy until rescued (*Sydney Morning Herald*, 24 Nov. 1881, p.5).

Finally, they were useful to westerners as objects of scientific inquiry, at least since the time of the Cook expeditions. Usually this meant the birds had to be killed. After the scientists had conducted their investigations, the flesh of the birds obtained on the Cook expeditions was eaten. A century later, an English collector, Thomas Parkin (NUS: Parkin; Allen E. Bax Collection; Log), amassed enough specimens during a round trip from England to Australia that he was able to establish his own private museum of stuffed birds.

Maori and Moriori attitudes towards and treatment of albatrosses up to the 19th century

Since albatrosses, for the most part, breed on remote islands and forage in open oceans, they did not generally come into close contact with humans across their worldwide range in pre-modern times. It was only in the North and South Pacific that birds played a part in indigenous cultures, so it will be useful for the purposes of this paper to examine the use and value of the birds in one Pacific indigenous culture which was very familiar with them. This was in New Zealand, where they played a significant part in the lives of the Maori of the main islands and especially the Moriori of the Chatham Islands.

Members of Cook’s expeditions reported that albatross meat formed part of the Maori diet and pieces of down were worn as ear decorations (Banks 1962, entry after 30 March 1770;

Forster 1982, vol.2, p.249). Highly-prized feathers were used in the hair as a mark of rank and to decorate canoes and kites, while breast down was also used to make capes. The bones were used for tools of various kinds, as ornaments or to make musical instruments (Orbell 2003, pp.165-67). Oil obtained from the bird was drunk as a remedy for coughs and colds and rubbed on joints to ease rheumatism (Riddell 2003, p.19). The value of parts of the bird, such as its feathers, was determined by the difficulty of obtaining them and their consequential scarcity, since birds had to be caught at sea by hook and line (Orbell 2003, pp.165-67), as they did not nest on the main islands.

Their role in myth is a further indication of their importance in Maori culture. In stories told by Maori residents on the East Coast of the North Island, the ancestor Pourangahua returned to the ancestral home, Hawaiki, in the Pacific, and brought back *kūmara* (sweet potato). The *tāniko* weaving pattern known as *roimata toroa* ‘albatross tears’ comes from a version of this story – two birds brought Pourangahua back home, but one died as a result of his ill treatment of them and the second shed tears of anguish on its return to Hawaiiiki (‘The Story of the Kumera’, n.d.; Riley 2001, p.47). Another story of the origin of this pattern refers to a party of hunters coming to an albatross colony in the Bay of Plenty (Riley 2001, p.47). In proverbial sayings in the Maori language, the birds were used in metaphorical references to a daughter, a young man or a war party (Riley 2001, p.45).

On the Chatham Islands, albatross meat was a staple of the Moriori diet (Riley 2001, p.48). The birds nested on offshore islets which were difficult to access, requiring dangerous ocean voyages of up to seventy kilometres in wash-through canoes (King 1989, p.31). The albatross was among the motifs Moriori carved in the bark of *Kopi* trees (Karaka *Corynocarpus laevigatus*) and on limestone walls alongside Te Whanga lagoon on Chatham Island. On these islands the feathers had a similar high value as on the mainland, but they appear to have had a special significance, marking the followers of Nunuku, who was traditionally credited with ending the lethal combat within and between Moriori groups (King 1989, pp.27-28).

After the Maori invasion of the Chatham Islands in the 1830s, albatross feathers and meat were exported back to that part of the North Island where the invaders originated. The birds’ feathers took on an extra significance in the 19th century, being adopted by the Parihaka prophets, Te Whiti O Rongomai and Tohu Kakahi, as the emblem of pacifist resistance to Pakeha encroachments on Maori land (Keenan 2007). This emblem, the *raukura*, consisting of one to three white feathers from the underwing of the albatross (Gadd 1966; Keenan 2007), was widely worn by Maori adherents of the teachings and political position of Te Whiti, as well as by sympathetic Pakeha, such as William Baucke (1928, p.191).

It will be evident from this brief summary that some attitudes to albatrosses were shared across European and Maori/Moriori cultures. The birds were valued as sources of food, feathers and body parts, and their influence on language and mythology demonstrates their culturally important role. In the English speaking world the notion that killing an albatross brought bad luck seems to derive from Coleridge’s poem, but an attitude shared by European and Maori culture was a deeply-felt recognition of the birds’ mastery of the elements. That European view is evident in any number of 19th century accounts of voyages into the Southern Ocean, where the writers comment on the ease of the birds’ flight in conditions which severely affected ships, while the Maori view is implied in the use of feathers to decorate canoes to assist the occupants in mastering conditions on the water. The notion of the birds as saviours may have been present in that culture, but it is more characteristic of a people who are entering an unfamiliar environment, like 19th century Europeans. Where the

cultures differ is in the European habit of killing birds for sport or, in very much smaller numbers, for scientific inquiry. But both cultures base most of their attitudes on the use value of the birds and recognition of similar attributes.

Exploitation of albatrosses – expansion and rationale

In the 19th and 20th centuries there were significant changes in the relationships between humans and albatrosses. Some of these were a result of the availability of more advanced technology producing more severe human impacts on the birds. It had often been acknowledged that the albatross down was so thick that it gave the birds protection, not just from the cold, but also from bullets and shot from European weaponry. Joseph Banks commented on the need to be near the bird in order for a shot to have a fatal effect (Banks 1962, entry for 6 Jan. 1770) and Nicolas Baudin noted several times in 1801 how difficult it was to achieve a kill, including one incident when it took four shots to kill the one bird (Baudin 2004, pp.82, 91, 96). Comments of this kind ceased as firearms improved. In New Zealand better technology in the form of sailing vessels and rowing boats, brought by Maori to the Chatham Islands, allowed an increase in the kill of albatrosses on the formerly difficult-to-access breeding islands (Robertson 1991, p.8).

In other cases, however, it was not so much improvements in material culture but the prevalence of certain widespread attitudes to the natural world which produced major consequences for albatrosses. In the Judeo-Christian world these attitudes can be traced back to the Christian Bible (1897), where Adam is given “dominion”, i.e. power, over the natural world, including “the fowl of the air” (Genesis ch.1, verse 26). It is a short step from being given controlling power to the notion that it is right and proper for humans to exploit natural resources which have been provided for their benefit, like trees and plants (Genesis ch.1, verse 29). As European power expanded beyond the confines of their continent, this exploitative attitude accompanied them. Albatrosses were no less subject to the consequences of this than any other animal which could be used by humans.

Albatross exploitation on a massive scale rapidly expanded around those areas of the world where they could be found. In Tasmania, populations of Shy Albatross in Bass Strait were almost annihilated by the 1890s, while colonies of other albatross species on Macquarie Island, South Georgia and Tristan da Cunha were either extirpated or severely reduced in the late 19th or early 20th century (Robertson 1991, pp.12-13). Such depredation did not derive solely from the Judeo-Christian tradition, since it was not confined to westerners. Short-tailed Albatrosses in the North Pacific were nearly wiped out by the 1930s by Japanese feather collectors, especially on the birds’ main island breeding colony, Torishima (Safina 2002, pp.181-88). The massive exploitation of Laysan Albatrosses, also in the North Pacific, was conducted by both Japanese and American interests (Safina 2002, pp.147-52).

The consequences of such exploitation were obvious and always had been. Even in the Bible (1897) there were warnings against over-exploitation of nesting birds, specifically a requirement that parent birds were not to be taken (Deuteronomy, ch.22, verses 6-7). For people who had a longer familiarity with and higher dependence on the resources that albatrosses provided, there were correspondingly stricter restraints on the exploitation of the birds. Thus on the Chatham Islands restrictions on harvesting meant that it was forbidden to use metal objects to kill birds, to bring food and alcohol to the breeding grounds, and to leave rubbish on the islands (Riddell 2003, p.19). Birding trips had to be approved. The break in the albatrosses take from 1900 to 1911-12 seems to have occurred because the birds became *tapu* ‘off limits’ following the drowning of nine islanders returning from an unsanctioned

birding expedition (Robertson 1991, p.8). Elsewhere, for those who lacked a close cultural relationship with the birds, such restraints were non-existent, and so the birds were exploited until the resource was exhausted or nearly so.

Changes in exploitation patterns and attitudes in the later 20th century

As the consequences of unrestrained exploitation became obvious, a major change occurred in the relations between humans and these birds. First it was signalled by the rise of legislated protection. In 1909 Laysan Island, west of the main Hawaiian group, became a bird sanctuary as a result of a presidential decree (Safina 2002, p.150). In 1920 Australian authorities refused to renew the commercial lease under which the natural resources of Macquarie Island had been exploited (Terauds & Stewart 2005, p.65). In New Zealand the passage of the *Animal Protection and Game Act 1921-22* brought protection for most albatross species, followed by some extensions in 1931 (Robertson 1999, p.9). Short-tailed Albatrosses on the Japanese island of Torishima gained protection in 1933 and were declared a national monument in 1958 (Safina 2002, pp.184-86).

But the enactment of legislation did not mean that exploitation stopped immediately. Because of the remoteness of the breeding islands, it was difficult, if not impossible, to police the regulations effectively. Poachers continued to raid breeding colonies for eggs, meat and feathers (Safina 2002, pp.150-51), and the killing and eating of birds remained a feature of people's experiences of the Southern Ocean. Members of the Cleveland Museum of Natural History expedition of 1925 ate the flesh of the birds they caught (Simmons 1927, pp.39-40). L Harrison Matthew, who wrote a book about his time with sealers and whalers on South Georgia and South Orkney in the late 1920s, dedicated it to "bird lovers, especially those who love them piping hot, well browned and with plenty of bread sauce" (Matthews 1951, p.ix). In wartime the needs of the birds were overruled by human needs as Midway Island, a breeding ground for Laysan Albatrosses, became a major US military base (Lindsey 2008, pp.105-06); in the Chatham Islands, the New Zealand government authorised the collection of albatrosses to be sent to the Maori Battalion during the Second World War (Riddell 2003, p.19).

Even when direct exploitation of the birds stopped, attitudes towards the natural world did not change greatly. It was still regarded as a source of benefit for humans, and in the case of the oceans, as something which could be harvested without restraint. Fish like tuna were widely popular and demand was high. Advances in fishing technology in the later 20th century saw the rise of the technique known as long-lining for tuna fishing, whereby immensely long-lines baited at regular intervals with hooks were trailed out behind boats. Many albatrosses were drawn to the baited hooks as the line was being set, attempted to take the bait and were caught by their bills and drowned. The very serious effects of this fishing on albatross populations from the 1950s to 1990s are well covered by WLN Tickell (2000, ch.17) and Michael Brooke (2004, ch.10), with Tickell outlining in detail the international efforts to reduce the damage and make the threat to albatross populations more widely known. There is evidence that these efforts have now reduced the annual mortality of albatrosses and some populations are showing signs of recovery (Lindsey 2008, p.112).

Indirect threats to the birds are more recent and are not confined to pressures as a result of new fisheries and fishing techniques. Terence Lindsey (2008, pp.106-08) outlines some of the threats posed by habitat modification on breeding islands as a result of the introduction of feral animals, including cattle, goats, pigs, rabbits, mice and rats. Again, authorities are responding to the threats, but generally only after the damage became severe. This is evident

in the reactions of the Tasmanian State and Australian Federal Governments to the situation on Macquarie Island (Terauds & Stewart 2005, pp.64-66).

Pressures to take action to preserve albatrosses come from conservation movements and concerned citizens of many countries, as well as from international treaties, like the *Agreement on the Conservation of Albatrosses and Petrels* (2001) which came into effect in 2004. Awareness in the developed world of these birds and their situation is sustained by a stream of high quality publications, often beautifully illustrated with the finest nature photography, in the form of coffee-table books, magazine and newspaper articles, as well as natural history documentaries on television and DVD, posters, websites, calendars, and similar kinds of material. It would be fair to say that these birds have become icons of the conservation movement, even in countries where the birds are not generally found, like the United Kingdom, which hosts the global office of BirdLife International, sponsor of major global seabird and albatross conservation programs (BirdLife International 2009a, 2009b).

The rapid increase in material featuring the birds aimed at a general market has been marked. In Australia, for example, there have been three monographs on albatrosses in the last five years (Terauds & Stewart 2005; Lindsey 2008; De Roy, Jones & Fitter 2008). Worldwide, there have been many works published recently which are aimed at helping interested readers to identify these birds (e.g. Onley & Scofield 2007; Shirihai 2007). This rising interest coincides with the rise in green political movements and green agendas in existing political parties in a number of developed countries, and also with organisations advocating sustainable production practices, like the Rainforest Alliance or Fair Trade, along with increased concerns about the sustainability of practices and long-standing consumption patterns in the light of climate change and diminishing natural resources.

While an increased awareness of albatrosses has undoubtedly produced some benefits for the birds, such as international conservation treaties, human attitudes towards them are still based on a use value. Previously their value lay in their capacity to be exploited for human physical needs. Now it lies in their contribution to people's spiritual and emotional needs, as they are almost venerated as emblems of the wild and magnificent natural world, as awe-inspiring creatures with the capacity to live long lives in harmony with the most hostile region of the planet. Thus readers and viewers of the glossy books, photographs, DVDs and TV shows can feel that in some way they are benefitting from a greater familiarity with these birds. If such people are then moved to support conservation movements and pressure governments to better address the situation that the birds face, then this may appease their concerns about their relationship with the oceanic environment and their responsibilities towards it, and thus provide a form of comfort and personal well-being.

Changing attitudes and new dangers for albatrosses

It should be evident that as human societies have changed – in terms of the view of what constitutes use value, or in terms of advances in material culture, or extensions of practices of harvesting ocean resources – so too have attitudes towards albatrosses, though these are still based on use value. Even as the cultural status of the birds rises in developed countries and some benefits to them flow from that, so do further challenges to the sustainability of their populations. Increased awareness, coupled with highly attractive colour, still and motion photography, can inspire people to want to visit the parts of the world that the birds frequent and this leads to a demand for tourist experiences. Eco-tourism to the Southern Ocean islands and the Antarctic is increasing rapidly as individuals and organisations in several countries begin to provide services to meet this demand. Statistics from the International Association of

Antarctica Tour Operators (IAATO) website show a fivefold increase in tourist visits from an estimated 6,704 in 1992-93 to 37,734 in 2008-09. Even though the basis for collection of figures has changed somewhat – for example, the early figures do not include commercial yacht activity – the rapid increase in tourist visits is plain.

Tourism poses particular challenges, especially to remote breeding colonies. Even though no albatrosses breed in Antarctica, they do frequent some Antarctic waters and so they are potentially at risk from increased tourist visits. In 1991 signatories to the Antarctic Treaty established a Protocol on Environmental Protection to the Antarctic Treaty and IAATO members have adopted guidelines for watching marine wildlife in keeping with the provisions of that protocol (IAATO 2002). These guidelines aim to minimise disturbance, protect wildlife and avoid harmful impacts. Breeding colonies are on islands controlled by sovereign nations, unlike Antarctica, and access to them is subject to the control of those nations. For instance, in the New Zealand subantarctic islands, access for tourism purposes is controlled by a permit system managed by the Department of Conservation (DOC) with fewer than a thousand visitors permitted per year, and the main tour operator, Heritage Expeditions (2009), is a concession holder licensed by that department. Here too there are strict rules in the form of a Minimum Impact Code governing wildlife viewing (DOC 2009).

But guidelines, codes and permits, even if strictly adhered to, are limited in the actual protection they offer. There are dangers which they are powerless to prevent. Aircraft on sightseeing flights can crash, as Air New Zealand flight TE901 did in November 1979, flying into the slopes of Mt Erebus, near McMurdo Sound, Antarctica. Ships can sink, even those specially strengthened for Antarctic conditions, like the MS *Explorer*, carrying 154 passengers and crew, which struck an unidentified submerged object and sank in November 2007 in the South Orkney Islands. Neither incident directly harmed albatrosses, but the potential for harm is plain. Apart from this, the longer term impacts of human visits to breeding colonies are not well-established. The most visited colony, that at Taiaroa Head, near Dunedin, New Zealand, has successfully combined tourism with an increase in the number of breeding birds, but this has been brought about by protecting birds from introduced predators and from the natural curiosity of visitors through the erection of fences to prevent unauthorised access and the employment of local field staff (Royal Albatross Colony 2010). It will be more difficult to achieve similar results in places which are more remote and less subject to the constant vigilance of wildlife authorities.

Conclusion

Thus, at least for birds living in the Southern Ocean, there is increased danger from tourism based on the new use value that the birds offer humanity. It seems likely that such dangers may have some serious impacts on these birds, as happened in the case of their exploitation for human physical needs, and in the case of the effects of long-line fishing, and it may be some time before humanity reacts and adjusts its practices and expectations. One way of making those adjustments would be to rethink our relationship with the natural world represented by these birds. A shift in the way of engaging with them might see them, not in terms of their use value to humans, but as creatures which have rights and a place of their own in the world we share. A greater willingness on our part to do this by valuing them for themselves, rather than for what they do for us, will help to achieve a more sustained relationship between humans and the environment with valuable consequences for the well-being of both humans and birds.

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