



Albatross

graham barwell



Animal series

Albatross



Animal

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Albatross

Graham Barwell



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To Rebecca, and in memory of my mother, who would have loved to hold this book in her hands

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Introduction

My first encounter with an albatross was when I was a boy. My father, a keen wildlife photographer, took me to see a light-mantled albatross that had been blown ashore near where we lived in southern New Zealand. It was being cared for prior to release and my father wanted to take some pictures. Like many people, even those living in areas surrounded by the oceans the birds frequent, I did not normally see such creatures in the course of my daily life, so the visit to the recuperating bird was presented as a special opportunity.

While the albatross I saw was one of the smaller members of this bird family, I confess to having only a hazy recollection of the day, though my father's picture of the bird remains. As I grew up I did see albatrosses at a distance on other occasions, but for me the bird remained largely unknown, familiar more from photographs or Coleridge's famous poem than from first-hand experience. It was only when I came to live in Wollongong, New South Wales, that I began to become familiar with the albatrosses that visit the offshore waters there in the cooler months. This familiarity came through participation in monthly pelagic trips during which the birds were regularly seen, caught and banded. The opportunity for ordinary members of the public to see such birds up close on a regular basis was completely unavailable when I was growing up.

My increasing familiarity with the bird on my doorstep, so to speak, in New Zealand and Australia mirrors the way the albatross has become increasingly prominent in the modern world.¹ Where once it was an almost mythical bird, familiar largely to those who visited the oceans it frequented, now it has an iconic status, representing the majesty of the natural world and signalling in its diminishing numbers the consequences of human treatment of the open seas. It is this combination of the awe which the bird inspires and the recognition of the threats it faces that produces a powerful emotional connection with it for many people today, even in parts of the world where it is not usually found.

The earliest evidence of the existence of albatrosses are fossils from the Oligocene epoch, 34–23 million years ago.² The fossil record from the Miocene and Pliocene epochs, 23–2.5 million years ago, shows that albatross ancestors inhabited the oceans of both hemispheres, with fossils being found in Japan, the United States, Britain and Bermuda, as well as in Australia, South America and South Africa. In the Quaternary Period the birds seem to have disappeared from the North Atlantic, though live birds

do turn up there occasionally and may stay for many years. In evolutionary terms, their closest relatives are other seabirds – the petrels and shearwaters, the storm-petrels and diving-petrels, which together occupy a wider range of oceanic habitats than the albatrosses. These families share a common characteristic of having tubular nostrils in a prominent position on top of the bill.



Light-mantled albatross recuperating after having been blown ashore. The first albatross I ever saw.



SOSSA members measuring and banding a wandering albatross off Wollongong.

Today albatrosses are confined to the Southern Ocean, the cooler waters off Peru and Ecuador and the North Pacific. They are not found in most of the tropics, except around Hawaii and the seas from the Galapagos Islands to the South American mainland. They breed usually on isolated oceanic islands and come into contact with humans on the oceans. They spend most of their lives at sea, mainly in pelagic waters, though they may frequent inshore waters in certain circumstances, especially when food is readily available. They generally come ashore only to breed, though some birds may be blown onto land by very strong winds.

habitat, but the often subtle differences between the coloration of the different species, and between juvenile and adult birds, can make the determination of some species a challenge.



Indian yellow-nosed albatross off Wollongong, 2011.

Albatrosses are big birds. Males are heavier than females, with the heaviest great albatrosses ranging up to 11 kg or more.⁶ This is a substantial weight for a flying bird, though albatrosses are not quite as heavy as some swans.⁷ In the smallest albatrosses, females may weigh as little as 1.7 kg, but in most species the birds weigh anything from about 2 to 5 kg. Their wings are very long and almost straight, with a wingspan of up to 3.5 m for some of the great albatrosses, the wings drooping towards the tips.⁸ The wings can be locked into place so that the birds can glide without the need for flapping, as long as there is sufficient moving air to keep them aloft. They can fly in light wind but often prefer to rest on the sea at such times. They may need to run along the surface of the sea or land in order to get up sufficient speed to take off, but once aloft, they can fly enormous distances both upwind and downwind.



While it was known as early as the mid-nineteenth century that some albatrosses could travel long distances, the advent of satellite tracking showed just how far the birds do travel. In 1989 it was established that male wandering albatrosses breeding in the Crozet Islands in the south Indian Ocean went on foraging expeditions of up to 15,000 km between incubation shifts.⁹ Satellite transmitters on northern royal albatrosses showed that they could fly up to 1,800 km in 24 hours on migration between breeding and wintering areas.¹⁰ Smaller albatrosses might achieve up to 900 km per day in such direct flights. By such means it is possible to determine that northern royal albatrosses may regularly travel on those flights at a point-to-point speed of up to 110 km per hour.¹¹ Foraging wandering albatrosses can achieve a speed of up to 135 km per hour.¹²

Albatrosses can be long-lived birds, with the oldest known individuals being at least 60 years of age. Like other larger animals they do not breed until they are at least six or seven years old, and more often much older in the case of the great albatrosses. Smaller albatrosses, those in the southern hemisphere for instance, may be six to ten years old before breeding for the first time. Young birds pair up before they begin to breed and, once settled with a partner, usually stay together until one of them dies. The albatross equivalent of divorce is infrequent. If its partner disappears, a bird will find a new partner, though finding a suitable one can take some time. Young birds may take some years to do so, with the process involving their mastering a set of stereotyped actions and postures which they may combine in varying ways. These actions may include dancing, mutual preening, and sky-calling with the bill pointed skywards and the wings extended. Once a pair bond has been formed, the extent of these activities decreases and experienced pairs may sit together silently. When returning to their nesting areas after months at sea, such birds appear to recognize each other without the need for elaborate courtship rituals.

Most birds begin their breeding cycle in the spring or summer, but those that breed in the subtropical North Pacific lay their eggs in their winter.¹³ Albatrosses build nests of dirt and vegetation or sometimes, where no vegetation is available, make simple scrapes. They lay a single egg of up to 7 per cent of their body mass, enabling them to raise one chick each time they breed. After the egg hatches, the parent birds feed their chick over a period of some months, the interval between feeds becoming longer as the chick grows. The semi-liquid food adults provide is so rich that the chicks become heavier than their parents before their weight diminishes and they fledge.¹⁴ The period from hatching to fledging can be as long as around 300 days in wandering albatrosses. In the case of these birds, which lay their eggs in the summer, the chick is fed through the following autumn, winter and spring. Other species have shorter feeding periods, but devote a number of months to the development of their offspring.

While most of the smaller albatrosses can breed each year, the grey-headed albatross, the sooty albatrosses and all the great albatrosses breed every two years. Regardless of whether the species breeds annually or biennially, successful breeders may not breed as regularly as this. The consequence of this breeding pattern among albatrosses is that populations may take many years to recover if the adult birds are

harmful. Providing they are unharmed, females continue to lay until near the end of their life. In broad terms the life cycle the birds follow is not greatly dissimilar to that probably lived by pre-agricultural humans.¹⁵



Black-browed albatross chick.

The food the birds eat is dependent entirely on the sea, consisting mainly of fish, squid and crustaceans. Carrion may be locally important. Among all these it is squid that is the most common and important part of albatross foods worldwide, and it is generally taken at or just below the ocean's surface. Because squid often come towards the surface at night, especially at times of full moon, albatrosses may feed in twilight as well as during the day.¹⁶ Albatrosses locate most of their food by sight but do have a sense of smell, though it is less developed than in some of their relatives, such as storm-petrels. They may satisfy their water needs from their prey or drink seawater, so they have special glands to enable them to process and excrete excess salt.

The number of albatrosses existing today varies widely according to species. Laysan and black-browed albatrosses have populations in excess of 1 million birds, but Amsterdam albatrosses from Île Amsterdam in the south Indian Ocean have a current estimated population of no more than 150 birds, with only about 25 pairs breeding each year. Like many albatross species, the Amsterdam birds seem to have been severely affected by human activity, primarily fishing. The situation for the whole albatross family is critical now, with seventeen species being considered threatened in terms of the criteria for extinction risk established for the IUCN Red List. Their future is still in the balance.¹⁷

In order to show how albatrosses have been regarded over time, the chapters in this book are arranged in roughly chronological order. The first chapter looks at how people from the north Atlantic seaboard first encountered the birds as their ships travelled into previously unfamiliar seas. They provided the earliest documented encounters. This led to the development of scientific interest in the birds, often in connection with the great voyages of exploration in the eighteenth century.

Samuel Taylor Coleridge's poem 'The Rime of the Ancient Mariner' forms the subject of the second chapter. This poem created some of the commonly held beliefs

about the consequences of killing albatrosses and gave rise to the notion of an albatross as a burden. But, for all its influence, it did not much affect the way people treated the actual birds.

Chapter Three focuses on the role albatrosses played in the cultures of people for whom it was part of the local birdlife. The people who had most to do with the birds were the Polynesians in Hawaii and especially in New Zealand. Elsewhere in the Pacific, the birds were part of human culture in southern South America and around the North Pacific Rim.

Attention then turns to the practical and imaginative uses the bird had in Western cultures in the late nineteenth and twentieth centuries, while the last two chapters examine the way human interactions with the bird have moved from exploitation to a recognition that such approaches will lead to its extinction. The final chapter is concerned with the bird today, its status as an icon of the conservation movement and a kind of celebrity, but retaining its place as a bird of significance in indigenous cultures of the Pacific.

This account of the way albatrosses have entered into the lives of humans makes a contribution to their well-being, as increasing understanding and awareness underwrites the efforts to ensure that these magnificent birds continue to provide inspiration into the future.

1 Encountering the Albatross

For people coming from parts of the world where albatrosses were unknown, the first sight of these birds produced many emotions, beginning with amazement. The experience of these early mariners is worth examining, since it was through them that the birds became gradually known to a wider audience, including those whose interests were scientific.

FIRST DOCUMENTED ENCOUNTERS

The earliest European navigators sometimes left tantalizingly cryptic references to large birds seen in the ocean south of the equator. For instance, a participant in Vasco da Gama's expedition to India noted in his journal that on one occasion in the South Atlantic in 1497 they saw many birds like large herons.¹ The size of these birds is suggestive, but their identity is unclear.

The English navigator Sir Richard Hawkins is unusual in providing the first definite account of what must be albatrosses. As he and his crew sailed south off the coast of modern Argentina in late 1593 on their way to the Strait of Magellan, they ran into a fierce storm during which 'certaine great fowles, as big as Swannes, soared about us, and the winde calming, settled themselues in the Sea, and fed upon the sweepings of our Ship'. Hawkins wanted a closer look at these birds, so caught one on a baited hook trailed in the water behind the ship. After the crew had some difficulty confining its thrashing wings and bringing it on board the *Dainty*, he determined that it was not quite as big as it first seemed. Subsequently he and his crew found that the birds were good to eat, their flesh 'in taste answerable to the food whereon they feed'. By this manner of fishing for birds, 'we caught so many of them, as refreshed and recreated all my people for that day'.² This account sets the scene for subsequent reports from European mariners. They too were struck by many of the same features of the birds, but sometimes offered different observations.

Size features in almost every report from the early voyagers. The Dutch navigator Willem Schouten, who made the first passage around Cape Horn in 1616, wrote of very large seabirds, possibly albatrosses, encountered on the voyage: 'extreame great Sea-Mewes [sea gulls], bigger of body [than] Swannes'.³ John Fryer, who travelled to India as surgeon for the East India Company, saw albatrosses west of the Cape of Good Hope in 1673. Their 'great Bodies', he wrote, are 'not proportionable to their

Wings', which are twice the length of their bodies.⁴ Peter Mundy, who made several voyages from England to India in the seventeenth century, was perhaps the most careful observer. Calling albatrosses 'the biggest of any Seaffowle I have yett seene', he distinguished between larger and smaller varieties, commenting that among the birds flying around his ship in the South Atlantic in 1655 were some 'of an extraordinary large size with a white head and taile and white under the belly'.⁵ These must have been one of the species of great albatross.

Early navigators made sense of the birds by comparing them with something familiar, like herons, swans, seagulls or gannets, a common practice when people come upon something new. Some observers were impressed by the sheer numbers of birds around their ships. Edmond Halley, of Halley's Comet fame, sailed into the South Atlantic in the course of his investigations into terrestrial magnetism. Some distance southwest of the island of Tristan da Cunha, on 11 February 1700, he counted more than twenty albatrosses around his ship. A few days later, when they were closer to the island, he commented how the innumerable birds around the ship included many albatrosses.⁶

Observers were impressed by other aspects of these new birds. Returning from Asia in 1638, Mundy was struck by their mastery of flight, how they could continue to glide effortlessly close to the water without flapping their wings. He made a similar comment during the return leg of a later journey to India. He discounted the theory that the birds were kept aloft by 'the depth of aire', like hawks and kites, noting that the albatrosses 'flew close to the water and never farre from it'.⁷ Their capacity to fly into a prevailing wind led him to speculate on how some ships are better able to sail in a similar fashion, wondering if the answer might lie in the way the wind struck the slightly curved underside of the bird's wing and the curved hollow formed by the sail on such vessels.



Antipodean (Gibson's) albatrosses off St Helens, Tasmania, 2008.



Wandering albatross in its element.

Some voyagers, always on the lookout for assistance in navigation and noting where they commonly encountered albatrosses, attributed a prophetic nature to the birds. Fryer included albatrosses among the birds that acted as ‘feathered Harbingers of the Cape [of Good Hope]’ in 1673.⁸ This view was repeated by William Dampier in 1697 in his remarks on his journey round the world.⁹

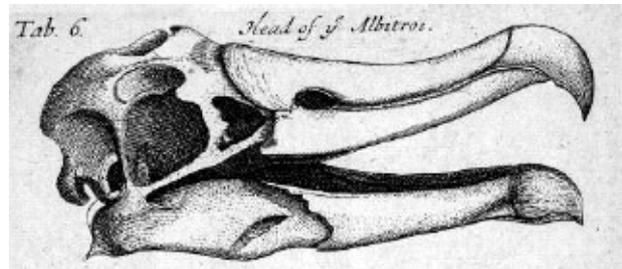
Whatever the birds were that flew around Schouten’s ship off Cape Horn in 1616 he, like Hawkins before him, saw them as a source of welcome fresh meat for his shipmates. He noted how the ‘birds being unaccustomed to see men, came to our ship, and sat thereon, and let our men take and kill them’.¹⁰ The readiness of albatrosses to come up close to ships, especially when there were tasty items of refuse to be had, their apparent docility once brought on board and their tameness on their breeding islands, all contributed to the long-standing notion that the birds were in some way foolish.

EARLY SCIENTIFIC INTEREST

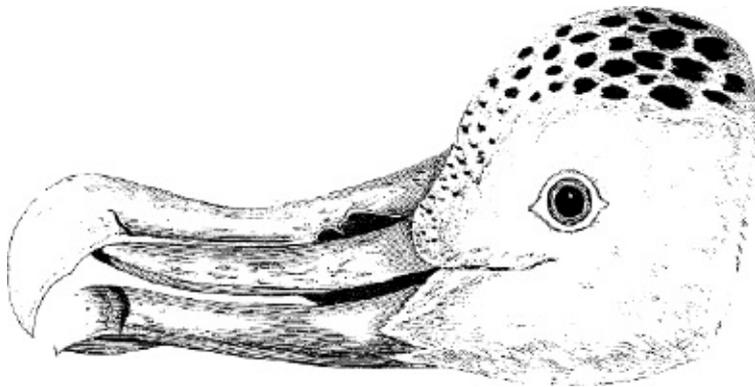
The regular capture of these unusual and unfamiliar birds by often hungry mariners resulted in some of the uneaten parts finding their way back to Europe as curios. Here they were a source of interest for those who were beginning to focus their interests on the natural world as revealed by voyages of discovery. The Royal Society in London obtained a skull, which the eminent plant physiologist Nehemiah Grew described and engraved in 1681. Given that neither he nor his fellows in the Society had ever seen a living albatross, and he had only a skull in front of him, it is not surprising that he felt obliged to spend part of his description discounting the possibility that the skull was that of a dodo. Nevertheless, this was the first published illustration relating to an albatross.¹¹

Such interests continued into the eighteenth century. In the third volume of *A Natural History of Birds* (1738), Eleazar Albin offered his readers a view of an albatross head, but this time fully feathered. The flecked plumage on the white crown indicates that the bird is one of the great albatrosses, possibly a wandering albatross from the South Atlantic. While Albin took pains to point out in his preface that his

illustrations were made directly from the bird itself, not from another drawing, he showed no such compunction in his text, which was shamelessly copied from Grew, who had died in 1712.¹²



The skull of a 'Man of War' bird, or 'Albitros', in the Royal Society Collection, London, engraved and published by Nehemiah Grew in 1681.



The albatross head depicted by Eleazar Albin in vol. III of his *Natural History of Birds* (1738).

Unlike Grew and Albin, the naturalist George Edwards had more than just an albatross head to work with when he was producing the second part (1747) of his illustrated natural history of birds. Using sketches made from two stuffed specimens, and a skeleton he had in his studio, he produced the first illustration of a whole albatross, even though he placed the rather stiff-postured bird on land rather than at sea.¹³ He also clarified a confusion in identification that went back to Grew and Albin, both of whom gave 'man-of-war' as an alternative name for the albatross. Based on his own experience in the West Indies, Albin had provided some extra information on the habits of the man-of-war bird, pointing to its practice of harrying boobies (gannet-like seabirds) for the flying fish they prey upon. These details identify the birds Albin had in mind as frigatebirds, tropical seabirds with albatross-like, long, hooked bills.



The albatross depicted by George Edwards in 1747, the first picture of a complete bird.

Confused accounts of unfamiliar parts of the natural world are commonplace in the days of exploration, with dugongs giving rise to stories of mermaids, and penguins appearing to have the characteristics of birds and fish. The confusion between albatrosses and other seabirds goes back at least to Richard Hawkins's time, since he spoke of the bird called 'alcatrace', which hunts flying fish in the tropics, separating it from the larger birds he met further south, genuine albatrosses – though he did not name them as such.¹⁴ Working more systematically than any of his predecessors, Edwards clarified the confusion in their work, pointing out that the albatrosses he had seen had been brought from the vicinity of the Cape of Good Hope. But the confusion was hard to eradicate, being given new life by Linnaeus only a few years later.¹⁵

NAMING THE BIRDS

Just as it took some time for albatrosses to be illustrated so that landlubbers could see what the birds looked like, so did it take some time for a suitable English name to be fixed for them. Early writers like Hawkins used the name *alcatrace* for the frigatebird, a word that Spanish and Portuguese navigators had taken, as *alcatraz*, from the Arabic word for a kind of sea eagle, *al-ġattās*, and applied it more generally to larger seabirds.¹⁶ In the seventeenth century Mundy seems to have been the first English

writer to apply *alcatraz* to the albatross.¹⁷ The word was then used in that meaning in a variety of spellings. The modern spelling, albatross, appears as early as 1747 in Edwards's *Natural History*.

Other names for the birds reflected prevailing views of their nature, such as foolishness. This is evident in a name that was commonly used in the southern hemisphere for some of the smaller albatrosses, mollymawk, derived from Dutch words meaning 'foolish gull', and gooney, an American-English name for northern Pacific albatrosses.¹⁸ It was not just those from the North Atlantic who saw foolishness as a key attribute of albatrosses. The Japanese names for the albatross, *aho-dori* or *baka-dori*, translate as 'stupid bird'.¹⁹

In the eighteenth century, interests that had led to the formation of the Royal Society in England in 1660 had spread and were flourishing throughout Europe. One way of understanding newly discovered natural creatures was by arranging them, along with their European counterparts, in groups and hierarchies that revealed their similarities and differences, and giving them names that would be the same, regardless of the language spoken. The Swedish scientist Carl von Linné, known by the latinized form of his name, Linnaeus, was the most influential of these taxonomists. The first volume of the tenth edition of his great work of classification, published in 1758, included the first formal scientific description of an albatross. In writing his description in Latin, Linnaeus relied on the pictures and information provided by Grew, Albin and Edwards, not having seen the bird himself or having a specimen to hand. By repeating Albin's statements on its tropical range and habits, he perpetuated the confusion between albatrosses and frigatebirds. The name he chose for the bird depicted by those authors was *Diomedea exulans*, 'the exiled/wandering diomedea', a name that is still in use today, applied to the wandering albatross.²⁰

The name that Linnaeus gave to the genus came from one of the Greek heroes of the Trojan War, Diomedes. Most classical authors agree that Diomedes offended the goddess Aphrodite and did not settle back in his own lands after the war, and that his companions were transformed into birds. Linnaeus gave no reason for his choice of name, but it is likely that he was thinking of the form of the story told by the Roman poet Ovid. Here the vengeful goddess turns the men into large birds very like white swans on their return voyage from Troy, and exiled Diomedes is prevented from returning to his homeland.²¹ Linnaeus's name picks up on the large size and generally white plumage of the birds reported by travellers and depicted by artists, as well as the notion of exile or wandering (*exulans*), since Linnaeus claimed that the bird ranged from the tropics to the Cape of Good Hope. Though the range is incorrect the name is appropriate, since wandering albatrosses are circumpolar travellers.

EIGHTEENTH-CENTURY VOYAGES

As the century progressed, increasing information was published about the large seabirds of the Southern Ocean. Like Linnaeus and others, writers may present somewhat confused or unclear accounts of what they saw, not surprising in the absence of accurate accounts of species. Thus the French explorer Louis de Bougainville noted how, as they approached the eastern entrance to the Strait of