

Falkland Islands



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Black-browed Albatrosses

General introduction

The Falkland Islands are situated in the South Atlantic between latitudes 51°S and 53°S and longitudes 57°30'W and 61°30'W. They cover an area of 4,700 square miles (12,173 km²), with two main islands, East and West Falkland, and about 750 smaller offshore islands and islets (Woods 2001).

Physiography

The Falkland Islands are composed of sedimentary rocks: the landscape is generally rugged and hilly, with the highest peaks being Mount Adam (700 m) on West Falkland and Mount Usborne (705 m) on East Falkland. East Falkland is divided into two large land blocks, connected by a narrow isthmus. The southern block is dominated by the plain of Lafonia, an area of gentle relief and open grasslands, while the area to the north is more rugged and rocky, with large upland areas of peat bog and permanent pools. West Falkland is generally more rugged, with an undulating landscape of open plains and upland acid grasslands. The coastline is deeply indented around both East and West Falkland (Aldiss and Edwards 1999).

Climate

The Falkland Islands have a cool-temperate oceanic climate, characterised by persistent strong winds, particularly in the spring and summer. Rain falls on approximately half the days of the year, though there tends to be more in summer, and the average annual

precipitation is 635 mm at Stanley, which has the longest series of reliable climatic records. Average monthly temperatures range from 9°C in January to 2°C in July.

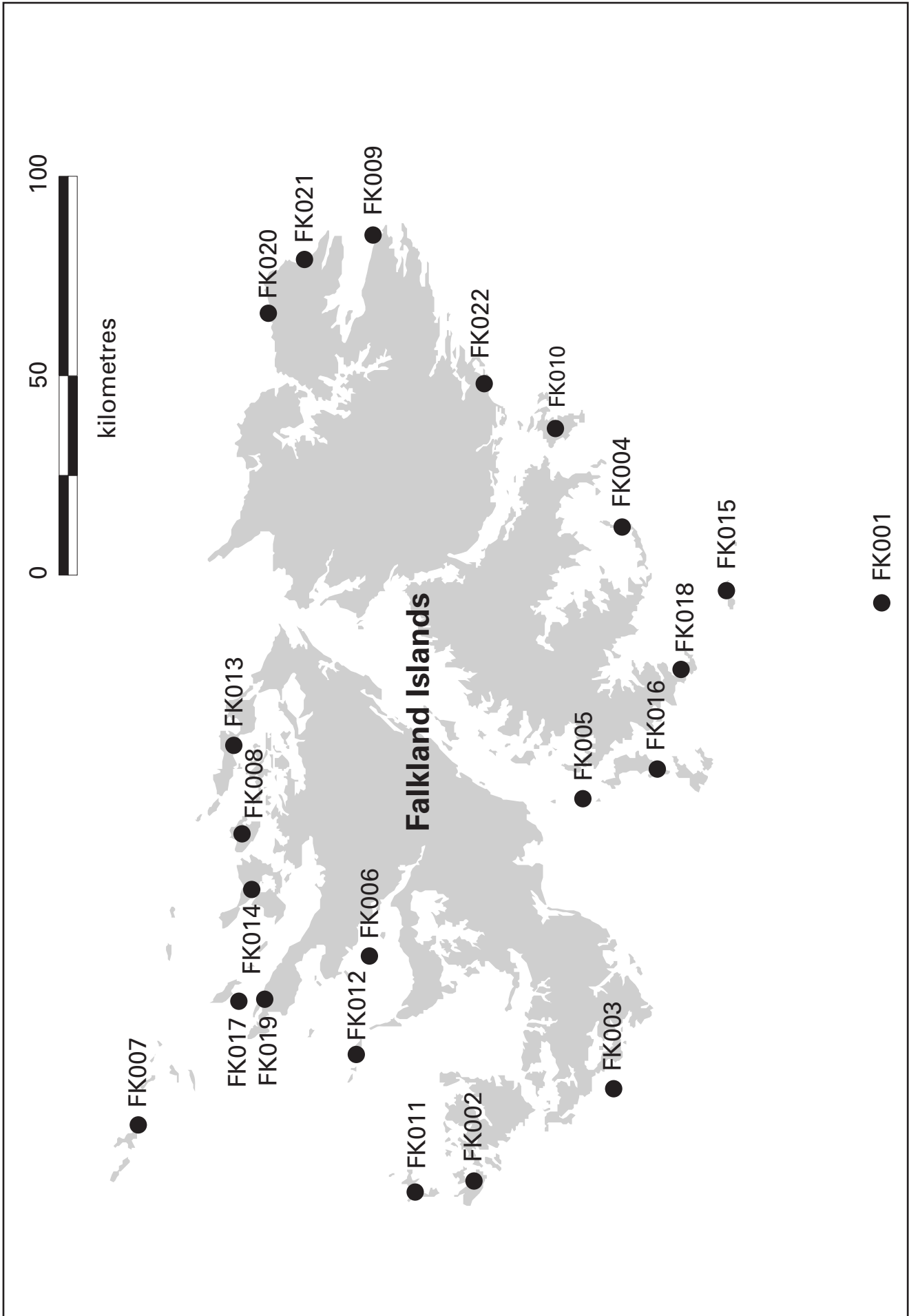
Biodiversity

Birds

The Falkland Islands are especially important in an international context for their seabird and marine mammal populations. The rich coastal waters are very productive, with the northerly Falklands Current to the east of the islands bringing cold, deep nutrient-rich water from the Antarctic and providing the basis for the marine food web. Abundant productivity leads to a wealth of marine life, supporting vast colonies of top predators such as albatrosses, penguins and seals. Colonies of nocturnal burrowing petrels are known from a few islands; probably others are still to be discovered and all need to be surveyed. More than 70% of the world population of Black-browed Albatrosses and 75% of the world population of the southern form of Rockhopper Penguins breed in the Falklands.

Marine mammals

Around the coasts, Southern Sea Lions *Otaria flavescens* and Southern Elephant Seals *Mirounga leonina* breed in colonies of up to 300 pairs, and at a few remote rocky sites there are colonies of up to several thousand South American Fur Seals *Arctocephalus australis*.



Vegetation

The natural vegetation consists of coastal fringes of Tussac Grass *Poa flabellata*, oceanic heath, acid grassland, peat bog and upland feldmark communities (Clark 1991). Tussac is the tallest native plant in the Falklands and originally formed stands around the coasts, extending at least 200 m and sometimes 800 m inland, and covered small islands. It is very long-lived and on Beauchêne Island, one large healthy plant was shown to be at least 300 years old (Smith and Prince 1985). The mature plant develops a fibrous pedestal (Tussac-bog) about 1–1.5 m high and 3 m or more in circumference; from the crown spring thousands of leaves and stems up to 1.5 m long and the whole plant may reach a height of 3.5 m. As they die, the leaves and stems fold down and are retained for years as a skirt between the pedestal and the growing leaves before eventually falling. Adjacent plants in mature Tussac grassland are so close together that skirts interlace completely and are difficult to penetrate. However, tunnels carpeted with leaf-litter between the bogs are kept open by the movements of penguins, seals, petrels and shearwaters. Tussac is very important for a great variety of Falkland birds, from the Falkland Grass Wren to the Striated Caracara, providing nest sites, shelter from wind and food sources for the majority of the resident species.

On the main islands and many of those offshore, the vegetation has been degraded by accidental or agricultural burning and grazing by sheep, cattle, pigs, horses and, more recently, Guanaco *Lama guanicoe*, Reindeer *Rangifer tarandus* and goats. In particular, Tussac has almost disappeared from the coasts of East and West Falkland, and only survives in its original state on some relatively inaccessible and remote offshore islands. The main islands are dominated by oceanic heath, with Whitegrass *Cortaderia pilosa*, a range of cushion plants and small shrubs. Bush and shrub associations are found inland on well-drained slopes with bog communities on poorly drained areas. Feldmark vegetation occurs above 600 m and on lower exposed slopes with mineral soils, with cushion-forming plants and associated mosses and lichens. Vegetation on the smaller ungrazed offshore islands is generally dominated by dense Tussac, which flourishes particularly where burrowing birds aerate and fertilise the soil. There are no native trees, although many settlements have shelter belts of introduced European Gorse *Ulex europaeus* and trees of several species, particularly Monterey Cypress *Cupressus macrocarpa*, pines, spruces, eucalyptus and poplar trees. Kelp beds are common around the coasts, often extending offshore for several hundreds of metres, where they provide nursery grounds for fish and squid (Clark and Dingwall 1985, Patterson 1986, Oldfield 1987).

Hepburn *et al.* (1992) describe wetlands in some detail. In their report, they identify over 100 wetland sites in the Falklands that may be important for wildlife. Ongoing survey work is currently updating this list.

The vascular plant flora consists of 171 native taxa (Broughton and McAdam 2002a, Broughton and McAdam 2005) of which 14 are currently considered to be endemic.

There are 177 recorded introduced plant species. Some native plants appear to have a very restricted range limited to one location, such as the Moore's Plantain *Plantago moorei*, from the south-west corner of West Falkland, and the Fuegian Violet *Viola magellanica*, recorded only in the south-east of the archipelago on Sea Lion Island.

A published Red Data List includes 23 plants considered to be threatened (Broughton and McAdam 2002b). Many of these are restricted in range to ungrazed offshore islands and areas inaccessible to grazing animals, such as within stone-runs and on mountain ledges. An inventory of lower plants is incomplete. The moss flora includes at least 168 species and subspecies, of which 43 have not been recorded outside the Falklands (Greene 1983). There are also 127 known liverworts, including three endemics (Engel 1972).

Land mammals

Currently, there are no native land mammals on the Falklands. However, in the late 18th century, at the time of the early settlers, there was one native species, the Falkland Fox or Warrah *Dusicyon australis*. This bold and inquisitive fox was described by early settlers but was never very numerous. It was larger than its close South American relatives and was said to have hunted in small groups. With a government bounty to encourage them, sheep farmers had hunted the Warrah to extinction by 1876.

Invertebrates

In a land without native trees, reptiles, amphibians or surviving terrestrial mammals, the insect life forms a very important part of the islands' ecology (Robinson 1984). Over 350 insect species have been recorded, with new species continuing to be discovered. Most native species are closely related to those found in Patagonia and Tierra del Fuego. Prevailing westerly winds and ocean currents are likely to have aided their arrival. A reduction in wing size, and indeed absence of wings, is a feature of many Falkland insects, in common with other island systems. This is thought to be the result of a trade-off between the high costs of wing development and the reduced need for dispersal on small islands, combined with the threat of the removal of actively flying individuals out to sea. In the Falklands, with its frequent high winds, this is a real hazard. The introduced species, many of European origin, are relatively recent arrivals, colonising these islands as a direct result of human activities (Jones 2004).

Threats to the Falklands' biodiversity

Threats to the biodiversity of the Falklands have included the deliberate introduction of herbivorous animals for farming and the accidental introduction of predators such as rats *Rattus spp.* and the House Mouse *Mus musculus*, and cats as pets (many of which have become feral).

Domesticated pigs, goats, cattle and horses introduced in the 18th and 19th centuries on to the two main islands and several other islands have, together with the burning of maritime Tussac communities in the early 1800s by itinerant sealers, led to the loss of important habitats. The rapid development of sheep farming from the 1860s has compounded this effect. The burning of Whitegrass in

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attempts to improve pasture for grazing (Bourne 1988) and the current trend in pasture improvement programmes is affecting the native vegetation over an increasing area of the islands. There is concern at the lack of environmental impact regulations for this and other agricultural developments (Dunnet 1983).

Rats and mice introduced from the 18th century onwards to many offshore islands during sealing and whaling activities or from wrecked ships, and feral cats, have greatly reduced bird populations. The accidental introduction of rodents is likely to continue as much of the freight is shipped from Stanley to remote islands and farmsteads, with little or no pest-prevention measures. Introduced plants such as European Gorse and Spear Thistle *Cirsium vulgare* are beginning to take a firm hold in the islands, with the spread of gorse hedges around settlements often becoming difficult to control, and many farmers reporting thistles in more remote and wild places. Work is under way to control these species where possible. Potential threats for the future include the oil exploration industry: surveying work began in 1998 and continues at present, possibly leading to exploitation in the near future (Brown 1994). A lack of marine protected areas leaves much of the valuable marine resources open to pollution from this source.

Population

The human population of the Falkland Islands was 2,491 at the last census in March 2001; the majority live in Stanley, the only town, which is on the extreme east of East Falkland. About 400 people live in widely scattered coastal settlements. Approximately 2,000 temporary inhabitants live on the Mount Pleasant military base to the south-west of Stanley. The traditional economic activity of the Falklands is sheep ranching for the production of wool (Shackleton 1982). Since 1987, the primary source of income has been the sale of fishing licences to foreign squid and finfish fleets operating within offshore fisheries conservation zones. The Falkland Islands Tourist Board was established in 1985. Tourism is directed at three main

sectors: overseas wildlife and game fishing enthusiasts; cruise ships; and the local civilian and military communities. Cruise ship visits have increased from 5,000 passengers in the 1995/96 season to over 40,000 in the 2005/06 season. This rise in numbers is mostly due to an increase in the number of large, luxury vessels and a worldwide development of the cruise industry.

Politics

The Falkland Islands are an Overseas Territory of the United Kingdom, executive authority being vested in Her Majesty the Queen and exercised by the Governor on her behalf. The current Falkland Islands Constitution came into force in 1985. Under the terms of that Constitution, eight Legislative Councillors, five from Stanley and three from Camp (the local name for everywhere outside Stanley, from the Spanish *campo*, meaning countryside), are elected every four years. Each year the Legislative Councillors elect three of their number to stand as members of the Executive Council (ExCo). The Governor is advised by the Executive Council, over which he presides, which is composed of the three elected members and two ex-officio members, the Chief Executive and Financial Secretary. In addition, the Commander British Forces South Atlantic Islands and the Attorney General may attend ExCo meetings, and may speak on any matter. ExCo meetings are held monthly. The Legislative Council (LegCo), which is chaired by the Governor, who acted as Speaker until recently, comprises the eight elected Councillors and two ex-officio members, the Chief Executive and Financial Secretary. As with ExCo, the Commander British Forces and the Attorney General may attend. LegCo is empowered to pass laws for the maintenance of Law, Order, Legislation and the government of the islands, subject to the approval of Her Majesty the Queen, acting through her Secretary of State for Foreign and Commonwealth Affairs. LegCo meetings, which are held in public, are called as required, but normally at least four times a year.

Defence and foreign affairs remain the responsibility of the British Government.

Ornithological importance

The avifauna is fairly well documented with a comprehensive guide (Woods 1988), an *Atlas of breeding birds of the Falkland Islands* (Woods, R. W. and Woods, A. 1997), containing the results of the Breeding Birds Survey in 3.86-mile (10-km) squares between 1983 and 1993, and a new book, *Birds and mammals of the Falkland Islands* (Woods and Woods 2006).

By early 2004, a total of 219 species had been recorded, including a few that are not fully substantiated. There are 21 resident landbirds, 18 waterbirds, 22 breeding seabirds, 18 annual non-breeding migrants and at least 140 occasional visitors. The only known extinction as a breeding species is the Cinereous Harrier, which still occurs infrequently as a vagrant. Only nine species of songbird have been able to adapt to the windy and exposed habitats

that lack native trees (Pettingill 1974). The native songbirds are representatives of southern South American species and most of them have been isolated from the original populations long enough to develop slight differences that allow them to be classed as geographic races/sub-species. It is probable that they established Falkland populations as glaciation decreased during the Holocene period of the last 10,000 years.

The Falkland Islands are of great ornithological interest. There are two endemic species, the Cobb's Wren and the Falkland Steamer Duck, and (at the time of writing) there are considered to be 13 Falkland races/sub-species. These are the White-tufted/Rolland's Grebe, Common Diving-petrel, Black-crowned Night-heron, Upland Goose (Summers and McAdam 1993), Kelp Goose, Short-eared

Owl, Tussacbird/Blackish Cinclodes, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren, Falkland Thrush, Canary-winged/Black-throated Finch and the Long-tailed Meadowlark. There is probably sufficient evidence to demonstrate that the White-tufted/Rolland's Grebe should be treated as a species distinct from the continental forms. If supported, the Falklands would have a small population of a third endemic species (Stattersfield *et al.* 1998).

A total of 18 species of global conservation concern are recorded; however, not all these species breed on the islands so are not included in the site identification. Those not breeding include the Endangered Northern Royal Albatross, the Vulnerable Wandering Albatross, Southern Royal Albatross, Grey-headed Albatross and Atlantic Petrel, and the Near-threatened Light-mantled Albatross and Northern Giant Petrel. The Near-threatened Fuegian Snipe is also not included in site identification since there are only two recent records of single birds.

From the 10 species of global conservation concern remaining, the Black-browed Albatross is classified by the International Union for the Conservation of Nature (IUCN) as Endangered (IUCN-BirdLife International 2004). The



The tiny endemic Cobb's Wren cannot survive in the presence of introduced rats

Falklands are the most important breeding site for the species (see the table on page 104 for distribution across IBA sites), probably supporting 75% of the world population (Croxall *et al.* 1984). Between the two complete censuses in 1995 and 2000, the calculated population fell by about 18%, from 468,000 to 382,000 pairs. This serious decline is most likely to be associated with longline fishing and trawling in the south-west Atlantic, which are known to have accidentally killed many thousands of albatrosses.

Five species are currently classified as Vulnerable: the Rockhopper Penguin, Macaroni Penguin, Southern Giant-petrel, White-chinned Petrel and Cobb's Wren. The

Rockhopper Penguin has suffered a very large decrease in population, which is fairly well documented since the 1960s, but reasons are not obvious and may be associated with changes in sea temperatures and availability of suitable prey. Similar factors may be affecting the Macaroni Penguin, though its Falkland population has never been large. The Southern Giant-petrel and White-chinned Petrel are also considered vulnerable to longline fishing and substantial numbers of deaths have been reported. The Cobb's Wren is a robust species of boulder beaches adjoining mature Tussac. Unfortunately, it cannot survive in competition with one of the most widespread alien predators, the Norway or Brown Rat *Rattus norvegicus*, because both species preferentially use the same coastal habitat. Islands that have not been infested by rats support good populations of Cobb's Wren and it is hoped that several islands where rat eradication has been carried out in the past few years will be recolonised by this wren.

The other four species of global concern are classified as Near-threatened: the Gentoo Penguin, Magellanic Penguin, Sooty Shearwater and the Striated Caracara. When the full census of breeding Gentoo Penguins took place in 2000/01, about 113,000 nests were counted, showing a substantial population increase of about 75% over the population found in 1995/96. However, in 2002, there were many deaths of adult birds at some colonies, associated with the occurrence of algal toxins in coastal waters. The Magellanic Penguin population is near impossible to assess for the whole archipelago, due to its burrowing habit and frequent use of peaty ground beneath dense Tussac. At monitored sites, a decrease in the number of occupied burrows has been noted, yet some colonies were more productive in recent years than they had been for several seasons. A census of the Striated Caracara was carried out in the 1997/98 and 1998/99 seasons. The breeding population of about 500 pairs was found to be concentrated on three islands or island groups, with the stronghold in the Jason Islands group north-west of West Falkland. There are signs that this population is increasing slowly, but it is nowhere near as widespread or numerous as it was before the advent of sheep farming. Persecution of this remarkably tame and inquisitive bird of prey has extirpated it from East Falkland and almost all West Falkland since the mid-19th century.

The Falkland Islands form part of the Southern Patagonia Endemic Bird Area (EBA 062), a large EBA that covers an area of 65,637 square miles (170,000 km²). It includes the southern half of Santa Cruz province (Argentina), Isla Grande de Tierra del Fuego (split between Chile and Argentina), Isla de los Estados (Argentina), mainland Chile in Magallanes province just west of the Straits of Magellan, islands south of the Beagle Channel (Chile) and the Falkland Islands. There are 10 restricted-range species, of which six occur on the Falklands. These are the globally threatened Cobb's Wren, Ruddy-headed Goose, Falkland Steamer Duck, Striated Caracara, Tussacbird/Blackish Cinclodes and the Canary-winged/Black-throated Finch (Stattersfield *et al.* 1998). The endemic Falkland Steamer Duck is mostly found in harbours and creeks with large

The occurrence of globally threatened species at Important Bird Areas in the Falklands

(X = present and qualifies; 3 = present only)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	Total number of sites for species
Black-browed Albatross <i>Thalassarche melanophrys</i> (EN)	X		X				X	X			X			X			X		X				8
Cobb's Wren <i>Troglodytes cobbi</i> (VU)	X		X			X	X		X	X	X	X			X	X	X						12
Rockhopper Penguin <i>Eudyptes chrysocome</i> (VU)	X		X	X		X	X	X	X		X	X	X	X	X		X		X	X			15
Macaroni Penguin <i>Eudyptes chrysolophus</i> (VU)	X		3				X	3	3		3	X	X	3	3					3			3
Southern Giant-petrel <i>Macronectes giganteus</i> (VU)	3	X		X	X		X		X	X		X	X	3	X	X	3						9
White-chinned Petrel <i>Procellaria aequinoctialis</i> (VU)									X		X												2
Gentoo Penguin <i>Pygoscelis papua</i> (NT)	X	X		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	18
Magellanic Penguin <i>Spheniscus magellanicus</i> (NT)	3	X		X	X	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	18
Striated Caracara <i>Phalacrocorax australis</i> (NT)	X	3	X	3	X	X	X				X	X	X		X	X	X						11
Sooty Shearwater <i>Puffinus griseus</i> (NT)	X		X						X				X		X	X				X			7

kelp beds. The endemic Cobb's Wren is now restricted to rat-free offshore islands.

There are two species from the Patagonia biome – the Kelp Goose and the Dolphin Gull – which breed in the Falklands, but they are not included in the site accounts since this criterion is not being applied to the Falkland Islands.

The seabird populations of the Falklands are of international importance (Croxall 1992, 1994). The Falkland Islands hold the world's largest concentration of the southern form of Rockhopper Penguin, a quarter of the world population of Gentoo Penguins and a significant proportion of the world population of Magellanic Penguins – possibly about 10% (Woods, R. W. and Woods, A. 1997). The King Penguin is at the extremity of its global range in the Falklands, and its population is almost entirely concentrated at Volunteer Point. The distribution and

abundance of sub-antarctic penguins were described in Woehler (1993). More recent information on the status of penguin populations in the Falklands is given by Clausen (2001).

The Falkland Islands also hold significant proportions of the world populations of Southern Giant-petrel and Thin-billed Prion (Woods, R. W. and Woods, A. 1997). The Canary-winged/ Black-throated Finch and Ruddy-headed Goose were considered vulnerable in the late 1970s because they are declining seriously in Patagonia and Tierra del Fuego, probably due to a combination of factors (the introduction of Patagonian Foxes, overgrazing by sheep, and persecution). However, they were removed from the threatened list because their populations are apparently stable in the Falklands, where they remain widespread and fairly common.

Conservation infrastructure and Protected Area system

The Government of the Falkland Islands is committed to preserving the environment of the Falklands in two major ways. On an international level, they have signed the Environment Charter for the UK Overseas Territories, which commits them broadly to preserving native species and habitats, creating sustainable development initiatives and supporting education policies. On a national level, the Islands Plan 2002–2006 has a section solely on the environment, reflecting the aims of the Environment Charter. Further, a Conservation and Biodiversity Strategy is in development, which will focus and prioritise environmental work within the islands.

In terms of legislation, the Conservation of Wildlife and Nature Ordinance 1999 protects all bird species except the Upland Goose and feral domestic goose (which can be killed at any time), and the Crested Duck and the Yellowbilled (Speckled) Teal (which cannot be killed during the close season, 1 July to 31 March). This Ordinance broadly prohibits the taking of eggs, birds or other animals, although the collection of certain eggs, including those of Magellanic and Gentoo Penguins, can still be carried out under licence. Legislation prior to this was the Wild Animals and Birds Protection Ordinance 1964, under which six bird species (Kelp Gulls, Falkland Skuas, House Sparrows, Upland Geese, Brent/Ruddy-headed Geese and Thin-billed Prions) were listed as pests, and the collection of 'penguin eggs' of any species was still widely allowed with a permit bought over the counter. The most recent environmental legislation introduced Environmental Impact Assessment regulations (as an amendment to the Planning Ordinance 1990) and are based on the current EC Directive as adopted in the UK.

Recent amendments to the 1999 Ordinance prohibit the collection of Black-browed Albatrosses' and Rockhopper Penguins' eggs under any circumstances, and more strictly control the licensing system for collection of Magellanic and Gentoo Penguins' eggs. The licensing system for

penguin eggs may also be under review as part of the draft Conservation and Biodiversity Strategy, and new systems of granting these licences are being designed to take into account the size of colonies and breeding success of the birds from year to year.

Legal protection for sites of conservation importance is contained in the Conservation of Wildlife and Nature Ordinance 1999, which provides for the designation of National Nature Reserves (NNRs). Some of this land was already protected as Nature Reserves or Sanctuaries under the Nature Reserves Ordinance (1964) or the Wild Animals and Birds Protection Ordinance (1964), respectively, and was redesignated as NNRs when the 1999 Ordinance came into force. 'National Nature Reserve' remains the recognised site protection classification. At the time of writing (mid-2004) there are 27 islands or coastal regions of East and West Falkland that have been designated as NNRs, covering a total area of about 154 square miles (400 km²). Falklands Conservation owns 18 islands and associated islets (about 2.9 square miles/7.5 km²), which are nature reserves, and about 45 other islands (covering about 25 square miles/65 km²) are treated as reserves by their owners though as yet they have no official status. In all, some measure of protection for wildlife is given in 184 square miles (476 km²) or about 3.9% of the Falkland Islands.

More than half of East Falkland, the majority of West Falkland and many of the offshore islands are privately owned. There is no right of access to private land without prior permission of the owner and a few of the sites in this inventory are classified as 'no access'.

Most government environmental decisions are made through the Environment Committee, which has two Councillors and other stakeholders. These include: the Rural Business Association, Falklands Conservation, New Island South Conservation Trust and other 'conservation minded' persons. Other government departments are also

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represented, including Agriculture, Fisheries and Public Works. The Environmental Planning Officer (EPO) is the lead officer for this Committee and any environmental matters, within government and externally. The EPO also has responsibility for dealing with all development in the Territory and up to 12 nautical miles at sea. The Environment Committee's decisions are passed to Executive Council for final approval. All research permits and scientific requests are handled in this way.

There is no requirement for National Nature Reserves to be actively managed. Some privately owned islands have management programmes, like those of the Conservation Trust on New Island South and the Wildlife Conservation Society on Steeple Jason. There are draft management plans for the two Ramsar sites at Bertha's Beach and Sea Lion Island. Some islands do not yet have management plans but have had all livestock removed, and here the vegetation is slowly recovering. Falklands Conservation is implementing active conservation programmes including Tussac planting and clearing rats on some government-owned and privately owned islands. Rat eradication programmes were successful on 12 islands between the winter of 2001 and 2004.

Falklands Conservation is working with landowners to promote best practice and increase the number of sites covered by conservation agreements and management plans. The Falkland Islands Government's draft Conservation and Biodiversity Strategy is reviewing the entire Protected Areas system with a view to making recommendations for improvements.

International measures relevant to the conservation of sites

In 1983, the United Nations Environment Programme (UNEP) Convention on the Conservation of Migratory Species of Wild Animals (CMS) agreement came into force to conserve terrestrial, marine and avian migratory species throughout their range. Migratory species are defined by the Convention as those that regularly cross international boundaries, including international waters. In this context, all seabird species susceptible to longline mortality in Falkland Island waters are considered migratory. Parties to the CMS provide strict protection for the endangered migratory species listed in Appendix I to the CMS, while Appendix II to the CMS lists migratory species that require or would benefit significantly from international cooperative agreements. Since April 1997 (the fifth meeting of the Conference of Parties to the Convention), all Southern Hemisphere albatross species have been listed in either Appendix I or II. In 1999, at the sixth meeting, it was requested that relevant parties develop an Agreement under the Convention, for the conservation of Southern Hemisphere albatrosses.

The UK Government has recently ratified the Agreement on the Conservation of Albatrosses and Petrels (ACAP) on

behalf of the Falkland Islands. This important step was taken in early April 2004 and will improve the conservation status of these birds within the islands. For the first time, steps will be taken to fully protect all the ACAP-listed species, by reducing the level of incidental mortality related to fisheries and protecting the birds' terrestrial breeding sites. Steps to assess the risks by fire, tourism, disturbance, introduced predators and diseases will be taken at key breeding sites, and the subsequent adoption of management plans will seek to secure the long-term future of these areas. ACAP schedules currently have 21 species of albatross and seven species of petrel listed as protected. Three of these species (the Black-browed Albatross, the White-chinned Petrel and the Southern Giant-petrel) are recognised as breeding in the Falkland Islands.

In addition to this step and also seeking to improve conservation of albatrosses and other seabirds, the Falkland Islands Government recently adopted a Food and Agriculture Organisation of the United Nations (FAO) 'National Plan of Action – Seabirds', written by Falklands Conservation with funding and technical support from the RSPB. These plans address the issues of incidental mortality in fisheries. The Falklands are the first place in the world to develop a specific plan that addresses the problems relating to the trawling fleet and the longlining fleet. Further, the government adopted an Assessment Directive on the squid jigging fleet, which will complete the entire range of fisheries undertaken in Falkland waters and promises to reduce all incidental mortalities of seabirds to negligible levels in the near future.

Since 1973, the Falkland Islands have been party to the Convention on International Trade in Endangered Species (CITES) and have strict Customs controls on any biological export from the islands. In addition, several requests are received each year for penguin eggs or live specimens for collections and captive breeding programmes. However, a moratorium by the government from 2001 has prevented any export of penguins or eggs for breeding purposes. This will only change in the future if there is a severe change in the conservation status of any of the penguin species and captive breeding is considered necessary for the species' survival.

A report on the application of the Ramsar Convention to the Falklands was prepared by Standring (1982). Falklands Conservation prepared information on the Falklands for inclusion in the review of Ramsar implementation in UK Dependent Territories, commissioned by the Department of the Environment in 1992.

In 2002, Bertha's Beach and Sea Lion Island were formally classified as Ramsar sites. Falklands Conservation has undertaken to continue the process of recommending sites for future inclusion within the Convention.

Overview of the inventory

The Important Bird Area (IBA) programme has identified 22 sites (see the map on page 100 and the table on page 108) of global conservation importance within the Falkland Islands, and highlighted those that require immediate attention, such as site-specific conservation, action, advocacy and monitoring. The sites cover a total area of 278 square miles (717 km²), which is about 5.9% of the total land area of the Falkland Islands. Only five IBAs are situated on the main islands (one on West and four on East Falkland); the 17 other IBAs consist of islands and island groups including a total of 186 islands and dependent islets, which are spread all around the Falklands. This reflects the importance of seabirds within the Falklands avifauna and the threats affecting these species. It also recognises that birds such as the Striated Caracaras, Tussacbirds and Cobb's Wrens are now generally restricted to rat-free islands where human impact has been lessened by their inaccessibility.

For each of the accounts, where rats are known to be present, the island name is starred [*]. These are Norway (or Brown) Rats in all cases except one.

Origin of data used

Several data sets were used to produce this directory. The main source is the *Atlas of breeding birds of the Falkland Islands* (Woods, R. W. and Woods, A. 1997). Albatross breeding numbers are from the *Census of the Black-browed Albatross population of the Falkland Islands 2000/2001* (Huin 2001). Penguin numbers are from the *Falkland Islands penguin census 2000/01* (Clausen 2001) and subsequent Falkland Islands Seabird Monitoring Programme (FISMP) annual reports (Clausen and Huin 2002, Huin 2003). Data for the Striated Caracara are from *The distribution and abundance of the Striated Caracara in the Falklands, 1997–1998* (Woods and Smith 1999). Further data are from Falklands Conservation's own database and records collected during surveys by Robin Woods. New Island South Conservation Trust compiled most of the section on New Island South (part of IBA site FK011). Other landowners contributed information and in a few sites, where knowledge was insufficient to make decisions, dedicated breeding bird surveys were conducted in the summer of 2003/04. Having identified the IBAs, the stage is set for action to be taken at these sites. This will require commitment locally from government, landowners and Falklands Conservation, and internationally from the UK Government and donors.

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Sites of global conservation importance with numbers of species in qualifying categories
(some species qualify in more than one category); a tick in category A4iii indicates a significant combined total of seabirds or waterbirds at that site

IBA code	Site name	Number of species	A1	A2	A4i	A4ii	A4iii
FK001	Beauchêne Island	10	7	4	0	3	3
FK002	Beaver Island Group	4	3	1	0	1	
FK003	Bird Island	7	5	3	0	2	3
FK004	Bleaker Island Group	9	4	4	1	0	
FK005	Elephant Cays Group	3	3	1	0	1	
FK006	Hummock Island Group	4	3	2	1	0	
FK007	Jason Islands Group	12	8	6	0	5	3
FK008	Keppel Island	7	4	3	0	0	
FK009	Kidney Island Group	7	5	3	0	1	3
FK010	Lively Island Group	8	4	5	0	0	
FK011	New Island Group	13	7	6	1	3	3
FK012	Passage Islands Group	7	5	4	0	0	
FK013	Pebble Island Group	12	8	6	0	0	3
FK014	Saunders Island	7	4	3	2	2	3
FK015	Sea Lion Islands Group	11	7	6	0	1	
FK016	Speedwell Island Group	11	6	6	1	2	3
FK017	West Point Island Group	10	6	6	0	1	3
FK018	Bull Point, East Falkland	5	2	3	0	1	
FK019	Hope Harbour, West Falkland	7	4	3	0	1	
FK020	Seal Bay, East Falkland	7	4	3	0	0	3
FK021	Volunteer Point, East Falkland	5	2	3	0	0	
FK022	Bertha's Beach, East Falkland	6	2	3	1	0	3

Site accounts: islands

FK001: Beauchêne Island

Ref number	FK001
Admin region	Falkland Islands
Coordinates	52°54'S 59°11'W
Area	172 ha
Altitude	0–70 m
IBA categories (details below)	A1, A2, A4ii, A4iii
Status	National Nature Reserve (designated 1964), owned by Falkland Islands Government

Site description

Forming the southernmost land in the Falklands archipelago, Beauchêne Island is located approximately 33 miles (54 km) south of Porpoise Point, Lafonia. It has not been grazed or permanently settled, is free of introduced predators and its remote location has protected the island from disturbance in recent years. In the north, the island is covered in dense Tussac and the coastline is gently sloping, up to around 30 m high. There are boulder beaches on the western coast. In the south, the land rises to around 70 m with higher cliffs on the eastern coast and fissured steep slopes. The southern quarter of the island is almost bare of vegetation.

Birds

See the accompanying table for details of key species.

More than 30 species have been recorded, the majority being migratory seabirds that are present in very large numbers during the breeding season. The site is significant for the second largest populations in the world of Black-browed Albatrosses and Rockhopper Penguins, and apparently the second most dense breeding population of Striated Caracaras in the Falklands. Beauchêne Island is also important for Wilson's Storm-petrels, Grey-backed Storm-petrels and Common Diving Petrels. It is the only confirmed breeding site for Fairy Prions in the Falkland

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	103,050	2000/01 census
A1, A4ii	Rockhopper Penguin <i>Eudyptes chrysocome</i>	61,650	2000/01, similar to numbers for 1995/96
A1	Sooty Shearwater <i>Puffinus griseus</i>		No counts; breeding not confirmed recently
A1	Macaroni Penguin <i>Eudyptes chrysolophus</i>	Few	16 nests in 1980
A1	Gentoo Penguin <i>Pygoscelis papua</i>	750	Increase of 53% since 1995/96
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Numerous, no counts
A1, A2	Striated Caracara <i>Phalco boenus australis</i>	65 (approx)	Adult population stable from mid-1960s onwards
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Numerous, no counts
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>	10	Estimated in 2000
A4ii	Fairy Prion <i>Pachyptila turtur</i>	10,000 (approx)	Discovered 1967, numerous, widespread over island
A4iii	Combined seabirds	>175,515	

Islands. The endemic Cobb's Wren breeds and appears to be fairly numerous. There is a colony of around 2,500 pairs of Imperial Shags, and White-chinned Petrels probably breed, but this has not been confirmed. Southern Giant Petrels and Magellanic Penguins are present, but populations are too small to qualify. The total congregation of seabirds far exceeds 10,000 breeding pairs, making this site classifiable under the A4iii criterion.

Other species of interest

The island is also host to a few breeding Southern Sea Lions and is a major haul-out station for non-breeding animals, which can congregate in numbers of up to a hundred individuals on the northern part of the island. It is remarkable for the paucity of plant species. Two-thirds of its area is covered by Tussac, which here reaches exceptional and luxuriant dimensions. Three other vascular species have been recorded, including Wild Celery *Apium australe*, Antarctic Starwort *Callitriche antarctica* and Bitter-cress *Cardamine glacialis*.

Conservation issues/threats

Access to the island is difficult because of its remote location, which protects it from most accidental disturbance or visitor pressure. There is no active management plan. Access is restricted: landings require permission from the Falkland Islands Government. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire, which would devastate the Tussac community. Detailed access guidelines, additional to the Countryside Code, are issued for this site by the Falkland Islands Government.

Further reading

See full details at end of chapter.

Clausen (2001), Clausen and Huin (2002), Huin (2001), Smith and Prince (1985), Strange (1968).

Site accounts: islands

FK002: Beaver Island Group

Ref number	FK002
Admin region	Falkland Islands
Coordinates	51°51'S 61°15'W
Area	Beaver Island* (4,856 ha), Split* (70 ha), Governor* (220 ha), Staats* (500 ha), Tea* (310 ha), and a few smaller islands * = rats present
Altitude	0–234 m
IBA categories (details below)	A1, A2, A4ii
Status	Privately owned (S. Poncet, Beaver Island)

Site description

This group of islands lies west of Weddell Island and West Falkland. Beaver, Split, Staats and Tea Islands all have spectacular west-facing sheer cliffs and deeply indented coastlines. There are generally very steep slopes above eastern coasts with rocky shores, a few sand beaches and sheltered coves. Inland the islands are mountainous with many peaks exceeding 150 m and some above 200 m. Most of the smaller islands are low lying.

Birds

See the accompanying table for details of key species.

At least 40 species have been recorded, of which 34 are known to breed. Thin-billed Prions breed on Channel Rock and Hecate Rock but their population has not been assessed. Striated Caracaras breed on Stick-in-the-mud, Rookery Island and Hecate Rock, and Ruddy-headed Geese are present but their populations are too small to qualify. Local sub-species recorded are the Black-crowned Night-heron, Upland Goose, Kelp Goose, Dark-faced Ground-tyrant, Falkland Thrush, Falkland Grass Wren and the Long-tailed Meadowlark. The Cobb's Wren has not been found on any of these islands in recent years, due probably to the widespread occurrence of Norway Rats. Few Upland Geese, oystercatchers, Magellanic Snipe or songbirds breed on Beaver Island due to the presence of foxes and rats.

Other species of interest

About 100 Southern Sea Lion pups are born annually on

Stick-in-the-mud Island, north of Governor Island, and 35 on Beaver Island (Stinker Point), while non-breeders haul out on Tea, Green, Split and other islands in Beaver Bay. The western cliffs of Beaver Island are home to a few hundred breeding South American Fur Seals. The scarce Adder's-tongue Fern *Ophioglossum crotalophoroides* occurs on Beaver Island. Tea Island has a population of the unidentified purslane (*Calandrinia*), possibly a new endemic plant. Additional endemic plants found in this group of islands include Clubmoss Cudweed *Chevreulia lycopodioides*, Vanilla Daisy *Leucheria suaveolens*, Lady's Slipper *Calceolaria fothergillii*, Smooth Falkland Ragwort *Senecio vaginatus*, Hairy Daisy *Erigeron incertus*, and Coastal Nassauvia *Nassauvia gaudichaudii*.

Conservation issues/threats

Beaver Island is currently farmed to a minimal level with sheep and reindeer, and this activity would not be expected to have an adverse affect on any of the IBA qualifying species. The main issue affecting Beaver, Tea and Staats is the presence of Patagonian Foxes *Dusicyon griseus*, which were introduced in the 1930s for trading in furs. Foxes have a significant negative effect on the resident birds and their presence probably explains the absence of breeding Upland Geese. An eradication programme has been under way for about 10 years.

Rats are numerous on Beaver and Governor Islands, and also present on Tea, Staats, Stick-in-the-mud, Green, Split and Channel Islands. They have been eradicated from

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Southern Giant-petrel <i>Macronectes giganteus</i>	300	Governor 2003
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	2,850	Beaver 2001, dropped to 500 in 2003
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	2,000 (approx)	Breeding on most islands
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	245 (approx)	Breeding on most islands, 140 pairs on Beaver

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Rookery, Rat and Cucumber Islands, and these islands will be closely monitored for signs of recolonisation by several bird species. All visitors should be informed about the dangers of introducing alien species to the islands.

Staats Island contains the Falklands' only population of introduced Guanaco and overgrazing has depleted the Tussac grass. This island could benefit from fencing, control and replanting. Tussac is currently being replanted in fenced paddocks on Beaver Island. Governor, Tea, Green, Rookery and Split Islands were stocked with sheep until

the late 1970s but there is good potential for long-term regeneration of the vegetation. It is very important that the Falkland Islands Countryside Code is followed (see Appendix 1), particularly to guard against the risk of fire.

Further reading

See full details at end of chapter.

Clausen (2001), Huin (2001), Kerr (1994), Poncet (1998), Thompson (2003), Towns and Broome (2003), Woods (2002a).

Site accounts: islands

FK003: Bird Island

Ref number	FK003
Admin region	Falkland Islands
Coordinates	52°10'S, 60°55'W
Area	120 ha
Altitude	0–107 m
IBA categories (details below)	A1, A2, A4ii, A4iii
Status	National Nature Reserve (designated 1969), owned by Falkland Islands Government

Site description

Bird Island is located 3 miles (4.5 km) off the south-western coast of West Falkland and is roughly triangular in shape. The western half of the southern coast has sheer cliffs reaching at least 70 m and the plateau above slopes gently to the north and west. In the centre of the island there is a large seasonal pool, to the west of a small inlet. The eastern promontory has two domed peaks reaching to at least 110 m with sheer southern cliffs of 30 m and very steep slopes in the north. Access by boat is difficult, except at the small north-east-facing inlet between the northern and eastern promontories, and the terrain is difficult to cross, with dense growth of Tussac above thick, soft peat and Tussac overhanging deep gulches.

Birds

See the accompanying table for details of key species.

The total number of species recorded on Bird Island in November 1998 was 27, of which 25 bred or were probably

breeding. Macaroni Penguins, Ruddy-headed Geese, Canary-winged/Black-throated Finches and Falkland Steamer Ducks are present but their status is uncertain or populations are too small to qualify. The congregation of seabirds on this island exceeds 10,000 breeding pairs, making the site classifiable under the A4iii criterion. Bird Island is one of the most important breeding sites for the Striated Caracara and it is considered that the population here is at least as dense as on any offshore island around the Falklands, possibly due to the very large population of Thin-billed Prions, an important prey species. Deep Tussac cover over most of Bird Island makes it comparable to Beauchêne Island for the density of burrowing petrels. Other species that should be investigated include the Sooty Shearwater, Grey-backed Storm-petrel, which is thought to be numerous, Rock Shag, Imperial Shag and the Dolphin Gull. Endemic races present include the Dark-faced Ground-tyrant, Falkland Thrush, Long-tailed Meadowlark and the Common Diving-petrel.

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	10,200 (approx)	2000/01
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	7,900 (approx)	2000/01, decrease from 10,600 (approx) in 1995/96
A1	Sooty Shearwater <i>Puffinus griseus</i>		Heard at night in 1998 and 2000
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>	Numerous, no counts	
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>	50 (approx)	Spread across dense Tussac, territories generally small, 1998
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Population unknown but numerous throughout island
A4ii	Thin-billed Prion <i>Pachyptila belcheri</i>	Thousands	Very numerous, no counts
A4iii	Combined seabirds	>20,000	

Other species of interest

There are two colonies of South American Fur Seals present on Bird Island, one of about 100 individuals on the northern coast, the second on the south-western coast, comprising approximately 10,000 individuals: the largest South American Fur Seal colony within the Falklands archipelago. The island also provides a haul-out for Southern Sea Lions, although they are not known to breed there. No endemic or introduced species were recorded in 1998; only 12 native flowering plants were found with Tussac predominant.

Conservation issues/threats

Bird Island is free of introduced mammalian predators, which is fortuitous because penguins were being killed there in the mid-19th century, seals were taken at the end of that century, and penguins' and albatrosses' eggs were collected for consumption. All visitors by boat should be informed about the dangers of accidentally introducing alien species to Bird Island. Another local issue arises from the annual dispersal of juvenile Striated Caracaras, perceived as a problem at a few farms on neighbouring

West Falkland. There have been requests to kill some birds, but few licences to remove 'rogue' birds have been issued under the Conservation of Wildlife and Nature Ordinance (1999). A detailed study of the ecology of the Striated Caracara and the interaction of the species with agriculture within the Falklands is necessary and should be seen as a priority.

One of the main priorities for Bird Island is to assess the populations of burrowing petrels and passerines. The Tussac has not been grazed and there are no signs that the vegetation has been burnt in the past. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire to this important National Nature Reserve.

Further reading

See full details at end of chapter.

Strange *et al.* (1988), Woods and Smith (1999).

Site accounts: islands

FK004: Bleaker Island Group

Ref number	FK004
Admin region	Falkland Islands
Coordinates	52°11'S 58°50'W
Area	Bleaker Island* (2070 ha), Sandy Bay Island (32 ha), Halt Island (13 ha), North Point Island (20 ha), Ghost Island (3 ha), First Island (3 ha), Second Island (2 ha), Third Island (3 ha) * = rats present
Altitude	0–27 m
IBA categories (details below)	A1, A2, A4i
Status	Privately owned (M. and P. Rendell, Stanley); all land north of the settlement and Long Gulch to North Point is a National Nature Reserve (designated 1970)

Site description

Bleaker Island and its outlying islands, off the south-eastern coast of East Falkland, are low lying and rarely exceed 15 m except at Semaphore Hill north-east of the settlement. Coasts vary from low cliffs with sloping bedrock beaches to wide sandy bays and sheltered coves. Inland, Bleaker Island is mostly open heathland, with several ponds, some of which provide good habitats for waterfowl. There are extensive coastal beds of giant kelp.

Ghost Island lies only 300 m from Bleaker Island, across a channel thick with kelp and it is not known if rats are

present. It is likely that this island, with two-thirds of its area covered with tall Tussac, has not been grazed.

Sandy Bay Island has not been stocked but the rodent status is unclear. The island lies 1 mile (1.5 km) off the Bleaker coast and is relatively high, at nearly 20 m in the centre, with a good coverage of Tussac grass. The greater distance from Bleaker Island makes infestation by rats across the channel unlikely, though possible.

Halt Island lies at the mouth of Bleaker Island harbour, only 1.3 miles (2 km) from the settlement, making this an obvious choice for stocking and grazing in the past. Again,

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Southern Giant-petrel <i>Macronectes giganteus</i>	170 (approx)	Total count from four sites
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	720	In seven sub-colonies along southern side of Long Gulch
A1	Gentoo Penguin <i>Pygoscelis papua</i>	1,250	One colony north of settlement
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Numerous, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	25	Total count in 2003
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Moderately numerous, no counts
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>	>10	Numerous prior to rat infestation, now restricted to areas inaccessible to rats, such as Long Gulch
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Breeding, large population, no counts
A4i	Imperial Shag <i>Phalacrocorax atriceps</i>	4,150 (approx)	Main colony near centre of island

the rodent status is not known. Few details exist for the smaller Tussac-covered **First**, **Second** and **Third Islands** in the settlement bay, except that First Island is linked to Bleaker and it is possible to cross on foot at low tides. In November 2003 the resident manager reported that all three islands had rats.

Birds

See the accompanying table for details of key species.

During a four-day surveying visit by a British Schools Exploring Society (BSES) party in November 2003, 46 possible breeding species were recorded, of which 37 were either confirmed or probably breeding. A few immature Striated Caracaras visit the settlement but they are not known to breed within the group. The island rates A4i status through the large colonies of Imperial Shags and Rock Shags present in November 2003. The globally threatened Macaroni Penguin may breed, but this needs confirmation. The Tussacbird was numerous prior to rat infestation but very few are breeding now. Endemic sub-species present include White-tufted/Rolland's Grebes, Black-crowned Night-herons and Upland Geese. The Falkland Grass Wren was present only in protected Tussac paddocks along the south-east-facing coast.

Other species of interest

The BSES recorded 79 species of flowering plants from 20 1-km squares; 53 were native, 26 were introduced species and four endemic: Lady's Slipper *Calceolari fothergillii*, Clubmoss Cudweed *Chevreulia lycopodioides*, Vanilla Daisy *Leucheria suaveolens* and Coastal Nassauvia *Nassauvia gaudichaudii*. Interesting species of note included the Yellow Orchid *Gavilea littoralis*, Whitlowgrass *Draba funiculosa*, Californian Club-rush *Schoenoplectus californicus* and Gillie's Dandelion *Taraxacum gilliesii*.

Conservation issues/threats

Norway Rats were accidentally introduced to Bleaker in the mid-1980s and have now spread throughout the island and on to First, Second and Third Islands. Feral cats were present for many years until they were eradicated in 2001. It is very important to establish whether rats are present on Sandy Bay, Halt, North Point and Ghost Islands. The Cobb's Wren was present and breeding on Bleaker Island in 1961 before the introduction of rats but was noticeably absent in November 2003. All visitors should be informed about the dangers of accidentally introducing alien species to the islands. On Bleaker Island itself, a limited programme is under way to control rats around the settlement, and eradication work for the whole island may be considered in the future. If this is successful, there is high potential for increased numbers of IBA qualifying species in the future.

The vegetation on the main island has suffered from years of overgrazing. Reduced grazing pressure in recent years and replanting of eroded areas in protected paddocks is allowing slow regeneration of Tussac and native flowering plants. Bleaker Island is a developing tourist destination within the Falklands and it is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire.

On the outlying islands, the main priority for future work is to assess their bird populations. No management plans can be made until this information is obtained.

Further reading

See full details at end of chapter.

Kerr (1994), Towns and Broome (2003), Woods and Thompson (2004).

Site accounts: islands

FK005: Elephant Cays Group

Ref number	FK005
Admin region	Falkland Islands
Coordinates	52°06'S 59°50'W
Area	Elephant Cays: Sandy Cay (80 ha), Southeast (13 ha), Southwest (20 ha) and West (33 ha), Stinker (10 ha), Golden Knob (1.5 ha), Calista (72 ha), Wedge (12 ha), Wedge Islet (5 ha) and two islets of about 1 ha each
Altitude	0–18 m
IBA categories (details below)	A1, A2, A4ii
Status	Privately owned nature reserve (E. Anderson, Stanley); no access

Site description

Located towards the southern end of Falkland Sound, there is little information available regarding the status of any of these islands. All of them have very good Tussac cover, but exact population counts are unavailable and their pest status is unknown, though Cecil Bertrand saw no rats in the 1930s (see under 'Further reading', below). Islands in this group were reported as having been stocked intermittently with cattle, probably between the 1930s and 1948; Stinker Island was grazed until 1985.

The ketch *Penelope* passed through the group on 12 December 2001 while on the Felton's Flower Project voyage. Observations of the topography, vegetation and birds of some of the islands were possible. Golden Knob has almost complete Tussac cover and a narrow, near-level sand beach. Stinker Island is covered by Tussac and has a boulder beach, while Sandy Cay also has very good Tussac and a boulder beach with a broad sand slope on the eastern half. Elephant Cays (West) has a massive reef extending westward and a long eroded sandy area between cliffs with Tussac above. Elephant Cays (Southwest) also has cliffs.

Birds

See the accompanying table for details of key species.

This group of islands is the most important breeding site for Southern Giant-petrels in the world. Counts were made

in early 2005. There is no complete list of birds, but it is probable that at least 20 species breed, possibly including burrowing petrels and Storm-petrels. Two small colonies of Imperial Shags were seen on the north-western and south-western cays in December 2001. Tussacbird adults were seen on Stinker Island in December 2001 and Cobb's Wrens are likely to be present. As their status is unknown they do not qualify the site.

Other species of interest

Little is known, but from counts at sea, between 80 and 100 Southern Sea Lion pups are born each year within the group.

Conservation issues/threats

The main priority for the future would be to establish some baseline data for this group of islands. The present owner has established a strict policy of no access and this has ensured that the islands have been protected from any disturbance and a favourable conservation status maintained. However, as a result, information on the occurrence and density of smaller birds and plants is limited. Remote sensing and aerial photography have provided information on larger species, such as the Southern Giant-petrel, and such initiatives through collaboration with the landowner should be encouraged. The presence of Tussacbirds on Stinker Island suggests that it is free of rats. Any visitors should be informed about the dangers of accidentally introducing alien species to the

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Southern Giant-petrel <i>Macronectes giganteus</i>	10,936	Calculated from aerial photographs 2004–05
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		No counts, probably numerous
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>		No counts, possibly tens

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islands. It would be very important to follow the Falkland Islands Countryside Code (see Appendix 1), particularly to guard against the risk of fire.

Further reading

See full details at end of chapter.

For information on Southern Giant-petrels, see Reid and Huin (2005). Little published material is available. The late Cecil Bertrand provided some information from his visits in the 1930s to R. W. Woods in 1983. For information on seals, see Thompson (2003).

Site accounts: islands

FK006: Hummock Island Group

Ref number	FK006
Admin region	Falkland Islands
Coordinates	51°37'S 60°26'W
Area	Hummock Island (303 ha), Rabbit Island* (178 ha), Middle Island (155 ha), Green Island* (4 ha), Gid's Island (30 ha) * = rats present
Altitude	0–191 m
IBA categories (details below)	A1, A2, A4i
Status	Hummock Island: privately owned nature reserve (D. Donnelly, Roy Cove) Rabbit Island: privately owned (S. Bonner, Pickthorne Farm) Middle Island: National Nature Reserve (designated 1966), owned by Falkland Islands Government Gid's and Green Island: owned by Falkland Islands Government

Site description

Hummock Island is the largest island in the group, stretching to nearly 2.5 miles (4 km) long and running in a north-west to south-east direction. The highest point is a very distinctive peak of 190 m looming like a gigantic breaking wave towards the north-east. Much of the coastline is cliffs, often reaching over 60 m in height. In the mid-20th century, it was used as an extension of the New Island sheep farm and a high level of grazing has led to much of the coastal Tussac being eaten out and replaced by bare 'black ground'. Considerable Boxwood *Hebe elliptica* grows on the cliffs and there is a varied flora across the central oceanic heathland.

Rabbit Island is 2.8 miles (4.5 km) north-west of Hummock Island and about 3.5 miles (5.5 km) west of Roy Cove. It is roughly rectangular, about 0.77 miles (2 km) square with a long promontory extending south-eastwards. The island slopes gently to the east and has very steep slopes up to 61 m facing north and west, with highest points of about 91 m. It has been heavily grazed by sheep in the past, though probably not since about 1986. An old shanty in a valley is in bad condition. The presence of rats was confirmed in 2000/01.

Middle Island is a small, conical island reaching to around 120 m in height, with dense, thick coastal Tussac. There is no beach as such, but flat stone slabs and low cliffs form the shoreline. It is believed to have been grazed for a short period prior to 1930, however since then the island has been ungrazed. It is also free of introduced predators. The Tussac thins out and is replaced by short spongy grasses further inland. The island was struck by lightning and badly burnt in the late 1960s and again in the 1980s. It was declared a wild animal and bird sanctuary by the Falkland Islands Government, with the consent of the owner, in July 1966 and was retained by the Government when the estate was sold in the 1980s.

Green Island is the smallest of the group, only 0.6 miles

(1 km) offshore and extending to just 4 ha. The vegetation is apparently limited to dense Tussac. Little information exists about the birds present, although 10 species were recorded during a short offshore observation period in November 1997, including Tussacbirds.

Gid's Island is almost round and reaches approximately 60 m towards the north-western coast. Tall and healthy Tussac grass extends from the coastal fringe almost to the top of the slopes, although there are patches of black and eroded ground present. The island is thought to be free of introduced predators and has been grazed only intermittently in the past. No livestock are currently present.

Birds

See the accompanying table for details of key species. These islands were visited during the Striated Caracara Survey in 1997; Hummock was revisited in 2001. Canary-winged/Black-throated Finches, Falkland Steamer Ducks and Tussacbirds are present, but numbers are not known and therefore do not qualify the site. On Hummock Island, 28 bird species were found, including all native passerines except Falkland Pipits, but the visit was short and a thorough examination of the island was not possible. A total of 14 species were recorded on Middle Island, of which probably 12 were breeding. On Rabbit Island, there was a 32% increase in Rockhopper Penguins' nests from 1995 to 2000. A total of 20 species was recorded in November 1997; 18 were breeding or probably breeding; only two individual Tussacbirds were seen and no Cobb's Wrens, Canary-winged/Black-throated Finches nor Ruddy-headed Geese. Magellanic Penguins were breeding but counts are required. Gid's Island held 17 species and 15 were probably breeding. At Green Island, in a very brief landing and circumnavigation, only 10 species were seen, of which nine were probably breeding. Thin-billed Prions and Common Diving Petrels may be present on some of these islands, but no surveys have been possible.

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Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	1,664	Hummock 871, Rabbit 793, 2000/01
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Breeding Hummock, numbers unknown
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>	8–10	On Hummock, Green and Gid's
A4i	Imperial Shag <i>Phalacrocorax atriceps</i>	5,000	Hummock, 2000/01

Other species of interest

More than 50 Southern Sea Lion pups were born on Gid's Island in an earlier season and 29 were found in the 2003 census. The other islands are used as haul-out sites for a few non-breeding seals. In two visits, 53 flowering plant species were recorded on Hummock Island, including the largest known population of an unidentified purslane (*Calandrinia*), possibly a new endemic plant. These plants were growing on the north-west-facing slopes below the peak at a height of about 46 m. Five endemic species were found: Lady's Slipper *Calceolaria fothergillii*, Woolly Ragwort *Senecio littoralis*, Coastal Nassauvia *Nassauvia gaudichaudii*, Falkland Rock Cress *Phlebotobium maclovianum* and Vanilla Daisy *Leucheria suaveolens*. One interesting and rare introduced species, Jersey Cudweed *Gnaphalium luteoalbum*, was found in very small numbers. On Rabbit Island, 45 species were identified, of which four were endemic and six introduced.

Conservation issues/threats

The entire group is worthy of further study and there are many populations that require close examination as a matter of priority. The present owner of Hummock Island has declared his intention not to put sheep on the island, but to allow the vegetation to recover and view it as a private reserve. Hummock, Green and Gid's Islands could therefore be considered for National Nature Reserve status. Hummock, Middle and Gid's Islands are free of rats and mice. All visitors should be informed about the dangers of accidentally introducing alien species to these islands. Rats are present on Rabbit Island and Green Island. It is important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire.

Further reading

See full details at end of chapter.

Huin (2001), Thompson (2003), Woods (1998, 2002a), Woods and Smith (1999).

Site accounts: islands

FK007: Jason Islands Group

Ref number	FK007
Admin region	Falkland Islands
Coordinates	51°05'S 61°02'W
Area	Steeple Jason (790 ha), Grand Jason (1,380 ha), Clarke's Islet (5 ha), Steeple Islet (22 ha), Flat Jason (375 ha), Elephant Jason (260 ha), South Jason (375 ha), North Fur (75 ha), South Fur (25 ha), The Fridays (2) (21 ha), Jason West Cay (22 ha), Jason East Cay (18 ha), and several small islets
Altitude	0–361 m
IBA categories (details below)	A1, A2, A4ii, A4iii
Status	<p>Steeple Jason, Grand Jason, Clarke's Islet: privately owned nature reserves (Wildlife Conservation Society, New York, USA)</p> <p>Steeple Islet, Flat Jason, Elephant Jason, South Jason, North Fur, South Fur, The Fridays, Jason West and East Cay and several small islets: National Nature Reserves (all designated 1973, except Flat Jason in 1966); owned by Falkland Islands Government</p>

Site description

The Jasons are a group of remote islands, to the far north-west of West Falkland. Some are scenically spectacular, with cliffs and craggy peaks, while others are low lying and covered with Tussac.

Steeple Jason is a large island, 5 miles (8 km) long, running south-east to north-west with an average width of around 0.6 miles (1 km). The island is divided into two main sections by a narrow neck, which marks the only break in a ridge of hills with steep slopes on both sides. The island peaks at 263 m towards the north and again at 290 m towards the south. At the northern point a wide, low plateau forms an important area for breeding colonial seabirds, which extend, in more scattered colonies, along the southern steep coastlines. The main stands of Tussac are along the southern shorelines and extend from around 30 m to the highest points of the island. Scattered patches of Tussac also exist in the centre of the island and there is a large stand in the middle of the northern half on the eastern coast.

Grand Jason is the largest of the group and has a similar history of stocking to Steeple Jason. The terrain varies from steep cliffs and high plateaux with gullies to Tussac-covered west-facing and south-facing slopes. There are severely eroded areas of 'black ground', particularly at the northern, south-eastern and western extremities. The island's peak is at 361 m and Tussac is sparse above 60–90 m, with low grasses and small cushion plants.

Steeple Islet is a small island, generally low lying, with boulder beaches and low cliffs, sloping towards a rocky north-western point. Almost the entire island is covered in dense Tussac grass, which has apparently never been grazed.

Flat Jason is a low-lying Tussac island with vertically dipping rock strata, and is possibly the largest island in the Falklands archipelago that has not been grazed, partly due to the difficulties of access. The island is almost 3.7 miles (6 km) long on a north-west to south-east axis, with an average

width of some 600 m. At the centre of the island there is a narrow neck with a boulder beach that may sometimes be tidally inundated. The northern coasts are mainly boulder beaches with rocky outcrops, while the southern shores are more formidable, with steep-sided mini stacks and cliffs.

Elephant Jason has a long ridge rising to a height of 208 m, sloping into low-lying plateaux thickly covered with dense Tussac on the northern and eastern coasts, and with sheer cliffs on the western coast. The fringe of Tussac extends around most of the island, giving way at the northernmost point to areas of grass and heath. For a short time early in the 20th century Elephant Jason was used as a base for government sealing inspectors, who constructed a shanty on the island. The remains of the cast iron stove can still be seen.

South Jason is a long, narrow island, running almost due east-west and reaching over 4.3 miles (7 km) in length and only 0.6 miles (1 km) wide at its widest point. The entire island has a central ridge reaching around 300 m in height, flattening out to the east and west. The eastern point has a dense cover of Tussac, while the western point is drier, with sparse grassland and a small pond. The southern slopes are mostly covered with dense Tussac while the northern slopes are rocky, and the vegetation consists of dry upland heath, with Balsam-bog *Bolax gunnifera* and exposed rock layers.

South Fur is a small island lying around 3 miles (5 km) off the south coast of Steeple Jason. Just 0.6 miles (1 km) long and 300 m wide, its highest point is only 18 m. Unusually, it is composed mainly of large blue-grey dolerite boulders, with a dense but low Tussac covering. It has not been stocked with sheep or cattle.

North Fur lies north-east of Flat Jason and is difficult to access due to steep cliffs formed from vertically bedded rocks. It is heavily overgrown with dense and tall Tussac, and has small amounts of Wild Celery *Apium australe*, Stonecrop *Crassula moschata* and Swordgrass *Carex trifida*, but

Important Bird Areas in the United Kingdom Overseas Territories

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	213,800	Largest Falkland colony is on Steeple Jason
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	12,300	Steeple and Grand Jason only
A1, A4ii	Rockhopper Penguin <i>Eudyptes chrysocome</i>	142,000	Steeple, Grand and Elephant Jason only
A1, A4ii	Southern Giant-petrel <i>Macronectes giganteus</i>	1,500	Main colonies on Grand and Steeple Jason, small colony on The Fridays
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	Numerous	Breeding on Grand, Steeple, Flat and Elephant Jason and North Fur, no counts
A1	Macaroni Penguin <i>Eudyptes chrysolophus</i>	10	Maximum count
A1, A2, A4ii	Striated Caracara <i>Phalcooboenus australis</i>	250	Jason Group are the Falkland stronghold of this species
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>	Numerous	All islands except Steeple Jason
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	10	Few pairs on Grand and Steeple Jason only
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		On all islands in group, not counted
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		All islands except Clarke's, not counted
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		All islands in group, not counted but numerous
A4iii	Combined seabirds	>369,850	

it has never been stocked, probably because access is difficult.

'**Clarke's Islet**' lies about 0.3 miles (0.5 km) off the north-eastern coast of Grand Jason. It is a rugged low island with many rock outcrops, patches of 'black ground' and open low Tussac, heavily used by Southern Sea Lions.

The Fridays are two small islands situated around 3 miles (5 km) from the north-west coast of Flat Jason. Both are low lying, and consist of large coastal rocky strike ridges with Tussac between. On the larger of the two, this area gives way in the centre to open peaty ground, which is the site of a colony of Southern Giant Petrels. Southern Sea Lions use both islands.

Birds

See the accompanying table for details of key species.

On Steeple Jason in October and November 1997, 36 species were noted, with 27 probably breeding, and 39 species were recorded on Grand Jason with 30 of them almost certainly breeding. A total of 12 species, 11 probably breeding, were found on Steeple Islet during a visit of only

90 minutes. Clarke's Islet held only 10 species, almost all breeding and including Cobb's Wrens, Tussacbirds and Canary-winged/Black-throated Finches. On Flat Jason, 32 species were seen, with 26 probably breeding. On Elephant Jason, 33 species were noted, of which 30 were probably breeding. Populations of Thin-billed Prions, Wilson's Storm-petrels, Grey-backed Storm-petrels, Rock Shags and Imperial Shags warrant further investigation.

Endemic sub-species present are the Common Diving-petrel, Black-crowned Night-heron, Upland Goose, Short-eared Owl, Dark-faced Ground-tyrant, Falkland Grass Wren, Falkland Thrush and the Long-tailed Meadowlark. The Falkland Pipit is apparently absent from all islands in this extreme western group.

Other species of interest

The presence of breeding Southern Elephant Seal, Southern Sea Lion and South American Fur Seal has been confirmed on most of the islands in the group. About 200 Southern Sea Lion pups are born annually in the archipelago and there are many non-breeding adults and sub-adults. Islands

where breeding occurs are Steeple Jason (46 pups), Fridays (29), Flat Jason (17), Elephant Jason (26), South Jason (5) and South Fur (4). South American Fur Seals breed on Jason West Cay (2,000) and East Cay (2,000), Seal Rocks (200), Elephant Jason (200) and North Fur (33 pups).

At least 43 flowering plant species occur including six endemics: Coastal Nassauvia *Nassauvia gaudichaudii*, Vanilla Daisy *Leucheria suaveolens*, Lady's Slipper *Calceolari fothergillii*, Woolly Falkland Ragwort *Senecio littoralis*, Smooth Falkland Ragwort *Senecio vaginatus* and Falkland Rockcress *Phlebotobium maclovianum*. The most surprising plant found on Grand Jason was an unidentified purslane (*Calandrinia*), possibly a new endemic plant.

Conservation issues/threats

Steeple and Grand Jason were stocked with cattle and up to 5,000 sheep from the late 19th century to about 1968. In 1970, after all the sheep had been removed, the islands were bought by Len Hill of Birdland, UK, to safeguard the habitat. Since then, some regeneration of the vegetation has occurred. Ownership recently passed to the Wildlife Conservation Society of New York (WCS). In 2002 a fire broke out on Steeple Jason as a result of dry weather and a lightning strike. This was contained to a narrow gully in the southern slopes of the northern half of the island and continued to burn, although control measures were taken to ensure that it did not spread to the albatross colonies. The fire was thought to be totally extinguished by May 2003. Elephant Jason was stocked briefly in 1967 when the Falkland Islands Government leased it for grazing of several hundred sheep. These were removed in 1971 and the island has not been grazed since.

South Jason was accidentally burnt in 1960 and the fire continued burning into the peat for several months. In 2001, a fire was caused on the northern coast by the detonation of unexploded ordnance from the remains of a military plane that had crashed in 1982. The fire burnt through most of the Tussac on the southern slope, but the level of damage is not known as the numbers of burrowing birds and songbirds had never been recorded. There is evidence that a severe fire affected the island in 1949 and traces of this were still visible in the 1980s, having left much of the north-western side of the island devoid of vegetation and prone to erosion. Government permits to

visit South Jason include a strong warning of the fire risk. In order to minimise this, visits should take place only between May and July.

All the government-owned islands were made Crown Reserves in July 1950, declared as wild animal and bird sanctuaries in May 1966, and reclassified as National Nature Reserves in 1999. Many of the islands are in their original state with dense Tussac and other natural vegetation.

The flora and fauna of the Jasons urgently need a full survey of species present and abundance. The remoteness of these islands from Stanley and the difficulties of access have meant that, in the past, it was impossible to make basic biological surveys. The research station constructed in 2003 on Steeple Jason by the WCS should facilitate long-term ecological studies. WCS and Falklands Conservation are currently developing a management plan for Grand and Steeple Jason.

Overgrazing has left large parts of Steeple and Grand Jason badly eroded. A Tussac replanting programme could improve the habitat for birds, though the logistics would be difficult. On other islands in the group, Tussac is still mostly dominant, except on the higher parts of Elephant Jason, where heathland predominates.

Steeple and Grand Jason, the two largest islands in this archipelago, are becoming a popular tourist destination for cruise ships. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire. The islands in this group are free of introduced predators, with the exception of Steeple Jason, which has a feral population of House Mice *Mus musculus*. This probably explains the absence of territory-holding Cobb's Wrens and poses a threat to other passerines and ground-nesting species, which would benefit from the eradication of mice. All visitors should be informed about the dangers of accidentally introducing alien species to the islands.

Further reading

See full details at end of chapter.

Clausen (2001), Huin (2001), Kerr (1994), Poncet (1998), Strange *et al.* (1988), Thompson (2003) Thompson and Rothery (1991), Woods and Smith (1999), Woods (2002a).

Site accounts: islands

FK008: Keppel Island

Ref number	FK008
Admin region	Falkland Islands
Coordinates	51°19'S 59°58'W
Area	3,626 ha*
	* = rats present
Altitude	0–341 m
IBA categories (details below)	A1, A2
Status	Privately owned (L. Fell, Ilminster, Somerset, UK)

Site description

Keppel Island lies approximately 3 miles (5 km) off the north-western coast of West Falkland and peaks at 341 m on Mount Keppel. The land rises steeply from a central valley, forming a ridge along the south-western coast of the island and cliffs to the west and north. There is a wide, flat valley in the centre of the island containing several freshwater lakes, which provide important habitat for waterfowl. To the north-east, the coastline is deeply indented with several sandy beaches and bays and there is a large area of sand dunes. The majority of the island is covered by heathland and Whitegrass associations, with the north-eastern coast having extensive green areas interspersed with Magellanic Penguins' burrows and frequented by flocks of geese. Coastal Tussac is very limited. Keppel Island is one of the most historic sites in the Falklands. The first long-term settlement in the archipelago and home to the South American Missionary Society was established there in February 1855. It was occupied for 40 years by a group of British missionaries with a small population of Fuegian natives, who ran one of

the earliest and most successful agricultural settlements in the Falklands. Activities were increased on islands south of Tierra del Fuego from the 1880s. Keppel was sold to Dean Brothers of Pebble Island in 1911 and continued in use as a sheep farm until 1992.

Birds

See the accompanying table for details of key species.

A total of 38 species was recorded in December 2001, of which 33 were breeding or probably breeding. The first pair of Barn Owls proved to be breeding (2001) on Keppel Island found suitable habitat in the extensive European Gorse and the shearing shed at the settlement, and were apparently feeding solely on the introduced rat population. During a visit in 2003, both Southern Caracaras and Striated Caracaras were noted as present, though not shown to be breeding. Falkland Grass Wrens, White-tufted/Rolland's Grebes and Black-necked Swans are often seen, especially on or near the ponds in the central valley. Very large numbers of Upland Geese were reported in December 2001 and, from sample counts, it was estimated

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Black-browed Albatross <i>Thalassarche melanophrys</i>	1,869	Apparently increased 1997–2001
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	782	Three colonies
A1	Gentoo Penguin <i>Pygoscelis papua</i>	1,250	Two colonies
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	Hundreds?	Widespread and numerous, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	Hundreds?	Widespread and numerous
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Present, probably low numbers
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Numerous around coasts, not counted

that more than 3,000 were present. Cobb's Wrens and Tussacbirds were notably absent during the December 2001 visit, which is consistent with the recorded presence of many rats.

The possible presence of petrels has been suggested, from sightings of burrows and traces of petrels. The burrows are most likely those of the numerous rats and the remains of petrels are probably either corpses of storm-driven birds or the prey of Peregrine Falcons or Short-eared Owls. However, the status of nocturnal petrels on the island has not been investigated.

Other species of interest

Robinson's Point on the northern coast is a popular haul-out site for Southern Elephant Seals and, in past years, pups have occasionally been born here. There have been unsubstantiated reports of Fuegian Otters at Keppel within the last 10 years, but no breeding sites have been found. There is an old plantation of Monterey Cypress and Broom *Cytisus sp.* in a valley nearby, which has provided attractive habitat for Black-chinned Siskins.

Six endemic plants have been recorded for Keppel: the Hairy Daisy *Erigeron incertus*, Vanilla Daisy *Leucheria suaveolens*, Coastal Nassauvia *Nassauvia gaudichaudii*, Woolly Falkland Ragwort *Senecio littoralis*, Smooth Falkland Ragwort *Senecio vaginatus*, Lady's Slipper *Calceolari fothergillii*. There is also a rare native plant, Fir Clubmoss *Huperzia fuegiana*.

Conservation issues/threats

Keppel Island has a high population of introduced Norway

Rats, which is clearly having a negative impact on the wildlife. Eradication of rats from the island might require the use of a helicopter or a very large workforce on the ground. All visitors should be informed about the dangers of accidentally introducing alien species to the islands. At the settlement, European Gorse has grown uncontrolled since 1988. During 2003, a working party from the Falklands Islands National Trust and Museum, and Falklands Conservation, removed large quantities of European Gorse to safeguard important historical buildings. The Box-leaved Barberry or Calafate *Berberis buxifolia* has also become more abundant and is spreading along the coastal plains. Experimental plantings of Tussac made in 1985 produced useful results when compared with similar plantings at Port Howard and Sea Lion Island. Over 700 trees were planted in the late 1980s and early 1990s, and more than 600 were still alive by Christmas 2001.

Cruise ships were scheduled to start visiting the island in late 2003. It is very important to promote the Falkland Islands Countryside Code (see Appendix 1), particularly to guard against the risk of fire. Consideration should be given to year-round occupancy of the island as this would afford a level of protection to the site and also facilitate the management of introduced species.

Further reading

See full details at end of chapter.

Clausen (2001), Huin (2001), McAdam and Walton (1990), Nutter (2002), Philpott (2003).

Site accounts: islands

FK009: Kidney Island Group

Ref number	FK009
Admin region	Falkland Islands
Coordinates	51°37'S 57°46'W
Area	Kidney Island (32 ha), Cochon Island (8 ha)
Altitude	0–30 m
IBA categories (details below)	A1, A2, A4ii, A4iii
Status	National Nature Reserves (designated 1964); owned by Falkland Islands Government

Site description

Kidney Island is roughly kidney-shaped, as its name suggests, and lies about 0.3 miles (0.5 km) off the coast of East Falkland, at the southern entrance to Berkeley Sound. It is largely low lying, with the highest point at 18 m above sea level, and is almost covered with mature Tussac. There are boulder beaches on eastern and western coasts, a large sand bay facing south-west and near-vertical cliffs along much of the northern coastline.

Cochon Island is a small island lying adjacent to Kidney Island, formed from steeply dipping rocks, which rise to over 30 m at the island's highest point. The soil is generally thin and vegetation is limited to Tussac, Wild Celery and Stonecrop, which vary in density throughout the rocky ridges.

Birds

See the accompanying table for details of key species.

At least 34 species have been recorded breeding on Kidney Island since 1960. The most numerous is the Sooty Shearwater, which was apparently confined to the western headland and steep north-western slopes in the 1930s, but now burrows around the coast and well inland. Kidney Island has one of only three known Falkland breeding colonies of White-chinned Petrels. It is also the only definite breeding site for Great Shearwaters outside the Tristan da Cunha and Gough Island group in the South Atlantic. Grey-backed Storm-petrels breed, but are very difficult to count. Common Diving Petrels traditionally bred but have not been found nesting in recent years. One or two pairs of Macaroni Penguins breed regularly with the Rockhoppers on Kidney, and small numbers of Rock Shags and Imperial Shags are present, but populations have not been counted recently. Canary-winged/Black-throated Finches formerly bred on Kidney but are now rarely seen, and one or two pairs of Ruddy-headed Geese have bred there since 1983. These

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	White-chinned Petrel <i>Procellaria aequinoctialis</i>	1,000 (approx)	Kidney population, mainly along southern coastal slopes
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	521	Kidney (257) increasing slowly, but large decline since 1930s (approx 3,500 pairs, Dec 1936), Cochon (264) decrease from 515 in 1995/96
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Numerous Kidney, not counted
A1, A4ii	Sooty Shearwater <i>Puffinus griseus</i>	>100,000	Kidney population has increased since 1960s, burrows on coastal slopes and inland, perhaps to density of one pair per 2 sq m
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Widespread and numerous Kidney, not counted
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Numerous on Kidney beaches and seen across island, not counted
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	15	Fluctuates: 1936 (6 prs), 1960 (10 prs), 1969 (8 prs)
A4iii	Combined seabirds	>102,000	

small numbers, however, do not qualify the site. Other endemic sub-species recorded are the Black-crowned Night-heron, Upland Goose, Short-eared Owl, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren, Falkland Thrush and the Long-tailed Meadowlark.

Other species of interest

Both islands are used by Southern Sea Lions for hauling out, and they can often be found resting in Tussac, sometimes well inland and at the top of long slopes, but apparently they do not now breed there. At least 26 species of flowering plants have been recorded in recent years on Kidney Island, including the two endemic ragworts, Woolly Falkland Ragwort *Senecio littoralis* and Smooth Falkland Ragwort *Senecio vaginatus*. The Swordgrass (sedge) *Carex trifida* grows well with shorter Tussac. Preliminary collections and surveys of the invertebrate fauna and flora have been made because Kidney is an accessible, mature Tussac island.

Conservation issues/threats

Kidney Island has not been grazed, but the Tussac was cut in large quantities for use as fodder for horses and cattle in Stanley until the early 1950s. Some Tussac on the eastern half of the island was accidentally burnt in the 1940s. It is not known whether Cochon Island has ever been stocked

and there is no evidence of it having being burnt. The islands are free of introduced predators, but being at the entrance of Berkeley Sound where many fishing vessels come for transshipping and a safe anchorage, the risks of accidental oil spills or the introduction of alien species to the islands are high. Kidney Island has a high potential value for guided day tours as it can be reached in half an hour from Stanley. However, the Tussac is very dense (sometimes overhanging dangerous cliffs) requiring physical fitness, determination and caution from visitors crossing the island. Near the southern landing bay a small wooden Tussac cutters' hut is now used occasionally by researchers. Permission to visit Kidney Island must be obtained from the Government Environmental Planning Department. It is essential that all visitors follow the Falkland Islands Countryside Code (see Appendix 1) particularly to guard against the risk of fire. A management plan is being drafted by Falklands Conservation in close consultation with the Environment Committee, which will address the management issues for this group of islands.

Further reading

See full details at end of chapter.

Roberts (1937), Woods (1970a, 1970b and unpublished notes 1958–2002).

Site accounts: islands

FK010: Lively Island Group

Ref number	FK010
Admin region	Falkland Islands
Coordinates	52°02'S 58°28'W
Area	Lively Island (5,585 ha), Gull (5 ha), Cow (12 ha), Irene (5 ha), Kidney Island (2) (2 ha) and (4 ha) and several other small islets (some tied to Lively Island by sandbars), Middle Island (and five islets) (150 ha), Motley Island (330 ha), The Mot (10 ha), Centre (3 ha), Sal (8 ha), Philimore (300 ha), Philimore Chico (18 ha), Reef (35 ha), Green Island (7 ha), Stinker (<1 ha), Pete's (4 ha), Hutchy's (12 ha), North East Island* (305 ha) * = rats present
Altitude	0–37 m
IBA categories (details below)	A1, A2
Status	Lively Island, Gull, Cow, Irene, Kidney Island etc.: privately owned (A. Jaffray, Lively Island) Middle Island (and islets), Motley Island, The Mot, Centre, Sal: privately owned nature reserves (Falklands Conservation) Philimore, Philimore Chico, Reef, Green Island, Stinker, Pete's, Hutchy's: privately owned nature reserves (S. Poncet, Stanley) North East Island: privately owned nature reserve (S. Poncet, Stanley and I. T. Bury, Stanley)

Site description

Lively Island is gently undulating lowland with the highest point at only 37 m. The coastline is deeply indented, with extensive kelp beds. There are many streams and several ponds, the largest being Enderby Pond (about 7 ha), which has much emergent vegetation, mainly the California Club-rush *Schoenoplectus californicus*, and is an important site for waterfowl. The island has been farmed since the mid-19th century with uncontrolled grazing by cattle, sheep and horses in earlier years. Little Tussac remains and there are many large patches of eroded ground. There are long sandbars and dunes on the eastern coast, and plantations of Marram *Ammophila arenaria*. Lively is the largest rat-free island in the Falklands archipelago and may be one of the largest in the world.

North East Island, lying just 350 m off the coast of Lively, was infested with rats until September 2003, when an intensive rat eradication programme was carried out. The island is divided in two by a huge sandbar, which is well vegetated with Marram. The inter-tidal area is heavily inundated by sand and, at low tide, is a favoured feeding area for migrant White-rumped Sandpipers during the southern summer. The sea may occasionally break through the bar at spring high tides, especially with a strong easterly wind.

Middle Island reaches no more than 15 m in height towards the north-eastern point and the central ridge. There is open mature Tussac along the southern and eastern coasts, while there is considerable erosion on the northern coast above the 10 m-high cliffs. The habitat is

varied, with large sand beaches and some dunes on the eastern coast, lush grasslands and areas of semi-permanent water with some interesting plants.

Motley Island has low cliffs and large shelf-rock beaches on the north-eastern, south-eastern and central western coasts. It reaches an altitude of 15 m in only four places. There are mature Tussac fringes, mainly at the northern and southern points, with inland grasslands recovering from years of grazing, but there are still areas of severe erosion on the western coast. Lying just 0.3 miles (0.5 km) south of Motley Island is **The Mot**, or Little Motley as it is sometimes called. The island is dome shaped and fairly open, but mature Tussac covers approximately half the island's surface.

Birds

See the accompanying table for details of key species.

Lively Island has good populations of songbirds, including Cobb's Wrens and Tussacbirds, in the absence of rats. About 38 species were recorded (1980s), most of which were breeding, including several hundred Imperial Shags. White-tufted/Rolland's Grebes, Black-crowned Night-herons and Black-necked Swans frequent Enderby Pond on the western Sal Point, where White-winged Coots have been seen several times. A total of 34 species was recorded on **North East Island** in February 2003, when rats were widespread; 24 species bred or probably bred, but there was a very low density of songbirds given the abundant vegetation cover, which provided suitable breeding habitat, and the availability of food, especially from Wild Celery

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Gentoo Penguin <i>Pygoscelis papua</i>	650	Lively Island
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	Numerous	Breeding on all islands, no counts
A1	Southern Giant-petrel <i>Macronectes giganteus</i>	40	Breeds Hutchy's off North East, count in 1996
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>	Numerous	Present on Middle, Motley, Lively and The Mot, no counts
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>	Numerous	Breeding all islands, except North East where a few seen Feb 2003
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Small numbers Middle and Motley, more common on North East
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Numerous Middle and Motley, present Lively and The Mot
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Numerous, present on all coasts

Apium australe and Diddle-dee *Empetrum rubrum*. The Cobb's Wren was absent as a breeding species and there were only small numbers of Tussacbirds.

On **Middle Island** 35 species were recorded (1997), of which 29 were potential breeding species. These included all nine native songbirds in good numbers. The presence of breeding Diving-petrels was strongly suspected but could not be confirmed. There was one colony of about 300 pairs of Imperial Shags, and Magellanic Penguins were particularly numerous and well spread. During two visits to **Motley Island** (January 1995 and January 1997) a total of 41 species was recorded, of which 35 were either breeding or probably breeding. Songbirds were plentiful, notably the Cobb's Wren and Falkland Grass Wren, Falkland Thrush, Canary-winged/Black-throated Finch and the Black-chinned Siskin.

Other species of interest

Southern Sea Lions can be seen hauled out on many of the islands of this group. They breed on Green (125 pups), Sal (47) and Motley (32), and there were signs of quite heavy use by Southern Sea Lions on The Mot. North East Island holds a small breeding population on the southern coast with three pups in 2003, while Southern Elephant Seals often use this island to haul out.

Though stocked with several hundred sheep until 1994, **North East Island** has a good variety of flora (65 species recorded) and is notable for its flourishing cover of Oxeye Daisies *Leucanthemum vulgare* mixed with Wild Celery *Apium australe* on coastal slopes. There is also a thriving population of the uncommon Mudwort *Limosella australis*

on a rocky shelf below a 2 m cliff on the northern coast. A total of 65 plants (50 native including five endemics) has been recorded on **Middle Island**, including the False Ladle-leaved Buttercup *Ranunculus pseudotrullifolius* (native, local and scarce), a good population of Mudwort in a shallow, semi-permanent pond and large areas of Bluegrass *Poa alopecurus* growing on sand. In another damp area with several plants of the very uncommon Falkland Rock Cress *Phlebotobium maclovianum*, the only population known in the Falklands of Fuegian Foxtail Grass *Alopecurus magellanicus* was found. Both species of endemic ragwort were found, growing in close proximity.

The vegetation of **Motley Island** is varied, with 83 plant species recorded including 56 natives. The low cliffs of the eastern coast shelter some stands of Swordgrass, and the rare Hairy Daisy *Erigeron incertus* was among four endemics found. Other interesting or rare plants included the Yellow Orchid *Gavilea littoralis* and Dusty Miller *Primula magellanica*.

Conservation issues/threats

Agriculture on Lively Island does not appear to have a detrimental effect on the existing bird populations, although the presence of sheep prevents the recovery of Tussac. There are small islands associated with Lively that warrant further investigation, including Seal, Philimore, Hutchy's, Philimore Chico, Cow, Irene, Reef and several unnamed islands.

Both **Middle** and **Motley Islands** were used for many years by the Falkland Islands Company for fattening mutton sheep en route to Stanley. Middle Island has not carried stock since 1988 and Motley was last stocked in

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1992. They were bought by Falklands Conservation in 1994. Surprisingly, they appear to be free of rats or mice and all nine species of native songbirds are breeding on both islands. The substantial proportion of introduced plant species (about 25%) is typical of offshore islands with a long history of grazing.

In contrast, **The Mot** has not apparently been grazed, but during a brief visit in November 1998, charred sides of Tussac bogs showed that some Tussac had been burnt several years earlier. Tussacbirds and Cobb's Wrens were seen, again indicating an absence of introduced predators. The rat-free status of Lively Island was threatened by the

proximity of rat-infested North East Island (just 300 m offshore) until the eradication programme by Falklands Conservation in 2003. All visitors should be informed about the dangers of accidentally introducing alien species to the islands. Fire is also a possible threat and it is important that the Falkland Islands Countryside Code (see Appendix 1) is followed.

Further reading

See full details at end of chapter.

Poncet (1994), Thompson (2003), Woods, R. W. and Woods, N. C. (1997), Woods *et al.* (2003).

Site accounts: islands

FK011: New Island Group

Ref number	FK011
Admin region	Falkland Islands
Coordinates	51°43'S 61°17'W
Area	New Island North* (1,181 ha), New Island South* (1,181 ha), Landsend Bluff (7 ha), Beef Island (10 ha), Coffin Island (45 ha), Ship Island* (9 ha), Cliff Knob (2 ha), North Island (75 ha) and Saddle Island (35 ha) * = rats present
Altitude	0–226 m
IBA categories (details below)	A1, A2, A4i, A4ii, A4iii
Status	New Island North: privately owned nature reserve (T. Chater, New Island North) New Island South: National Nature Reserve (designated 1993); owned by New Island South Conservation Trust Landsend Bluff, Beef Island, Coffin Island, Ship Island, Cliff Knob, North Island, Saddle Island: privately owned nature reserves (Falklands Conservation)

Site description

New Island has a length of 8 miles (13 km) and an average width of 0.5 miles (0.75 km). In section, the island is wedge shaped, the western and northern coasts rising dramatically to form a formidable coastline of cliffs. In contrast, the eastern coasts are lower lying and gently sloped, comprising rocky shores and sandy bays. The island was formerly heavily grazed and in some places has suffered considerable erosion.

Landsend Bluff consists of two large bluffs lying off the north-western point of New Island, both of which have an elevation of around 100 m. The bluffs are deeply fissured and provide cliff nesting habitat for colonial seabirds.

Beef Island lies almost 1.2 miles (2 km) east of the New Island settlement. It is generally dome shaped with very steep slopes on the south-eastern side and rises to around 50 m. Much of the island is thickly covered with Tussac, with the exception of a small area of heathland and low grasses on the north-eastern point.

Coffin Island is about 0.6 miles (1 km) north-east of South End Camp, New Island. It is dome-shaped, with very steep sides above cliffs, which rise to around 50 m. The higher elevations are dominated by heath and grassland, while the summit at 122 m has cushion plants on very thin soils and exposed rocks. On the steep coastal slopes, a fringe of Tussac remains.

North Island lies 1.5 miles (2.5 km) offshore from the northern point of New Island and is just under 1.7 miles (2.75 km) in length and 0.3 miles (0.5 km) in width. The western coast is dominated by cliffs, which peak at 70 m and are often undercut at sea level. Most of the island is covered by Tussac, with the exception of a central interior plateau, which is oceanic heathland, with Balsam-bog and Bluegrass.

Saddle Island is located roughly equidistant between New Island and North Island. It has sheer cliffs up to about 75 m on the western and eastern coasts but has a sheltered sandy bay facing south-east. Much of the island is covered with dense but fairly low Tussac 1.5–2 m tall. There are two shallow ponds in the centre of the saddle, which are thought to dry out in the summer.

Ship Island in Ship Harbour is a low hummock reaching a height of no more than 15 m and is only 400 m from New Island.

Cliff Knob Island is only 400 m to the south-east of Sabina Point, New Island North. It is a steep-sided domed islet no more than 15 m high and covered in Tussac, much eroded in the lower part by burrows. It is unlikely to have been grazed.

Birds

See the accompanying table for details of key species.

The New Island group is considered to be one of the finest wildlife areas in the Falklands, with at least 46 species breeding or probably breeding, and very large populations of colonial nesting seabirds. It is probably the world's most important breeding ground for the Thin-billed Prion. The colony of Black-browed Albatrosses on North Island was devastated by fire from a lightning strike in January 1988. It has since recovered to a population of about 17,700 pairs in 2000. New Island has a breeding population of Falkland Skuas numbering several hundred. There are a few pairs of Macaroni Penguins but they do not qualify the site as they are probably not breeding. Birds of prey include Peregrine Falcons, Southern Caracaras, Variable Hawks, Turkey Vultures and Short-eared Owls. New Island North has one or two pairs of King Penguins with Gentoos and a colony of about 50 pairs of Southern Giant Petrels. Dark-faced Ground-tyrants are widespread and common but other songbirds are uncommon.

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Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	29,000	New Island 12,000, North Island 17,000
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	6,648	NI North 6,148, NI South 500
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	13,450	NI South 10,000, North Island 3,450
A1	White-chinned Petrel <i>Procellaria aequinoctialis</i>	<20	New Island, one of three known Falkland breeding sites
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	>3,700	Numerous, breeding, total unknown, >3,700 pairs NI South 2001
A1, A2	Striated Caracara <i>Phalco boenus australis</i>	<50	New, Beef, Coffin, Saddle, Ship and North, probably also Cliff Knob
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Numbers unknown, breeds Coffin, Saddle and Beef, none breeds on New Island
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	3	Flock of 70 moulting birds recorded on NI South
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Regularly breeds NI South, not recorded NI North November 1999
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	>30	30 breeding pairs NI South, uncounted NI North, but numerous and breeding
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Breeds Beef, Coffin and Saddle, 10 pairs (approx) NI South
A4i	Imperial Shag <i>Phalacrocorax atriceps</i>	>4,500	Figures for NI South only, also breeds on cliffs of NI North
A4ii	Thin-billed Prion <i>Pachyptila belcheri</i>	>2 million	New Island 2 million, large populations North, Saddle and Beef
A4iii	Combined seabirds	>2 million	

Other species of interest

New Island has one of the Falklands most important breeding locations for South American Fur Seals at Landsend Bluff, with an estimated total population of about 2,500 animals. The islands in this group are also breeding grounds for a small number of Southern Sea Lions.

Endemic plants include Lady's Slipper *Calceolaria fothergillii*, Vanilla Daisy *Leucheria suaveolens*, Coastal Nassauvia *Nassauvia gaudichaudii*, Snake Plant *Nassauvia serpens*, Woolly Falkland Ragwort *Senecio littoralis*, and Smooth Falkland Ragwort *Senecio vaginatus*. Other interesting plants are Whitlowgrass *Draba funiculosa*, Tufted Azorella *Azorella monantha* and Yellow Orchid *Gavilea littoralis*. New Island (North Harbour), Coffin and Beef Islands have populations of an unidentified purslane (*Calandrinia*), possibly a new endemic plant.

Conservation issues/threats

Two owners manage New Island as separate nature reserves. Only a very small number of sheep are retained on the New Island North property as a meat supply for the owner.

New Island South Conservation Trust (NISCT) researchers Paulo Catry, Ana Campos, Petra Quillfeldt, Juan Masello and Ian Strange prepared the area description, breeding bird status notes and the material below on conservation issues for New Island South.

The management of New Island South as a wildlife reserve was started in 1972 with all sheep being removed in 1975. New Island has some alien species: Black/Ship Rats *Rattus rattus*, House Mice, a small number of feral cats, the European Rabbit *Oryctolagus cuniculus* and possibly a Cottontail Rabbit *Sylvilagus sp.* The eradication of introduced rodents from New Island would be a costly and major undertaking. The ecological value of this remains

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questionable. As a result of management and studies made of these alien introductions, none is considered to be a serious threat to native species. Intensive studies over the last four years by NISCT on the Black Rat, the only species of rat found on New Island, show that populations are restricted to small areas. The species has been found to feed largely on vegetation, with little evidence to show it is reducing populations of ground-nesting bird species. Nevertheless, the absence of the Cobb's Wren as a breeding species is significant.

The NISCT is aware, however, of the potential dangers that such alien species pose and will continue to undertake monitoring and management strategies employed over the last 33 years. Similar studies will also be carried out on the small populations of feral cats and rabbits to evaluate their position in the general ecology of New Island. All visitors should be informed about the dangers of accidentally introducing alien species to the Falklands.

Researchers at the field study centre on New Island South have clearly demonstrated that the removal of sheep and careful management of the environment have greatly benefited native plant and bird species. New Island receives a number of tourist vessels throughout the austral summer (early November to late March). Tourists are permitted to land in restricted areas to view the wildlife and dramatic coastal scenery. In 2003/04, 21 vessels brought an average of 98 passengers every eight days for visits of three to four hours' duration. It is very important that all visitors should follow the Falkland Islands Countryside Code (see Appendix 1), particularly to guard against the risk of fire. Although a potential conservation issue in the future for some islands, by adhering to present

management policies New Island would not expect to see its environment under any threat from controlled tourism.

Falklands Conservation is aware that the offshore islands need ecological surveys.

Saddle Island was stocked with cattle until 1972. There is no evidence to indicate that Tussac has been burnt and it is believed to be free of introduced predators.

Access to North Island is extremely difficult because there is no easy landing place. It has never been stocked and no sign of rats or mice was found in November 2000. A large area of Tussac was burnt in January 1988 following a lightning strike and many albatrosses abandoned their nests and chicks. Since then, the vegetation has recovered to some extent and the albatrosses have recolonised. Beef Island carried sheep and cattle until 1972. There are signs that Tussac has been burnt in the past but the island is believed to be free of introduced predators. As on Beef Island, sheep were removed from Coffin Island in 1972 and there is no evidence that this island has ever suffered a fire. Ship Island carries little vegetation except dwarf shrubs and low introduced grass, and shows clear evidence of having been burnt long ago. It is likely to have been grazed and there are also signs that it has a population of rats.

Further reading

See full details at end of chapter.

Catry *et al.* (2003), Clausen (2001), Huin (2001), New Island South Conservation Trust reports (1995–2004), O'Gorman (1960), Strange (1992), Towns and Broome (2003), Woods (2000).

Site accounts: islands

FK012: Passage Islands Group

Ref number	FK012
Admin region	Falkland Islands
Coordinates	51°35'S 60°47'W
Area	Second Passage Island (650 ha), Third Passage Island (80 ha), Fourth Passage Island (150 ha)
Altitude	0–75 m
IBA categories (details below)	A1, A2
Status	Second Passage Island: privately owned (A. R. Marsh, Shallow Harbour Farm) Third Passage Island, Fourth Passage Island: privately owned nature reserves (E. Anderson, Stanley): no access

Site description

Second Passage Island, by far the largest of this group, is over 5.6 miles (9 km) from east to west and up to 1.2 miles (2 km) wide. There are cliffs up to 30 m high of very unstable decaying rock strata around most of the coast. The highest point is Sixtus Hill at 75 m in the eastern half of the island. A small sheltered bay provides the only safe landing near the centre of the northern coast. There is considerable 'black ground' above the cliffs and especially behind the old woolshed at the northern inlet where the valley is full of decomposed peat dust, indicating that much of the vegetation has been over-grazed in the past. Tussac is restricted to steep rocky slopes, the western point and the cliffs along the northern shore. There are several ponds, some of which are seasonal and shallow but one, with thriving vegetation, provides feeding grounds for wading birds and waterfowl.

Third and Fourth Passage Islands are just 800 m apart and both are low lying, rising to just over 30 m. They are covered with dense Tussac, except for a coastal strip on Fourth Passage and a central area of grassland on Third Passage Island. Both islands were stocked briefly with cattle during the 1960s; since then they have been ungrazed. All three islands are free of introduced predators.

Birds

On Second Passage Island, 32 species were recorded in November 1997. Of these, 28 probably breed, including all the resident songbirds except the Falkland Pipit. Six pairs of Striated Caracaras and one pair of Ruddy-headed Geese were recorded but do not qualify the site. The primary importance of this group of islands is the large breeding population of Southern Giant Petrels on Third Passage

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Southern Giant-petrel <i>Macronectes giganteus</i>		Third Passage
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	145	Second Passage (2000/01)
A1	Gentoo Penguin <i>Pygoscelis papua</i>	300	Fourth Passage 1995, not censused 2000/01
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Breeding Second Passage, probably also Third and Fourth Passage
A1, A2	Striated Caracara <i>Phalco boenus australis</i>	6	Second Passage 1997; Third Passage around 1987, 'fairly high density'
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Second Passage 1997
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Population unknown, numerous on all islands

Island, though the exact size of the colony is unknown. There is a possibility that Third and Fourth Passage Islands support breeding populations of Thin-billed Prions, though this has yet to be confirmed.

Other species of interest

Six adult Southern Sea Lions were noted on Second Passage Island during the 2003 census, and Third Passage Island held a total of 80 Southern Sea Lions, which included 30 pups. A total of 30 species of flowering plants was recorded on Second Passage Island in November 1997, including both endemic ragworts, Coastal Nassauvia *Nassauvia gaudichaudii* and Lady's Slipper *Calceolaria fothergillii*.

Despite being heavily grazed, there were only three species of introduced plants, possibly because the island lies to the west of West Falkland.

Conservation issues/threats

Third and Fourth Passage Islands are managed by the owner as nature reserves with a 'no access' policy. Survey

work to record species and estimate or count their populations would be valuable, although considerable assistance has been given to remotely monitor penguin species and Southern Giant-petrels, for which the islands are most important, through aerial photography. The no access policy promotes conservation and minimises the risks of alien introductions and fire. The late Cecil Bertrand provided information to R. W. Woods in 1983, from his visits in the 1930s when no rats were seen on either island. The current rodent status of Third and Fourth Passage is not known. Second Passage Island is rat free and all sheep have been removed. The vegetation is showing signs of recovery. It is important that visitors to the island follow the Falkland Islands Countryside Code (see Appendix 1), particularly to guard against the risk of fire.

Further reading

See full details at end of chapter.

Little published material is available, but see Strange *et al.* (1988), Thompson (2003).

Site accounts: islands

FK013: Pebble Island Group

Ref number	FK013
Admin region	Falkland Islands
Coordinates	51°18'S 59°38'W
Area	Pebble Island* (10,336 ha), Pebble Islet* (500 ha), Government Islet (110 ha), White Island (5 ha), Keppel Islet (8 ha)
	* = rats present
Altitude	0–277 m
IBA categories (details below)	A1, A2, A4iii
Status	Privately owned (Dean Brothers, Stanley; manager R. Evans)

Site description

Pebble Island is the third largest offshore island in the archipelago, stretching about 18.5 miles (30 km) from east to west, but it is only about 4.3 miles (7 km) at its widest point. There are three peaks west of the settlement: First Mountain reaches 277 m, Middle Mountain 214 m and the western Marble Mountain 237 m. The land to the east is generally low lying with many large lakes and ponds, which provide important waterfowl and wader habitat. The coastline is deeply indented and Elephant Bay, north-east of the settlement, has a spectacular 3 mile-long (5 km) white sand beach. Pebble Island is one of the most visited tourist sites in the Falklands, with a lodge and self-catering cottage accommodation in the centrally located settlement and a cottage near Marble Mountain on the far western point.

The largest of the associated islets, **Pebble Islet** is low lying, reaching no more than 20 m at the western point. The northern coast has shelf rock and there are extensive kelp beds off the northern and western coasts, extending to Government Islet. There are a few large ponds and the island has been heavily grazed by sheep and horses. The vegetation is open and sparse, with only about 14 ha of Tussac cover at the eastern point.

Government Islet is almost entirely covered by dense Tussac but was grazed by up to 10 bullocks in the early 1960s. There are cliffs up to 15 m on the western and north-eastern coasts, and large sheltered bays towards the east.

White Island is a low rocky stack with thick Tussac on the southern slopes and in the centre, but less vegetation towards the east and west. It has probably not been grazed.

Keppel Islet is a low, domed island with a boulder beach on the north-east coast and low cliffs to the south-east. It is densely covered in Tussac, which appears to be in good condition, although it was used for fattening bullocks, probably between 1960 and 1970.

Birds

See the accompanying table for details of key species.

In 1995, 39 species were found breeding on **Pebble Island**, with another four possibly breeding. A total of 23 of the 25 species of waterfowl and wading birds (as defined under the Ramsar Convention) breeding in the Falklands are found in the large wetland area on Pebble Island East, and

more than 1,000 pairs of Imperial Shags breed near Cape Tamar. There are also colonies of Rockhopper and Gentoo Penguins. The Gentoo population doubled in the five years between 1995 and 2000, while the Rockhopper population remained more or less stable. The very small number of breeding Macaroni Penguins is associated with a large colony of Rockhopper Penguins north of Marble Mountain. The status of some of the species that could be breeding needs clarification and the entire group warrants further study since the previous (partial) surveys took place in 1995 and 1998. During the summer of 2000/01 the first pair of Coscoroba Swans – known to breed successfully in the Falklands since 1860 – was recorded on the eastern wetlands. Sightings of rare visitors or breeders such as Red Shovelers and Cinnamon Teals make the site a favourite haunt for birdwatchers. This part of the island probably supports the largest concentration of Black-necked Swans in the Falklands, with at least 15 pairs nesting in 1995/96. The Cobb's Wren is absent from Pebble Island, and probably Pebble Islet, as it cannot co-exist with rats. Members of the Royal Air Force Ornithological Society carried out a complete coastal survey of Pebble Island in 1995.

A total of 16 species was noted during a brief visit to the south-eastern part of **Government Islet** in December 2001. Cobb's Wrens, Tussacbirds and other species were numerous, suggesting that the islet is apparently free of introduced predators. However, an old bleached rat skull was found in a clearing among Tussac and a piece of orange expanded polystyrene on the beach had been chewed. These items may have been carried by a bird, perhaps a Striated Caracara. **Keppel Islet** was examined briefly from a passing boat in December 2001; 11 species were noted, including Tussacbirds near a colony of Rock Shags. This suggests that the islet is free of rats. Endemic sub-species known to be present in the Pebble Group include the White-tufted/Rolland's Grebe, Black-crowned Night-heron, Upland Goose, Kelp Goose, Short-eared Owl, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren, Falkland Thrush and the Long-tailed Meadowlark.

Other species of interest

About 40 immature Southern Elephant Seals and several Southern Sea Lions used the south-western beach of Government Islet in December 2001. White Island is also a

Falkland Islands

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	6,775	Only Pebble 2000/01
A1	Macaroni Penguin <i>Eudyptes chrysolophus</i>	5–10	Pebble, with Rockhopper Penguins
A1	Southern Giant-petrel <i>Macronectes giganteus</i>	20	Pebble 2000/01
A1	Gentoo Penguin <i>Pygoscelis papua</i>	1,669	Pebble 2000/01
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	1,400+	Pebble 1995, also Government Islet and probably Pebble Islet
A1	Sooty Shearwater <i>Puffinus griseus</i>	100+	Breeding Government Islet, not surveyed
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Numerous on Government Islet, absent from Pebble
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>	2+	Government Islet, probably also Keppel Islet and White
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	175 (approx)	Pebble 1995
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>	17 (approx)	Pebble 1995, Government Islet 2001
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Numerous Government Islet, present Keppel Islet, absent from Pebble
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	103	Pebble 1995
A4iii	Combined seabirds	>11,244	

traditional site for Southern Sea Lions. The flowering plants of Pebble Island have been well surveyed (133 species recorded up to 2001). The following eight endemics have been recorded: Clubmoss Cudweed *Chevreulia lycopodioides*, Antarctic Cudweed *Gamochaeta antarctica*, Vanilla Daisy *Leucheria suaveolens*, Hairy Daisy *Erigeron incertus*, Coastal Nassauvia *Nassauvia gaudichaudii*, Woolly Falkland Ragwort *Senecio littoralis*, Smooth Falkland Ragwort *Senecio vaginatus* and Lady's Slipper *Calceolaria fothergillii*. Other species of note include Yellow Lady's Slipper *Calceolaria biflora* and the 'local and scarce' Shoreweed *Littoralis australis*.

Conservation issues/threats

The eastern half of Pebble Island is of great conservation value due to the presence of large lakes and wetlands. The tourist industry on Pebble Island is currently well managed and poses little threat to the wildlife in terms of disturbance and risk of fire. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed.

A herd of goats on Pebble Island that caused serious damage to the vegetation for at least 10 years has been culled. Some controls are necessary to guard against overgrazing and further erosion of the more fragile parts of the habitat. Pebble Island has cats and rats, while Pebble Islet is known to have rats; the species is unknown but they are probably Brown/Norway Rats. All visitors should be informed about the dangers of accidentally introducing alien species to the islands.

All four offshore islets/islands require baseline ecological surveys, particularly looking for introduced predators and burrowing petrels.

Further reading

See full details at end of chapter.

Broughton and McAdam (2002a), Hayes (1996a), Smith *et al.* (1998), Woods (unpublished notes, 2001/02, including personal communications from B. Betts, T. and S. Blake, and J. McGhie).

Site accounts: islands

FK014: Saunders Island

Ref number	FK014
Admin region	Falkland Islands
Coordinates	51°20'S 60°11'W
Area	12,400 ha*
	* = rats present
Altitude	0–457 m
IBA categories (details below)	A1, A2, A4i, A4ii, A4iii
Status	Privately owned (A. R. and D. L. Pole-Evans, Saunders Island)

Site description

Saunders Island is the second largest offshore island in the Falklands and has been managed as a working sheep farm for many years. It has a complex shape, being about 13 miles (21 km) from east to west and almost as wide from north-east to south-west. There are three large upland areas, with the highest point (457 m) at the summit of Mount Richards. There are varied habitats, including wetland and permanent lakes, areas of dune formations and extensive steep cliff slopes, particularly towards the northern and western coasts. A narrow waist of open dune and sand flats (The Neck), north-west of Mount Richards, leads to Elephant Point with Mount Harston (433 m) and the far western coast known as the Holy City, where steep cliffs provide habitat for Black-browed Albatrosses and Rockhopper Penguins. The slopes of the upland areas are rich in native flora, which consists of feldmark formation and upland heath.

Birds

See the accompanying table for details of key species.

About 50 species have been recorded on Saunders Island, 40 of them breeding or probably breeding. The Cobb's Wren is absent and few songbirds are seen, due to the presence of introduced cats and rats. However, in some valleys with more vegetation and, particularly, good stands of *Fachine Chilotrichum diffusum*, songbird numbers are higher. The largest variety of waterbirds is found on and around the ponds on Elephant Point. A colony of Silvery Grebes favours this locality. There are significant populations of Imperial and Rock Shags that warrant further investigation. The Tussacbird has been recorded recently but is not thought to be breeding. There are one to two pairs of Macaroni Penguins among the Rockhoppers but insufficient to warrant site qualification. A small colony of Southern Giant Petrels has been recorded on a small

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	11,000 (approx)	2000/01 shows slight decrease on 1995 total of approx 12,500
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	6,680 (approx)	2000/01 figures, almost double those of 1995
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	6,900 (approx)	2000/01 total shows approx 1,000 increase on 1995
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	4,230	Occupied burrows in 1995
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>	25	Widespread but not numerous
A2, A4i	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	2,000–3,000 birds	2000/01 moulting flock at Elephant Point ponds, 1995 only c350 birds
A2, A4i	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	250+	1995 numerous around coasts
A4iii	Combined seabirds	>28,810	

island adjacent to Burnt Island, south of Saunders Island. Endemic sub-species present are the White-tufted/Rolland's Grebe, Upland Goose, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Thrush and the Long-tailed Meadowlark. Members of the Royal Air Force Ornithological Society carried out a complete coastal survey in 1995.

Other species of interest

Up to five Southern Elephant Seal Pups are born annually at Elephant Point, and this area is also a favourite haul-out for adults, especially during moulting. A few Southern Sea Lions and the occasional South American Fur Seal haul out on the island.

Saunders is one of the few offshore islands that have had an intensive sample survey of their flora. In the early 1990s, 176 species were found, including eight endemics. Coastal rocks, dry ridges and moist areas were found to support the most varied species groups.

Conservation issues/threats

Saunders Island has a thriving tourist industry, with self-catering facilities in the settlement and at The Neck.

Approximately 200–500 cruise ship passengers per year visit throughout the summer, mostly at The Neck, to see the Gentoo and King Penguins on the sands and the Imperial Shag, Rockhopper Penguin and Black-browed Albatross colonies on the slopes of Mount Richards. It is

very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire. There are more albatross and penguin colonies to the north and east of Rookery Mountain. Some areas of the coast are prone to erosion and the entire island has grazing stock with little Tussac. Saunders Island has great potential for managed recovery from overgrazing and its importance as a tourist site within the archipelago is increasing, both to land- and ship-based tourists.

Unfortunately, the island has populations of feral cats, House Mice, rats and some rabbits, and because of the size and varied habitat, it is unlikely to be cleared of introduced predators in the near future. Control programmes around sensitive sites could perhaps reduce the threat to key bird species from rats and cats. All visitors should be advised about the dangers of accidentally introducing alien species to the Falklands. Accidentally introduced Spear Thistles are becoming more prevalent across the island and volunteers helped to destroy some in the autumn of 2003. With careful management, it is hoped that this alien plant species can be eradicated from the island in the next few years.

Further reading

See full details at end of chapter.

Broughton and McAdam (2002a), Broughton *et al.* (2000), Clausen (2001), Hayes (1996b), Huin (2001), Towns and Broome (2003).

Site accounts: islands

FK015: Sea Lion Islands Group

Ref number	FK015
Admin region	Falkland Islands
Coordinates	52°26'S 59°04'W
Area	Sea Lion Island (905 ha), Rum Islet (7 ha), Brandy Island (25 ha), Whisky Island (13 ha), Sea Lion Easterly (85 ha)
Altitude	0–18 m
IBA categories (details below)	A1, A2, A4ii
Status	Sea Lion Island: National Nature Reserve and Ramsar site (designated 2002); owned by Falkland Islands Development Company Rum Islet, Brandy Island, Whisky Island, Sea Lion Easterly: privately owned (Antarctic Research Trust, Stanley)

Site description

Sea Lion Island is about 5 miles (8 km) from east to west and 1.2 miles (2 km) at its widest part. The island is a slightly inclined plateau with steep cliffs of about 30 m at the south-western point and long sandy bays to the east. Substantial parts of the coastline have dense Tussac, protected by fencing, while there is mature original Tussac at the eastern point. Red ash deposits visible below peat layers on the southern coast show that Tussac stands were burnt, probably in the 19th century. Habitat inland is largely open heath and grassland. The island was managed as a sheep farm from at least 1904 until about 1997 when it was cleared of all but a small flock of sheep. Western coasts show evidence of overgrazing and soil erosion. There are permanent ponds and boggy ground, which are attractive to a variety of waterbirds. The island was surveyed extensively in 1998 as part of the Ramsar designation process.

Rum Islet, lying 0.6 miles (1 km) south of Sea Lion Island, is only about 750 m long. It is very low lying with a beach of large irregular boulders and rock slabs with considerable dead kelp, ideal for Cobb's Wrens. The island is almost covered by Tussac up to 2 m tall, but it is easy to walk through because it has been opened up by Southern Sea Lions.

Brandy Island is 1.2 miles (2 km) east of Sea Lion Island and is covered with tall, dense Tussac. Apart from sheer cliffs up to 15 m on the south-eastern coastline and shelf rocks at the southern point, the beach consists of large unstable boulders and it can be difficult to land.

Whisky Island is only 400 m east of Brandy. It lies east to west with a boulder beach on the northern coast and extensive shelf rock below cliffs up to 15 m along the southern coast. Dense Tussac covers the ground above high water mark.

Sea Lion Easterly lies about 5.6 miles (9 km) east of Sea Lion Island and reaches no more than 17 m at its highest southern and north-eastern points. Much of the central part of the island is boggy, with two permanent ponds, one near the northern point and one towards the south-western point. It has a dense belt of tall, coastal Tussac and a beach of large boulders.

Birds

See the accompanying table for details of key species.

Between 1983 and 1993, 53 species were recorded on Sea Lion Island during fieldwork for the Breeding Birds Survey. Of these, 43 were breeding or probably breeding, including eight of the nine resident songbirds and five species of penguins. The Macaroni Penguin occasionally breeds among the Rockhoppers but not in sufficient numbers to warrant site qualification. On Rum Islet, only 17 species were recorded in November 1998, including 15 probably breeding. Brandy Island had 26 species, of which 17 were breeding or probably breeding. These included Common Diving Petrels found incubating and the remains of a Sooty Shearwater. Whisky Island had 19 species, with 13 probably breeding, while Sea Lion Easterly had 24 species, of which 21 were breeding or probably breeding. The Grey-backed Storm-petrel is present but breeding needs to be confirmed.

The predator-free status of all five islands in the Sea Lion group makes them important for small passerines and burrowing petrels. It is noticeable that Tussacbirds and Cobb's Wrens are very numerous, particularly on the beaches of the four smaller islands. These islands all support at least one pair of Striated Caracaras but the Ruddy-headed Goose was found only on Sea Lion Island, where wetlands provide suitable habitat.

An interesting feature of the bird community of the group is the current absence of the very conspicuous Long-tailed Meadowlark over the past 10 years, though it is present at Bull Point only 9 miles (15 km) away. However, it was recorded on Sea Lion Island in 1915 and again in 1987 and 1992.

Endemic sub-species present include the White-tufted/Rolland's Grebe, Black-crowned Night-heron, Upland Goose, Short-eared Owl, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren and the Falkland Thrush.

Other species of interest

Experimental plantings of Tussac made in 1985 produced useful results when compared with similar plantings at

Falkland Islands

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	484	Sea Lion Island 2000/01, almost the same as in 1995/96
A1	Southern Giant-petrel <i>Macronectes giganteus</i>	25 (approx)	Sea Lion Island, a few Brandy and Sea Lion Easterly, 1998
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Breeding on all islands, numerous, no counts
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	2,813	Sea Lion Island 2000/01, increase of 1,329 on 1995 figures
A1	Sooty Shearwater <i>Puffinus griseus</i>		Sea Lion Island breeding, probably also on Brandy, no counts
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>	10	1998, breeding on all five islands
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>	Many	Numerous on all five islands
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Sea Lion Island breeding, no counts, absent from rest of group
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding, no counts
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Breeding, numerous all five islands
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Breeding, widespread all islands

Port Howard and Keppel Island. Sea Lion Island is of particular interest for the large colony of breeding Southern Elephant Seals, which produce around 200 pups per year.

These are the subjects of a long-term study by Italian researchers from the University of Rome. Southern Sea Lions also breed on the coasts, with 40 pups in 2003. The other small islands are used as haul-out sites for Southern Sea Lions and many Southern Elephant Seals, although no breeding takes place there. Sea Lion Island is popular with tourists for its diverse bird and mammal life. Because of the steeply shelving coastline, it is also one of the best places in the Falklands to see Killer Whales hunting and feeding on penguins and seals just offshore.

In November 1998, 56 species of flowering plants were recorded on Sea Lion Island. The most interesting is the Fuegian Violet *Viola magellanica*. In the Falklands, this plant has been found only on Sea Lion Island, growing with Tussac on sand north of the lodge. It is not known how the plant reached this remote island. At least 12 species were introduced agricultural weeds or grasses and only three were endemics. In contrast, only two to six species of flowering plants could be found on each of the four smaller islands, although 12 species have been recorded on Sea

Lion Easterly in the past. All these species are natives, except for Groundsel *Senecio vulgaris* found on Rum, which is immediately south of Sea Lion Island.

Conservation issues/threats

Sea Lion Island is an important wildlife tourism destination within the Falklands archipelago, with a popular tourist lodge. High numbers of visitors arrive each year, both land based and on cruise ships. Estimates suggest that around 2,000 people visit the Island each year. The island is free of introduced predators and there should be very strict guidelines to prevent the accidental introduction of rats or mice, in particular in food stores from Stanley or Mount Pleasant being landed for the lodge. All visitors should be informed about the dangers of accidentally introducing alien species to the islands.

The lodge is well managed and has operated to a high standard of environmental protection. This policy should be kept under review, given increasing tourist numbers to the Falklands and the higher demands made on staff at the lodge. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to avoid disturbance to the breeding Southern Giant Petrels and to guard against the risk of fire.

Important Bird Areas in the United Kingdom Overseas Territories

As far as is known, none of the four smaller islands in this group has been grazed by livestock, and the Tussac shows no sign of having been burnt. All islands are free of introduced predators. They are therefore of considerable interest as examples of natural vegetation. Further survey work is needed to quantify the presence and numbers of bird species on all of these islands, especially Sea Lion Easterly with its two ponds sheltered by dense Tussac and

the central boggy area. A management plan is in preparation.

Further reading

See full details at end of chapter.

Bound (1993), Clausen (2001), McAdam and Walton (1990), Strange *et al.* (1988), Woods and Smith (1999).

Site accounts: islands

FK016: Speedwell Island Group

Ref number	FK016
Admin region	Falklands Islands
Coordinates	52°16'S 59°44'W
Area	Speedwell Island (5,150 ha), Halfway Island (6 ha), Annie Island (45 ha), George Island (2,400 ha), Barren Island (1,150 ha), Emily Island (9 ha), Tiny Island (6 ha) and Knob Islets (1 ha and <1 ha)
Altitude	0–45 m
IBA categories (details below)	A1, A2, A4i, A4ii, A4iii
Status	Speedwell Island, Halfway Island: privately owned (C. May, George Island) Annie Island: private nature reserve (owned by A. Gisby, Stanley) George Island, Barren Island, Emily Island, Tiny Island, Knob Islets: privately owned (C. May, George Island)

Site description

Speedwell Island is one of the larger offshore islands, extending about 11 miles (17.5 km) from north to south and 3 miles (5 km) at its widest central part. It is generally low lying with boulder beaches and sandy bays, some permanent ponds and substantial stands of introduced Marram. It has been used as a sheep farm for more than a century, and coastal areas of the south and centre camps have suffered badly from overgrazing, leading to serious soil erosion.

Annie Island lies 1 mile (1.5 km) to the east of Annie Island Point on the south camp of Speedwell Island. It is low lying with boulders on the northern coast and cliffs of less than 10 m on the southern coast above a wide tidal rock platform. The southern cliff top is bare sand and stones, with a wide band, several metres across, of black decomposed peat and scattered Tussac plants merging into low grasses inland. The severe erosion and destruction of Tussac suggest that the island was heavily grazed by sheep, while bones of cattle show that the island has also been used for fattening bullocks. Several patches of orange ash below fibrous Tussac roots indicate that the island was also burnt, perhaps two centuries ago by sealers. Grasses have recolonised in some places and thick vegetation now covers most of the island. Native grasses predominate inland with dwarf shrubs, and the northern coast has some introduced plants.

George and Barren Islands are situated off the southern tip of East Falkland between Sea Lion Island and Speedwell Island and are both generally flat, reaching no more than 18 m in height, with a rugged coastline. There are several ponds on George Island and there is severe soil erosion in the central section. Barren Island is sparsely vegetated and, in the early 20th century, large quantities of Marram were planted across the island. Coastal areas are badly eroded, particularly to the south and east, with remnants of an extensive Tussac fringe. The northern and western coasts are greener and have gently undulating valleys containing rushes and Diddle-dee. On the south-eastern coast there is

a spectacular patch of relict Tussac pedestals, still containing the bones of seals, which was probably burnt out by sealers many years ago.

George and Barren Islands form the most southerly farm in the Falklands. They are currently being promoted as a wildlife tourism destination, with cruise ships visiting through the summer months.

Birds

See the accompanying table for details of key species.

More than 40 species have been recorded on **Speedwell Island**. One of the largest rat-free islands in the Falklands, it has a thriving population of native songbirds including the endemic Cobb's Wren, and the ponds provide excellent waterfowl habitat. George and Barren Islands hold the most accessible large breeding colonies of Southern Giant Petrels in the Falklands, which are attractive to tourists. There are significant numbers of Rock and Imperial Shags on Speedwell and Annie Islands, and a colony of Sooty Shearwaters at the northern point of George Island. More than 10,000 pairs of seabirds breed on a regular basis, which means the IBA qualifies under the A4iii criterion.

A total of 27 species have been recorded on or near **Annie Island**. Of these, 24 were either breeding or probably breeding, including eight of the nine native songbirds, only the Falkland Pipit being absent. Canary-winged/Black-throated Finches, Tussacbirds and Magellanic Snipe seemed particularly numerous. With Cobb's Wrens breeding and the large number of small landbirds, it is almost certainly free of rats. The only colonial birds noted were Rock and Imperial Shags, which jointly occupied a colony on the south-eastern cliff.

Endemic sub-species present within the group are the White-tufted/Rolland's Grebe, Upland Goose, Black-crowned Night-heron, Short-eared Owl, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren, Falkland Thrush and the Longtailed Meadowlark.

Important Bird Areas in the United Kingdom Overseas Territories

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	Possibly 10,000	Numerous, numbers estimated
A1, A4ii	Southern Giant-petrel <i>Macronectes giganteus</i>	1,000	Speedwell, Barren and George
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Numerous on all islands, increasing on Speedwell
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>		Small numbers breed on Tussac islands off Speedwell
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	3,685	Speedwell and Barren
A1	Sooty Shearwater <i>Puffinus griseus</i>		Colony northern point of George Island, no counts
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Population unknown but numerous on all islands
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	600–700	Numerous on most coasts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	Several hundred	Large moulting flocks on Speedwell, recorded all islands, numbers estimated
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Numerous and widespread, no counts
A4i	Dolphin Gull <i>Leucophaeus scoresbii</i>	500–600	Speedwell
A4iii	Combined seabirds	>16,000	

Other species of interest

The breeding colony of Southern Sea Lions in Speedwell Pass produces about 90 pups annually and the animals haul out on most islands, including Annie. Southern Elephant Seals also visit the islands, but do not breed. The Tussac-covered Emily and Tiny Islands and the Knob Islets are all heavily used by Southern Sea Lions as haul-out sites.

Flowering plants on Speedwell Island have been sampled but not surveyed intensively. On Annie Island, at least 35 species of flowering plants were found in December 2001. Of these, 25 were native plants, including large areas of Bluegrass *Poa alopecurus*, Falkland Cudweed *Gamochaeta malvinensis* and the endemic Smooth Falkland Ragwort *Senecio vaginatus*. The other 10 were common farmland weeds, originally from Europe.

Conservation issues/threats

The rat-free status of all islands in this group makes them especially important for small songbirds. Further survey

work is needed to establish the presence and numbers of species on all islands in the group. All visitors should be informed about the dangers of accidentally introducing alien species to the islands. Tourism on George and Barren is well managed. The islands are usually visited by small expedition ships that have a high ratio of staff to passengers. Strict measures are taken to prevent disturbance to breeding birds – especially Southern Giant Petrels, which are particularly sensitive and liable to leave their eggs. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire. Efforts should be made to prevent further soil erosion and to replant Tussac where possible.

Further reading

See full details at end of chapter.

Thompson (2003), Woods (2002b).

Site accounts: islands

FK017: West Point Island Group

Ref number	FK017
Admin region	Falkland Islands
Coordinates	51°19'S 60°35'W
Area	West Point Island* (1,255 ha), Gibraltar Rock (20 ha), Low Island and two islets (76 ha), Dunbar Island (225 ha) and Button Islet (<1 ha), Carcass Island (1,894 ha), Beechams Island (1 ha), Carcass Reef (<1 ha) and Needles Rocks (five islets) (c.5 ha), The Twins (Northern, 8 ha), Southern, 15 ha) * = rats present
Altitude	0–369 m
IBA categories (details below)	A1, A2, A4ii, A4iii
Status	West Point Island, Gibraltar Rock, Low Island and two islets, Dunbar Island, Button Islet: privately owned (R. B. Napier, West Point Island) Low Island is a National Nature Reserve (designated 1964); Dunbar Island is a private nature reserve Carcass Island, Beechams Island, Carcass Reef, Needles Rocks: privately owned (R. P. McGill, Carcass Island) The Twins: National nature Reserve (designated 1964), owned by Falklands Conservation

Site description

West Point Island lies off the most north-westerly point of West Falkland. It is about 3.7 miles (6 km) long and no more than 2.7 miles (4 km) at its widest. The dramatic west-facing cliffs with gullies or sheer rock faces rising from the open South Atlantic reach 350 m or more in height and the scenery is spectacular. The southern third of the island has impressive rock faces below Cliff Mountain and, further south, Mount Misery (337 m) defines the narrow deep channel to the east, known as the Woolly Gut. The settlement is snug at the north-western edge of a large harbour on the eastern coast, sheltered from the prevailing westerlies. The vegetation is mostly short turf, upland heath or feldmark with several large Tussac paddocks, some with Cinnamon Grass *Hierochloa redolens*, replanted more than a century ago. The valley across the island from the settlement leads to the Devil's Nose, a sheer-sided promontory with accessible colonies of Black-browed Albatrosses and Rockhopper Penguins, which attract many tourists from cruise ships.

Gibraltar Rock lies approximately 1 mile (1.5 km) northwest of Cape Terrible, West Point Island, and when viewed from the sea appears in the shape of a slipper (hence its local name, The Slipper), with the cliffs on the western side forming the highest point at around 100 m. The island is covered in very dense but low tussac and there are no records of stocking or burning in the past.

Low Island is less than 0.6 miles (1 km) south-east of Carcass Island in the north-western entrance of Byron Sound, West Falkland. It reaches about 28 m in height towards the northern coast, which has steep cliffs and vertical rock strata. Large bays on the eastern and western coasts enclose a lower area of heath and open grassland,

with bogs and a permanent pool. The southern coast is rocky. Low Island has dense, mature Tussac on the northern part and a fringe on the southern section. There were still some retired dairy cows present on the island in 2000 and these are thought to have had very little impact on the Tussac. There are no plans to stock the island again after they have died.

Dunbar Island lies at the entrance to Byron Sound about 750 m south-east of Low Island. It is about 2 miles (3.5 km) from north-west to south-east and only about 0.6 miles (1 km) wide. The highest part, Dunbar Hill, is almost central at 89 m while it reaches 38 m and 53 m near the eastern and western points respectively. There is serious soil erosion on the northern slopes, probably due to heavy stocking with sheep until 1969, when livestock were removed and the vegetation was left to recover. Some mature Tussac remains around the coastline, especially at the north-western point and along the southern coastal slopes. Inland, the vegetation is heathland with rocky outcrops. A small shanty stands near the south-eastern point.

Carcass Island is 6 miles (10 km) from north-west to south-east and has a maximum width of 1.5 miles (2.5 km). There are large sand bays and a tidal rocky point to the north-west, while the north-eastern coast has cliffs and slopes. The highest point of the island is Mount Byng at 220 m. The island also has several substantial freshwater ponds, mainly towards North West Point, which are important waterfowl sites. Carcass Island has been a sheep farm for more than a century, but excellent management has left it with a varied habitat and a diverse flora, including mature Tussac in replanted coastal paddocks.

The Twins are two Tussac-covered islands, lying approximately 1.2 miles (2 km) north-west of Carcass Island.

Important Bird Areas in the United Kingdom Overseas Territories

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Black-browed Albatross <i>Thalassarche melanophrys</i>	14,561	West Point, 2000/01, numbers slightly lower than in 1995
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	4,800	West Point, 2000/01
A1	Gentoo Penguin <i>Pygoscelis papua</i>	610	On Carcass only, increase of 430 on 1995 figures
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Widespread, breeding all islands, no counts
A1, A2	Cobb's Wren <i>Troglodytes cobbi</i>		Numerous on all islands except West Point, no counts
A1, A2	Striated Caracara <i>Phalacrocorax australis</i>	36	All islands
A2	Tussacbird/Blackish Cinclodes <i>Cinclodes antarcticus</i>		Numerous, breeding all islands except West Point where scarce, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Numerous on Carcass, also breeding Dunbar, Low and West Point
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding all islands except northern island of Twins, few on West Point
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Breeding around coasts of all islands, no counts
A4iii	Combined seabirds	>18,500	

The northern Twin is 600 m long and low lying, with dense Tussac cover and apparently supports a good population of Southern Sea Lions, while the southern Twin is 850 m from south-east to north-west and has a more varied habitat. Apart from a bay and sand dunes to the north-east, the coast is mostly boulder beach.

Birds

See the accompanying table for details of key species.

A total of 50 species was recorded on or near West Point Island during the Breeding Birds Survey 1983–93, of which 30 were breeding or probably breeding. Seven of the native songbirds were present but their numbers were low compared with Carcass Island, where Tussacbirds and Cobb's Wrens were widespread and numerous. Gibraltar Rock has only four or five songbird species but supports a large breeding population of Thin-billed Prions, and it is probable that the Grey-backed Storm-petrel is breeding there and on Carcass, Low, Dunbar and The Twins. The Common Diving-petrel may breed on The Twins and Dunbar. The Rock Shag is breeding on most islands but the only breeding records for the Imperial Shag are for Carcass and Dunbar. West Point Island is a key site for breeding Black-browed Albatrosses, while the entire chain supports a small but significant number of breeding Striated Caracaras (>7% of the estimated Falkland population of about 500 breeding pairs). The Southern Giant-petrel is possibly breeding

on the southern Twin as 40 adults were present in 1997.

Endemic sub-species present are the Common Diving-petrel, Black-crowned Night-heron, Upland Goose, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Grass Wren, Short-eared Owl, Falkland Thrush and the Long-tailed Meadowlark.

Other species of interest

There are several breeding populations of Southern Sea Lions in the group. At the 2003 census, 59 pups were found on The Twins, 14 on Gibraltar Rock, 40 on Low Island and 51 on Dunbar Island. The plants on West Point have been fairly well surveyed and 123 species were identified between 1995 and 1998. Of these, only four were endemic and 52 (42%) were introduced, including several grasses sown to improve pastures and others that have naturalised from garden plantings. On Carcass Island, about 107 species have been identified, including the uncommon Yellow Orchid *Gavilea littoralis*, the rare endemic Hairy Daisy *Erigeron incertus* and Whitlowgrass *Draba funiculosa*, as well as a large number of introduced species. In contrast, Low Island had 20 species, including one endemic and seven introduced, Dunbar had 23 species (one endemic and three introduced), the southern Twin had only seven species (two introduced) and Tussac was the only plant found on the northern Twin.

Conservation issues/threats

West Point Island has been managed as a working sheep farm since about 1879. Historically, it was the first place in the Falklands where replanting of Tussac in fenced paddocks was undertaken successfully from late in the 19th century, to provide managed good-quality grazing and shelter for livestock. Unfortunately, West Point still has populations of Norway Rats and House Mice, which are controlled by a programme of annual poisoning. Feral cats were numerous for many years but they were exterminated in about 1984. None of the other islands in the group has been colonised by mammalian predators. All visitors should be informed about the dangers of accidentally introducing alien species to the Falklands.

The first methodical fieldwork on Black-browed Albatrosses in the Falklands was carried out on West Point Island between 1960 and 1968, supported by the US Antarctic Research Program. Recoveries from about 11,000 albatrosses ringed as nestlings demonstrated that juveniles dispersed northwards quickly towards the eastern coast of South America. Some recoveries were from Argentine and Brazilian seafarers, while others were found dead or dying on the coasts of Argentina, Uruguay and Brazil north to 23°S. A few reached the western coast of Africa in as little as 2½ months, while one bird reached 16°S on the coast of Angola about 3½ months after leaving West Point. From all recoveries, it seems that birds ringed in the Falklands normally remain within the South Atlantic as they mature

and return to their native colonies when about five years old.

West Point Island and Carcass Island are particularly noteworthy as two long-established sheep farms where Striated Caracaras are not persecuted but actively encouraged as having a place in the Falklands avifauna and being of great interest to visiting bird enthusiasts and tourists. With accessible colonies of Black-browed Albatrosses and Rockhopper Penguins, West Point was the first island to receive cruise ship tourists in 1968. Carcass Island is another popular destination, with hundreds of passengers landing either at Leopard Beach to the south-east or at the settlement. It is also a thriving self-catering holiday location, with land-based visitors being present on the island through the summer months. The tourism pressures on Carcass and West Point are well managed under current ownership and cause little disturbance at the sites used. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire.

Falklands Conservation is aware that further survey work is needed to improve knowledge of the species present and their populations, particularly on the smaller islands in the group.

Further reading

See full details at end of chapter.

Clausen (2001), Huin (2001), Thompson (2003), Tickell (1967), Woods and Smith (1999).

Site accounts: mainland East and West Falkland

FK018: Bull Point, East Falkland

Ref number	FK018
Admin region	Falkland Islands
Coordinates	52°20'S 59°22'W
Area	1,500 ha (approx)*
	* = rats present
Altitude	0–18 m
IBA categories (details below)	A1, A2, A4ii
Status	Nature reserve (Falkland Land Holdings; managers I. and E. Jaffray, North Arm)

Site description

Bull Point, at the southernmost tip of East Falkland, is low lying. The habitat is varied, comprising maritime heath in the higher areas, with a variety of rocky and sandy beaches on the coast. There are extensive dune systems covering much of the southern point. Wide areas of coastal greens interspersed with permanent and seasonal pools provide habitat for wading birds and waterfowl. There is scattered Tussac at Porpoise Point and also on small islands immediately offshore.

The site is managed as part of a working farm and it has been grazed for many years. The tip of the point has recently been completely cleared of stock, and fencing improved to prevent accidental access. This has undoubtedly led to an improvement in the quality and diversity of the flora.

Birds

See the accompanying table for details of key species.

The pool areas are particular favourites with birdwatchers, who have recorded many rare and visiting species, such as the Coscoroba Swan, Ashy-headed Goose, Cinnamon Teal and breeding Black-necked Swan. Chiloe Wigeons and all resident duck species are frequently seen. At the

southernmost tip, where a ring of dunes surrounds the central green areas, the density of penguins and geese during the summer months is extremely high. This is also a good place to see juvenile Striated Caracaras. The Tussacbird is present but probably not breeding due to the presence of rats and cats. Bull Point has extensive beach and dune areas where White-rumped Sandpipers congregate in large numbers with local Two-banded Plovers, Rufous-chested Dotterels and the two species of oystercatcher. Magellanic Snipe and Brown-hooded Gulls probably breed. Endemic sub-species recorded here include the White-tufted/Rolland's Grebe, Upland Goose, Short-eared Owl, Falkland Grass Wren, Dark-faced Ground-tyrant, Falkland Pipit, Falkland Thrush and the Long-tailed Meadowlark. This is also a site of special interest for watching seabirds passing by the point.

Other species of interest

There is a small breeding colony of Southern Sea Lions on the far eastern point, which produces fewer than five pups each year. The area is also a major haul-out site for Southern Sea Lions and Southern Elephant Seals. The plants have been fairly well surveyed: 101 species were recorded, including Dusen's Moonwort *Botrychium dusenii*, a vulnerable and legally protected native fern that is only

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	4,784	2000/01, increase of 1,990 from 1995 figures
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Widespread and numerous, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	65	Widespread and numerous around greens, no counts
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding, numbers unknown
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Widespread and numerous around coasts, no counts

known to occur in two other localities in the Falklands.

Another interesting plant is Southern Dock *Rumex magellanicus*. In addition there are four endemic plants here: Clubmoss Cudweed *Chevreulia lycopodioides*, Lady's Slipper *Calceolaria fothergillii*, Coastal Nassauvia *Nassauvia gaudichaudii*, and Vanilla Daisy *Leucheria suaveolens*.

Conservation issues/threats

There are biannual visits by Falklands Conservation to conduct seabird monitoring. The two-hour overland journey from the nearest settlement at North Arm protects the site from large numbers of visitors. However, the development of roads through East Falkland has made the area more accessible and, with an increasing move towards restoring 'outside' houses as holiday homes, there is a risk that there may be increasing numbers of tourists to Bull Point. Particularly in the lower point area, it is extremely easy to cause disturbance, simply due to the volume of birds passing from one side of the point to the other and the open nature of the terrain. It is very important that the

Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire. The traditional sheep farming practice of burning rank Whitegrass is still used in the southern half of East Falkland. As strict guidelines are in place to control this and the season is limited by legislation, accidental burning at Bull Point is unlikely.

As with all sites on mainland East Falkland, feral cats and rats are present and undoubtedly affect the bird populations. It may be possible to put some controls in place to reduce these predators but this is not a long-term solution. All visitors should be informed about the dangers of accidentally introducing alien species to the Falklands.

Further reading

See full details at end of chapter.

Bourne (1988), Broughton and McAdam (2002a), Clausen (2001), Poncet (1996), Thompson (2003).

Site accounts: mainland East and West Falkland

FK019: Hope Harbour, West Falkland

Ref number	FK019
Admin region	Falkland Islands
Coordinates	51°22'S 60°35'W
Area	Bramble Point Camp* and Grave Cove Camp*: 1,763 ha (approx) * = rats present
Altitude	0–350 m
IBA categories (details below)	A1, A2, A4ii
Status	Privately owned (P. Barnes, Hope Harbour Farm)

Site description

Grave Cove Camp, a promontory in the north-western section of Hope Harbour Farm, has striking scenery. Severe south-west-facing cliffs peak at 130 m in the south and the land slopes northwards towards the coast of Hope Harbour. It is divided from Bramble Point Camp by a wide valley, only about 20 m above sea level at its highest point, with large areas of eroded ground to the south of Grave Cove. Much of Bramble Point Camp is mountainous with stone runs and is used for sheep farming. A ridge to the north of Hope Harbour extends westwards more than 2.5 miles (4 km) towards the low-lying Hope Point, with extensive kelp beds on its northern coast.

Birds

See the accompanying table for details of key species.

Hope Harbour has been chosen as an IBA because it is the only mainland site with colonies of the globally endangered Black-browed Albatross and it has two large colonies of Gentoo Penguins. Access to the albatross

colonies on very steep cliffs is extremely difficult. Endemic sub-species recorded at the site include the Upland Goose and the Long-tailed Meadowlark. Apart from penguin and albatross counts, there is little information available. Knowledge of other species is very limited and requires further fieldwork.

Conservation issues

The whole of this area has been heavily overgrazed in past years and little, if any, of the coastal Tussac remains. There is much 'black ground', the result of serious soil erosion over many years. The presence of feral cats and rats will be having a negative impact on the resident birds, as with all mainland areas, but this has not been investigated.

This site is more than 8.5 miles (14 km) from the settlement and overland travel is difficult. There are few visitors and this is not a tourist destination, although the cliffs are visible from passing cruise ships and West Point Island. However, it is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed,

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Black-browed Albatross <i>Thalassarche melanophrys</i>	226	2000/01 Penguin Point south 108 and north 26, Grave Cove Camp 92
A1, A4ii	Gentoo Penguin <i>Pygoscelis papua</i>	5,750	2000/01 Hope Point 1,110, 70% increase, Grave Cove 4,640, 224% increase from 1995
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	242	2000/01 Penguin Point, increase of 160% over 1995 figures
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Breeding on lower ground, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Breeding, numbers unknown
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding, numbers unknown
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Widespread on lower shores, no counts

particularly to guard against the risk of fire. The entire area has been little studied and would warrant a survey in the near future. While the albatross breeding site is protected from disturbance due to its extreme inaccessibility, potential threats include the possibility of a landslide due to cliff erosion.

Further reading

See full details at end of chapter.

Clausen (2001), Huin (2001).

Site accounts: mainland East and West Falkland

FK020: Seal Bay, East Falkland

Ref number	FK020
Admin region	Falkland Islands
Coordinates	51°23'S 58°03'W
Area	Seal Bay*, Campa Menta Camp* and MacBride Head Camp:* 3,100 ha (approx) * = rats present
Altitude	0–229 m
IBA categories (details below)	A1, A2, A4iii
Status	Privately owned (P. Gilding, Port Louis Farm); no access

Site description

The coastline is exposed with rugged north-facing cliffs and has very little shelter other than a few indented bays. Inland, a deep sheltered valley, which once contained an estuary, now holds the land-locked Swan Pond, which is long and shallow with wet grassland where geese congregate. A sandbar, only a few feet high, separates the pond from the beach. Vegetation is maritime heath and typical boggy Whitegrass plains on peat. There is a Tussac plantation at Rabbit Rincon, which until recently was protected from grazing and provided a habitat for breeding Rockhopper Penguins and a haul-out site for Southern Sea Lions. Offshore, tall rocky stacks dot the coastline. These are often crowned with Tussac and, due to currents and the exposure of these north cliffs, are free of predators and constitute relicts of previous habitats of the mainland.

Birds

See the accompanying table for details of key species.

The area is notable for the small population of Sooty

Shearwaters located close to Wineglass Hill and at Rabbit Rincon. It is almost certain that a further substantial colony exists on the offshore Tussac-covered stack nearby, where other burrowing petrels might also breed. Imperial and Rock Shags are present but counts are required. Three to four pairs of Macaroni Penguins, including hybrids with Rockhopper Penguins do not qualify the site. The first pair of Barn Owls proved to breed in the Falklands was found nesting in the old gorse-covered corral close to Seal Bay shepherd's house in 1987. Endemic sub-species present include the White-tufted/Rolland's Grebe on Swan Pond, the Upland Goose, Falkland Grass Wren, Falkland Pipit and the Falkland Thrush.

Other species of interest

Southern Sea Lions haul out all along the coast and breed at MacBride Head, a favourite site, where 64 pups were counted in 2003. In 1996, 46 species of flowering plants were found on the coast and inland, including 33 native (three endemics) and 13 introduced species. There was a

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Gentoo Penguin <i>Pygoscelis papua</i>	1,519	2001 increase of 644 from 1995
A1	Rockhopper Penguin <i>Eudyptes chrysocome</i>	15,281	2001 increased from about 13,000 in 1995
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Widespread and numerous, no counts
A1	Sooty Shearwater <i>Puffinus griseus</i>		Presence confirmed, numbers unknown
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Widespread and numerous around greens, no counts
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding, numbers unknown
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Widespread and numerous around coast, no counts
A4iii	Combined seabirds	>16,800	

notable population of tall Pale Maiden *Olsynium filifolium* on the hilltop of Rabbit Rincon in a paddock that had been fenced and not grazed for several years.

Conservation issues/threats

The area is under slight grazing pressure, although sensitive sites were protected where possible by fencing. For several years, the site was open to tourists travelling overland who were always accompanied by experienced guides. In 2003, the owners restricted access and at the time of writing (2004) no visitors are allowed. The status of many species needs investigation. This site was checked annually as part of the FISMP, but even the monitoring of key species by Falklands Conservation is now prohibited. Feral cats are often seen near the Rockhopper Penguin colonies more than 10 km from the nearest settlement, and the remains of penguins have frequently been seen around

unoccupied Magellanic Penguin burrows. The chewed remains of Sooty Shearwaters have also been found by their burrows on Wineglass Hill, which would again point to predation by cats. Control measures are needed to protect these penguins, and the only known shearwater colonies on East Falkland, from feral cats. All future visitors should be informed about the dangers of accidentally introducing alien species to the Falklands. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire.

Further reading

See full details at end of chapter.

Broughton and McAdam (2002a), Clausen (2001), Thompson (2003), Towns and Broome (2003).

Site accounts: mainland East and West Falkland

FK021: Volunteer Point, East Falkland

Ref number	FK021
Admin region	Falkland Islands
Coordinates	51°28'S 57°51'W
Area	Volunteer Point*, Inside Volunteer*, Cow Bay:* 4,060 ha (approx) * = rats present
Altitude	0–38 m
IBA categories (details below)	A1, A2
Status	Privately owned (Berkeley Sound Sheep Farming Company, Johnson's Harbour); National Nature Reserve (designated 1968)

Site description

Volunteer Point is an impressive lowland peninsula on the north-east of mainland East Falkland. Extending eastward from Volunteer Green, the northern coast includes a range of low cliffs, sandy and boulder beaches with extensive kelp beds offshore. The southern side of the peninsula borders Volunteer Lagoon and includes the extensive sand flats and dunes of Lagoon Bar. To the north and west of the 1.2 mile (2 km) long Volunteer Beach are low hills and green valleys with shallow seasonal ponds and ditches. North of the rocky headlands is Cow Bay Beach, also about 1.2 miles (2 km) and with a similar aspect to Volunteer Beach.

Birds

See the accompanying table for details of key species.

Volunteer Green supports the largest population of King Penguins in the Falklands and this is one of the most important tourist destinations within the archipelago. The entire area is dominated by colonies of Gentoo and King Penguins, with bare turf patches marking recently deserted breeding areas and older colony sites marked by vivid green patches of fertilised grasses. Beyond the penguin colonies on the green, Volunteer Lagoon supports a variety of waterfowl. Endemic sub-species recorded in the area are the Upland Goose, Dark-faced Ground-tyrant, Falkland

Pipit, Falkland Thrush and the Long-tailed Meadowlark.

Several vagrants, including the Hudsonian Godwit, Stilt Sandpiper, Whimbrel, Fork-tailed Flycatcher and Black-faced Ibis have been recorded in recent years.

Other species of interest

Southern Sea Lions can often be seen hauled out or hunting penguins just offshore in shallow water along the sand beach. One pup was born during the summer of 2002/03 in the north-west of the area. A breeding colony of 150 South American Fur Seals was counted on Volunteer Rocks in February 2004.

Conservation issues/threats

Volunteer Green is visited regularly by the seabird monitoring team from Falklands Conservation. Since November 2001, wardens have been present throughout the summer. The most pressing conservation issue is the current high level of tourism. Since the inception of this wardening programme, breeding success of birds at the site has improved considerably. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against disturbance to breeding King Penguins and the risk of fire.

The fishing industry for *Loligo gahi* squid operates just 3

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Gentoo Penguin <i>Pygoscelis papua</i>	1,368	2001: Volunteer Green 766, Lagoon Bar 325, Cow Bay 277
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>	>2,000	2003: extensive coastal colony
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>	>100	Scattered throughout site
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Breeding in heathland and coastal vegetation, no counts
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>	About 75	Volunteer Point 60 along coast, Cow Bay 10

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miles offshore. Beaches are frequently littered with marine debris, presumably derived mainly from this source, and problems of entanglement have been reported.

There is a high population of feral cats in the area. Eradication would undoubtedly benefit breeding birds. Rats, mice and European Rabbits are also present and are affecting the populations of birds. All visitors should be

informed about the dangers of accidentally introducing alien species to the Falkland Islands.

Further reading

See full details at end of chapter.

Clausen (2001), Jeffs and Lock (2004), Otley and Ingham (2003).

Site accounts: mainland East and West Falkland

FK022: Bertha's Beach, East Falkland

Ref number	FK022
Admin region	Falkland Islands
Coordinates	51°52'S 58°19'W
Area	Bertha's Beach,* Fox Point,* Kelp Point* and Pleasant Point:* 3,300 ha (approx) * = rats present
Altitude	0–30 m
IBA categories (details below)	A1, A2, A4i, A4iii
Status	National Nature Reserve, Ramsar site (designated) 2002 (owner Falkland Land Holdings; manager A. Eagle, Fitzroy Farm)

Site description

Fox Point camp, formerly an island, is largely maritime heathland surrounded by boulder beaches with some sandy coves. Fox Point to **Bertha's Beach** is a typical example of Falkland coastal wetland habitat with a long, white sand beach bordered by extensive coastal dunes, many large freshwater ponds and brackish lagoons. To the landward side of Bertha's Beach, Whitegrass plains are dominant. This area was one of the first two Ramsar sites to be declared in the Falklands and is located only a few kilometres from Mount Pleasant Airport.

North-east of Bertha's Beach, from Elephant Point to Pleasant Point is a large area of undulating coastal lowland with promontories and islands almost enclosing Kelp Lagoon. Elephant and Burnt Islands and the Kelp Islands are Crown land. There are very extensive kelp beds up to 2.5 miles (4 km) offshore from Elephant Point to Boat Point.

Birds

See the accompanying table for details of key species.

The coastal area and lagoon margins are particularly important for large congregations of migratory species. These include non-breeding summer visitors from the Canadian Arctic: White-rumped Sandpipers, Sanderlings and Hudsonian Godwits occur regularly in higher numbers than in other parts of the Falklands; Whimbrels, Ruddy Turnstones, Least Seedsnipe, Baird's Sandpipers and several other rare visitors have been recorded, often associated with the resident Two-banded Plover, Rufous-chested (Plover) Dotterel and both species of oystercatcher.

The ponds, behind Bertha's Beach and the dunes, support a variety of waterbirds: Black-necked Swans, Chiloe Wigeons, Patagonian Crested Ducks, Flying Steamer Ducks, Silver Teals, Yellow-billed Pintails, Speckled Teals

Key species

Criteria	Key species	Number of breeding pairs (if known)	Notes
A1	Gentoo Penguin <i>Pygoscelis papua</i>	496	2000/01, numbers fluctuate
A1	Magellanic Penguin <i>Spheniscus magellanicus</i>		Breeding, widespread and numerous, no counts
A2	Ruddy-headed Goose <i>Chloephaga rubidiceps</i>		Breeding, no counts
A2	Canary-winged/Black-throated Finch <i>Melanodera melanodera</i>		Widespread, breeding, no counts
A2	Falkland Steamer Duck <i>Tachyeres brachypterus</i>		Breeding, numerous along coasts, no counts
A4i	White-rumped Sandpiper <i>Calidris fuscicollis</i>	Non-breeding, regular visitors	Maximum count, March 2003, approx 15,000 birds, Whale Point/Kelp Lagoon
A4iii	Combined waterbirds	>20,000 individuals	

(numerous) and both resident species of grebe breed. Coscoroba Swans, Red Shovelers, Snowy Egrets and Chilean Flamingos have all occurred irregularly.

Other species of interest

The northern Kelp Islands hold a breeding population of Southern Sea Lions, with 165 pups in 2002, which was the largest number found at any colony in the Falklands during that year. The site is not known to hold any breeding populations of Southern Elephant Seals. A small colony of Southern Sea Lions breeds on Direction Island just off Bertha's Beach, and Peale's Dolphins *Lagenorhynchus australis* can often be seen from the shore, playing in the surf. No comprehensive botanical studies have taken place in this IBA except in the Ramsar site, where 77 species of flowering plants were recorded in 1997 and the rare Dusen's Moonwort *Botrychium dusenii* was found on the greens.

Conservation issues/threats

The site has high recreational and educational value because of its proximity to the military base at Mount Pleasant Airport. Excessive human activity could be detrimental to the biodiversity of this important site. Until the Ramsar designation in 2002, there were live firing

activities from the beach out to open water. These have now ceased and are unlikely to occur again. Motor vehicles are not allowed on Bertha's Beach as they would cause disturbance during the breeding season. This site would benefit from signs to guide people away from sensitive areas. During the summer of 2001, an extensive grass fire from a neighbouring farm burnt very close to parts of the site, destroying many acres of vegetation. It is very important that the Falkland Islands Countryside Code (see Appendix 1) is followed, particularly to guard against the risk of fire.

Feral cats, rats, mice and Brown Hares *Lepus capensis* are all present in this region of East Falkland. It is not known if the islands in the site are similarly infested. All visitors should be informed about the dangers of introducing more alien species to the Falklands.

Further reading

See full details at end of chapter.

Bourne (1988), Clausen (2001), Smith *et al.* (1998), Thompson (2003), Wetlands International (2002), Henry, A. (wader records, March 2003).

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General note

Appendix at end of Directory: scientific names of bird species.

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Appendix 1

Falkland Islands Countryside Code

- 1 Always ask permission before entering private land.
 - 2 Keep to paths wherever possible. Leave gates open or shut as you find them.
 - 3 Be aware of the high fire risk throughout the islands. Be extremely careful if smoking. Take cigarette butts away with you.
 - 4 *Do not drop litter. Take your rubbish home with you.
 - 5 Do not disfigure rocks or buildings.
 - 6 *Do not touch, handle, injure or kill any wild animal or bird.
 - 7 Avoid feeding wild animals or birds.
 - 8 Always give animals and birds the right of way. Remember not to block the routes of seabirds and seals coming ashore to their colonies.
 - 9 Try to prevent any undue disturbance to wild animals and birds. Stay on the outside of bird and seal colonies. Remain at least 6 m (20 ft) away. When taking photographs or filming stay low to the ground. Move slowly and quietly. Do not startle or chase wildlife from resting or breeding areas.
 - 10 *Some plants are protected and should not be picked. Wildflowers are there for all to enjoy.
 - 11 *Whalebones, skulls, eggs or other such items may not be exported from the Falkland Islands. They should be left where they are found.
- * Such actions (with a few special exceptions) may constitute an offence in the Falkland Islands and could result in fines up to £3,000.