British Indian Ocean Territory

Peter Carr

Red Booby on nest

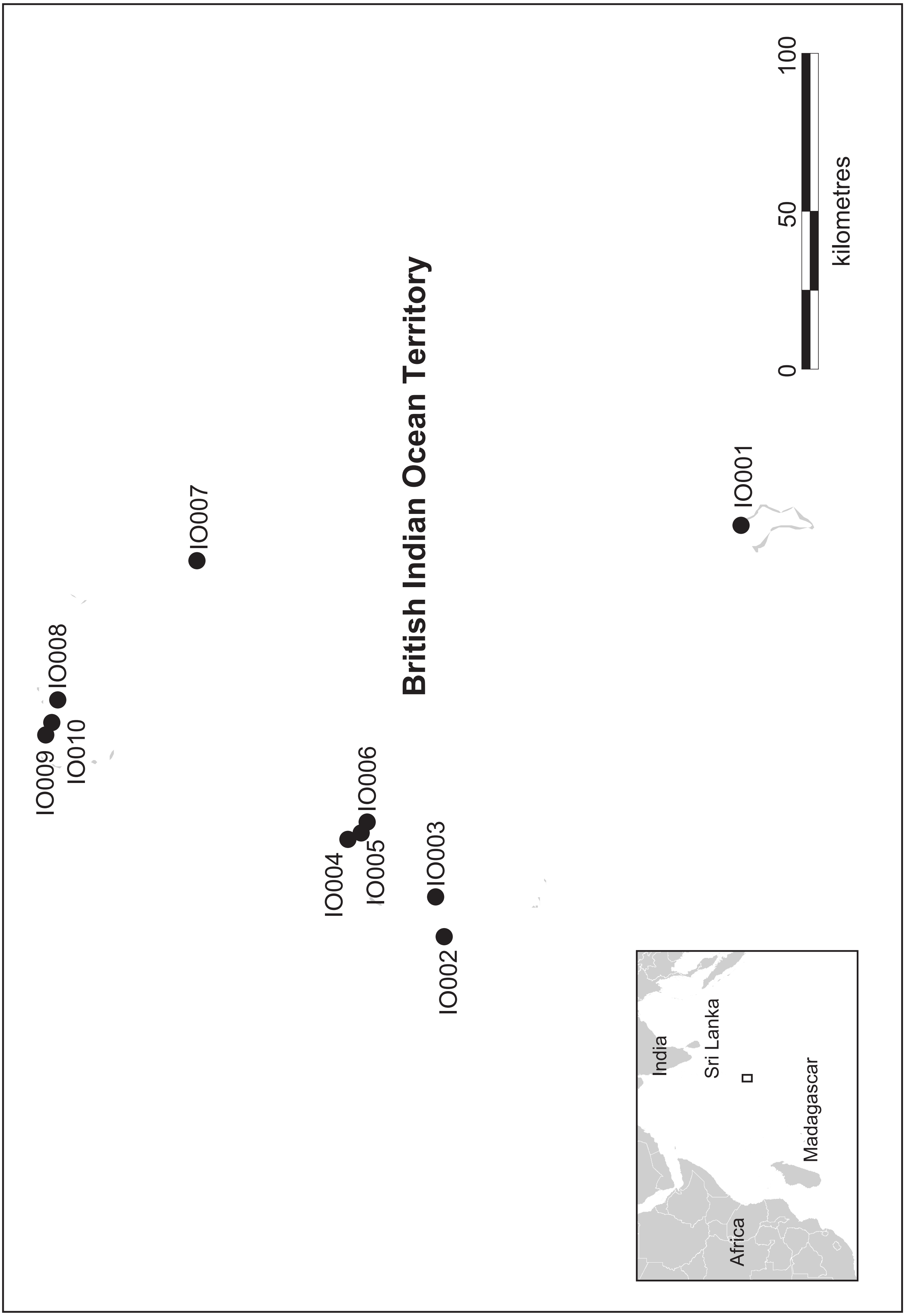
General introduction

The British Indian Ocean Territory (BIOT), also known as the Chagos Archipelago, lies at the southern end of the Laccadives–Maldives–Chagos ridge, in the geographical centre of the tropical Indian Ocean. Its central feature is the Great Chagos Bank, the world's largest atoll, found between 5˚20' to 7˚35'S and 71˚20' to 72˚40'E. Although most of the Great Chagos Bank is submerged, the above-water land mass of the archipelago, totalling approximately 67 individual islands, can be grouped in to five islanded atolls found around the Chagos Bank: Peros Banhos and Salomon Atolls to the north, the Chagos Bank and Egmont Atolls to the west, and Diego Garcia Atoll, the largest land mass, to the south (Bourne 1971, Sheppard 1981, Sheppard *et al.* 1999).

The whole Chagos complex covers about 155 by 249 miles (250 by 400 km) and is a limestone cap 1 or 2 km thick, resting on volcanic rock. Chagos is the oldest part of the Laccadives–Maldives–Chagos ridge, created by hot-spot activity since the last Cretaceous. All islands are those of typical atolls, located on atoll rims with elevations generally of no more than 2–3 m; two areas in Chagos have reefs, which are tectonically uplifted to over 6 m (Sheppard *et al.* 1999).

From October to April winds are light or moderate, and blow generally from the north-west. For the rest of the year the south-east trades blow strongly. The area is rarely subjected to cyclonic-strength winds, although severe storms are sometimes experienced, especially in Diego Garcia. Rainfall has a strong seasonal pattern, with most falling between October and April. Total annual rainfall averages about 2,400 mm in the southern atoll of Diego Garcia. It reaches 4,000 mm in the northern atolls, making them the wettest in the Indian Ocean. The average temperature is 27˚C.

The Chagos Archipelago is only a few thousand years old, so its islands are relatively young. Their remote location, 1,118 miles (1,800 km) east of the Seychelles and 1,864 miles (3,000 km) west of Indonesia, means that biological diversity is low, as would be expected. The islands' vegetation is largely the product of introductions, natural forces and dispersion. Nearly 280 species of vascular plants, including ferns, have been recorded, none of which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is endemic, and only 45 are native species. There is a strong correlation between the size of the individual islands and species diversity for both the higher and lower plants (Topp and Sheppard 1999).

Dominant among the higher flora is the Coconut Palm *Cocos nucifera,* introduced for trade. The plantations can stretch from shoreline to shoreline. With the demise of the industry, the broad-leaved native trees are spreading at the expense of the Coconut Palms, creating vegetation reminiscent of pre-human colonisation. At the forefront of those spreading are *Barringtonia asiatica, Guettarda speciosa* and *Pisonia grandis.* Another important component of the vegetation is *Scaveola sericea*; this inhabitant of landward sandy and rocky shorelines stabilises the soil. Another important shoreline shrub is *Argusia argenta,* the branching of which creates ideal nesting sites for seabirds (Topp and Sheppard 1999).

The first recorded sighting of the archipelago by a European is thought to have been in 1512 by a Portuguese sailor named Pedro Mascarenhas. It was not until the 19th century that the islands became populated, primarily by African slaves, and the growth of the copra and coconut industries resulted in much deforestation. Coaling, whaling and timber extraction added to the destruction of the native flora and fauna, and this continued relatively unabated until the mid-20th century. By the mid-1930s, copra and coconut harvesting had reduced and were based out of Peros Banhos, Salomon and Diego Garcia. In 1965 the archipelago formed with other Indian Ocean islands a UK Overseas Territory, known as the British Indian Ocean Territory (BIOT), administered from the Foreign and Commonwealth Office, Whitehall, London. In 1974, all residents of the atolls were resettled, mostly in Mauritius, as a result of the closure of copra plantations on which livelihoods were dependent. The military base on Diego Garcia was expanded (Sheppard 1981). In November 2000, the High Court ruled that the legislation, which required Chagossians to obtain a permit if they wished to return, was unlawful. However, legislation made in 2004 has now reimposed the requirement for a permit. There are no current plans for the resettlement of a civil population in BIOT.

In 2004, Diego Garcia remained populated by the military and their support staff; only adventurous yacht crews and scientific survey teams occasionally visit the remainder of the Chagos. The British Royal Navy, including Royal Marines, acting as Customs officials and fishery protection staff, police the outer islands. The geographic isolation and lack of disturbance is allowing much of the archipelago to revert to its natural vegetation.

The Chagos Archipelago has not, however, escaped having its seabird colonies devastated by the interference of man and his commensals, primarily rats and cats. Massive reductions of the seabird colonies have taken place, primarily in the last century. Most of the indigenous island vegetation has been replaced with coconut plantations; human populations increased, particularly in the 1800s, and rats and cats were established as alien predators (Bourne 1971).

Feare (1984) notes the rate of change of habitat by man on most islands in the Indian Ocean has reached a nadir, while some islands are being allowed, or even encouraged, to revert to their former states. This is true for all the islands in the Chagos Archipelago except certain areas of Diego Garcia. Therefore the breeding colonies that remain, after at least a century of adaptation, are likely to have reached some form of (introduced) predator/prey equilibrium. The seabird colonies are possibly at the stage where, with the correct management and protection, they will remain at their present levels or even expand.

Ornithological importance

Landbirds

The Chagos Archipelago is not a species-rich area for landbirds. Bourne (1971) speculated that prior to man's arrival to the Chagos, when the islands were still forested, there may have been a rich landbird community comparable to that of Christmas Island further east. Since G. C. Bourne's visit in 1886 (Bourne 1886), the Chagos, and in particular Diego Garcia, has received enough ornithological attention for it to be said with certainty that this is now not true.

There are no indigenous passerines resident on the Chagos Archipelago. Of the non-passerines (excluding seabirds), with the exception of the Striated Heron, White-breasted Waterhen and, since at least 1995, a single Glossy Ibis, all the resident non-passerines are thought to be introductions.

Of interest in the assessing of Important Bird Areas (IBAs) is the systematic status of the Striated Heron. This has been reviewed by Ripley (1969) who concluded for the population on Diego Garcia that 'it is perhaps worthwhile to maintain the (sub-specific) name for an isolated island population' and thus warrants further research on the specific status of the Striated Heron.

Similarly the systematic status of the Madagascar Turtle Dove, occurring on Diego Garcia, is of uncertain origin and status. It is unclear as to whether the existing population is the result of hybridisation between the nominate *sp. picturata* of Madagascar and *sp. comorensis* from Comoros, as proposed by Benson (1970), or is an endemic race *sp. chuni* (Reichenhow), the result of recent evolution, as proposed by Ripley (in Bourne 1971).

Bourne (1971) also comments on the strategic position of the Chagos to receive migrants as well as vagrants. This is certainly true and the remainder of the landbird species noted by all authors throughout the recorded ornithological history of the archipelago (Bourne 1886, Finsch 1887, Gadow and Gardiner 1907, Loustau-Lalanne 1962) fall into one of these migrant/vagrant categories. The difficulty, due to the paucity of ornithological data from the area, is in defining which category a regular migrant or vagrant species falls in to.

Of particular interest in the landbird records to date, when assessing IBAs, are sightings by Bruner (1995) of the Near-threatened (Collar *et al.* 1994) Asian Dowitcher and the globally threatened (Collar *et al.* 1994) Nordmann's Greenshank. If these records are substantiated and proved correct, and these species are found to regularly spend the Northern Hemisphere winter in the Chagos, this could influence the future selection of IBAs.

Seabirds

Despite the endeavours of the very limited number of ornithologists who have carried out research work in the Chagos Archipelago since at least 1886 (Bourne 1886), the knowledge of bird populations is still at a very basic stage. This is especially true of the internationally important seabird colonies that exist in the area. In ecological and conservation terms, the paucity of published seabird material, detailing accurate breeding numbers, timings of breeding and locations of colonies is of great concern.

Feare, in 'Seabird status and conservation in the Tropical Indian Ocean' (1984), states that many islands in the Indian Ocean are still very poorly known and need visiting at different times of the year to establish what species are there, and their approximate numbers and breeding seasons. He then further notes the Chagos Archipelago as one of the island groups from which information is particularly sparse. This paucity of knowledge has been enriched by an authoritative paper by Symens in *Ecology of the Chagos Archipelago* (1999) and by the Royal Naval Birdwatching Society expedition report, covering breeding seabirds on Diego Garcia and its surrounding islets, published in *Sea Swallow* (Carr 1998).

Only one species of globally threatened seabird has been recorded from the Chagos Archipelago, this being the Critically Endangered Abbott's Booby (Collar *et al*. 1994). Now extinct as a breeding species on Assumption Island to the west of the Chagos, the remaining world population is thought to breed on Christmas Island to the east (Nelson 1978). It has been speculated that it once bred in the Chagos (Bourne 1971) and there appears no reason why now, with much of the archipelago reverting to type, it could not recolonise or even be reintroduced. At present it remains a rare sighting.

The bulk of the breeding seabirds throughout the Chagos Archipelago are made up by the pan-tropical Red-footed Booby, the Brown Noddy and the Lesser Noddy. It is these three species that afford certain islands of the Chagos Archipelago IBA status. The fact should not be overlooked that the Chagos Archipelago, containing uninhabited islands that are reverting to their natural vegetation (some of which, importantly, have remained rat free), offers an important refuge for declining seabird populations throughout the Indian Ocean.

Conservation infrastructure and Protected Area system

As a UK Overseas Territory, BIOT is included under the UK ratification of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), the Convention on Wetlands of International Importance (Ramsar), the World Heritage Convention and the Bonn Convention on Migratory Species. The Convention on Biological Diversity has still to be extended.

BIOT has signed the Environment Charter, which is an agreement with the British Government to work together on protecting biodiversity. The BIOT Commissioner, based at the Foreign and Commonwealth Office in London, has ultimate responsibility for protection of the environment. A Conservation Adviser is employed by the BIOT Government and has made a range of legislative provisions dealing with the protection and conservation of the natural environment. The responsibility for implementing conservation measures lies with the senior UK representative, a senior British naval officer, stationed on the island.

There is a Conservation Area in Diego Garcia, to which access is strictly controlled, and there are Strict Nature Reserves, covering several of the outer islands and their territorial seas and internal waters, to which access is in general prohibited and where, when access is (exceptionally) authorised, various activities are prohibited unless specifically licensed.

The main threats to biological diversity include the uncontrolled spread of introduced invasive species such as rats and cats. Rising sea levels could result in the future disappearance of islands from the archipelago.

Overview of the inventory

The gathering of ornithological data from the Chagos Archipelago has continued steadily since Dr W. R. P. Bourne published the seminal work on the birds of the area, which included a historical review of all ornithological records, in *Atoll Research Bulletin* in 1971 (Bourne 1971). Post-1971 contributions to the sparse ornithological knowledge of the area have been published in a wide range of journals, books and newspapers. These works, incorporated in to this assessment of IBAs in the Chagos are Hirons (1973), Baldwin (1975), Curtis (1975), Hutson (1975), Hirons *et al.* (1976), Bellamy (1979), Howells (1983), Cochrane (1992), Bruner (1995), Symens (1996, 1999), Carr (1996, 1998, 2000, 2004) and Wood (2002). The most important of these recent works has been the assessment of the Chagos breeding seabird populations published in 1999 by Symens in the groundbreaking book *Ecology of the Chagos Archipelago* (Sheppard *et al.* 1999).

Despite the paucity in data, 10 sites, which qualify as IBAs, have been identified. These sites cover an area of 924 hectares, which is approximately 20% of the total land area of the Chagos Archipelago. There are currently no globally threatened species breeding on the Chagos Archipelago (A1) and it does not qualify as an endemic bird area (A2) or have species characteristic of particular vegetation biomes (A3); all of the IBA designations are based on their seabird/waterbird populations, or A4i, A4ii and/or A4iii criterion. See the table below for an overview of IBAs and their qualifying criteria.

Sites of global conservation importance

IBA code	Site name	A1	A2	A3	A4i	A4ii	A4iii
IO001	Barton Point nature reserve					X	X
IO002	Danger Island				X	X	X
IO003	Sea Cow				X		X
IO004	North Brother					X	X
IO005	Middle Brother				X		X
IO006	South Brother				X		X
IO007	Nelson				X		X
IO008	Petite Ile bois mangue				X		X
IO009	Ile Parasol				X		X
IO010	Ile Longue				X		X

IO001: Diego Garcia: Barton Point nature reserve

Ref number	**IO001**
Admin region	**British Indian Ocean Territory**
Coordinates	**72°26'E 7°14'S**
Area	**680 ha (approx)**
Altitude	**1 m**
IBA categories (details below)	**A4ii, A4iii**
Status	**Barton Point and East, Middle and West Island are out of bounds to all personnel unless there are vital reasons to visit**

Site description

Diego Garcia stretches for 12 miles (19 km) from tip to tip of the horseshoe, and the majority of the land mass is less than 1 km from ocean to lagoon. The area proposed for the IBA is the length of Diego Garcia, stretching for approximately 8.5 miles (14 km) from Minni Minni to Barton Point, and the three islets of East, West and Middle Island in the mouth of the Diego Garcia horseshoe.

Birds

See the accompanying table for details of key species. The Barton Point area of Diego Garcia, combined with the three islets, supports over 16,000 pairs of Red-footed Boobies, the largest breeding concentration recorded in the Chagos. It holds the only breeding records of the Little Tern (four pairs) from the Chagos and has some 300 pairs of Common White-terns, which constitute 49% of the Chagos breeding population. It also holds 25% of the breeding populations of Great Crested-terns (15 pairs) and Roseate Terns (five pairs), and 23% of breeding White-tailed Tropicbirds (three pairs).

Other threatened/endemic wildlife

The Coconut Crab *Birgus latro,* included as 'Data Deficient' by the IUCN (1996), has a healthy population centred upon the Barton Point end of the atoll. The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) both breed on Diego Garcia.

Barton Point from the lagoon side

Conservation issues/threats

Introduced rats remain a constant pressure on seabird populations. Feral cats have historically taken their toll on breeding seabirds; there is a programme of cat eradication under way at present, the results of which are not yet known.

Further reading

See full details at end of chapter.

Bourne (1971), Carr (1998), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4ii	Red-footed Booby *Sula sula*	16,067
A4iii	More than 10,000 pairs of seabirds occur regularly at this site	

IO002: Chagos Bank: Danger Island

Ref number	**IO002**
Admin region	**British Indian Ocean Territory**
Coordinates	**71°15'E 6°23'S**
Area	**66 ha**
Altitude	**<6 m**
IBA categories (details below)	**A4i, A4ii, A4iii**
Status	**As part of BIOT, Danger Island has restricted access**

Site description

Danger Island is about 1.5 miles (2.4 km) long by 0.7 miles (1.2 km) wide. Along with The Brothers, Sea Cow and Nelson it forms part of the (Great) Chagos Bank. It is densely vegetated with palms and broad-leaved trees including *Hernandia sonara* and *Tournefortia argentea*. There are also open areas of coral debris where Brown Boobies breed, which contain dwarf vegetation consisting mainly of *Boerhavia coccinea* and *Portulaca oleracea*. Most importantly, the atoll is rat free.

Red Boobies in flight

Birds

See the accompanying table for details of key species. The atoll holds 245 breeding pairs of Brown Boobies, and small numbers of breeding Lesser Noddies and Common White-terns.

Other threatened/endemic wildlife

The Coconut Crab *Birgus latro* has been recorded on Danger Island (Barnett *et al.* 1999). The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded as breeding on Danger Island (Mortimer and Day 1999).

Conservation issues/threats

Unknown.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Brown Noddy *Anous stolidus*	11,100
A4ii	Red-footed Booby *Sula sula*	3,470
A4iii	More than 20,000 waterbirds occur regularly at this site	

IO003: Chagos Bank: Sea Cow

Ref number	**IO003**
Admin region	**British Indian Ocean Territory**
Coordinates	**71°15'E 6°22'S**
Area	**18 ha**
Altitude	**<6 m**
IBA categories (details below)	**A4i, A4iii**
Status	**As part of BIOT, Sea Cow has restricted access**

Site description

Sea Cow is the atoll north of Danger Island in the Chagos Bank chain. It is a rat-free island with a surface area of 18 hectares.

Birds

See the accompanying table for details of key species. Sea Cow has had 950 pairs of Wedge-tailed Shearwaters recorded as breeding, as well as small numbers of Red-footed Boobies, Sooty Terns (100), Common White-terns (11), Lesser Noddies (800) and Brown Noddies (11,500).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Sea Cow (Mortimer and Day 1999).

Conservation issues/threats

To maintain rat-free status of island.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Brown Noddy *Anous stolidus*	11,500
A4iii	More than 20,000 waterbirds occur regularly at this site	

IO004: Chagos Bank: North Brother

Ref number	**IO004**
Admin region	**British Indian Ocean Territory**
Coordinates	**71°32'E 6°07'S**
Area	**6 ha**
Altitude	**<6 m**
IBA categories (details below)	**A4ii, A4iii**
Status	**As part of BIOT, North Brother has restricted access**

Site description

North, Middle and South Brother (collectively The Brothers) are the next atoll group, lying north-east of Sea Cow. North Brother is a rat-free island with a surface area of 6 hectares.

Birds

See the accompanying table for details of key species. North Brother has at least nine species of seabirds recorded as breeding; the actual figure is likely to be higher. Of interest are Wedge-tailed Shearwaters (2,100 breeding pairs), Audubon's Shearwaters (420 breeding pairs), Red-footed Boobies (420 breeding pairs), Brown Boobies (280 breeding pairs), Lesser Frigatebirds (12 breeding pairs), Great Frigatebirds *F. minor* (85 breeding pairs), Bridled Terns (15 breeding pairs), Common White-terns (eight breeding pairs), Lesser Noddies (4,100 breeding pairs) and Brown Noddies (1,950 breeding pairs). More than 10,000 pairs of seabirds have been recorded from this atoll, meaning it also qualifies under the A4iii criterion.

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from North Brother (Mortimer and Day 1999).

Conservation issues/threats

Unknown.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4ii	Audubon's Shearwater *Puffinus lherminieri*	420
A4iii	More than 10,000 pairs of seabirds occur regularly at this site	

IO005: Chagos Bank: Middle Brother

Ref number	**IO005**
Admin region	**British Indian Ocean Territory**
Coordinates	**71°33'E 6°09'S**
Area	**8 ha**
Altitude	**<6 m**
IBA categories (details below)	**A4i, A4iii**
Status	**As part of BIOT, Middle Brother has restricted access**

Site description

Part of The Brothers, Middle Brother is a rat-free island with a surface area of 8 hectares.

Birds

See the accompanying table for details of key species. Middle Brother has at least six species of seabirds recorded as breeding; the actual figure is likely to be higher. Of interest are Red-footed Boobies (370), Black-naped Terns (one), Sooty Terns (12,500), Common White-terns (four), Lesser Noddies (320) and Brown Noddies (1,300).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Middle Brother (Mortimer and Day 1999).

Conservation issues/threats

Unknown.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Sooty Tern *Sterna fuscata*	12,500
A4iii	More than 10,000 pairs of seabirds occur regularly at this site	

IO006: Chagos Bank: South Brother

Ref number	IO006
Admin region	British Indian Ocean Territory
Coordinates	71°35'E 6°10'S
Area	23 ha
Altitude	<6 m
IBA categories (details below)	A4i, A4iii
Status	As part of BIOT, South Brother has restricted access

Site description

The most southerly of The Brothers trio of the Chagos Bank, South Brother is a rat-free island with a surface area of 23 hectares.

Birds

See the accompanying table for details of key species. South Brother has at least eight species of seabirds recorded as breeding; the actual figure is likely to be higher. Of interest are Wedge-tailed Shearwaters (350), Audubon's Shearwaters (150), Red-footed Boobies (220), Black-naped Terns (three), Sooty Terns (4,600), Common White-terns (six), Lesser Noddies (7,300) and Brown Noddies (6,100).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from South Brother (Mortimer and Day 1999).

Conservation issues/threats

Unknown.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Lesser Noddy *Anous tenuirostris*	7,300
A4i	Brown Noddy *Anous stolidus*	6,100
A4iii	More than 20,000 waterbirds occur regularly at this site	

IO007: Chagos Bank: Nelson

Ref number	**IO007**
Admin region	**British Indian Ocean Territory**
Coordinates	**72°20'E 5°41'S**
Area	**81 ha**
Altitude	**<6 m**
IBA categories (details below)	**A4i, A4iii**
Status	**As part of BIOT, Nelson has restricted access**

Site description

Nelson Island lies some 31 miles (50 km) north-east of The Brothers trio on the northern rim of the Chagos Bank. It is a small, rat-free island with a surface area of 81 hectares. It appears never to have been inhabited or cultivated, and is very infrequently visited.

Birds

See the accompanying table for details of key species. Nelson has at least eight species of seabirds recorded as breeding. Of interest are Red-footed Boobies (330), Brown Boobies (four), Lesser Frigatebirds (60), Bridled Terns (eight), Common White-terns (18), Lesser Noddies (13,700) and Brown Noddies (8,300).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Nelson (Mortimer and Day 1999).

Conservation issues/threats

Unknown.

Further reading

See full details at end of chapter.

Baldwin (1975), Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Lesser Noddy *Anous tenuirostris*	13,700
A4i	Brown Noddy *Anous stolidus*	8,300
A4iii	More than 20,000 waterbirds occur regularly at this site	

IO008: Peros Banhos: Petite Ile bois mangue

Ref number	IO008
Admin region	British Indian Ocean Territory
Coordinates	72°56'E 5°17'S
Area	8.5 ha
Altitude	<6 m
IBA categories (details below)	A4i, A4iii
Status	As part of BIOT, Petite bois has restricted access

Site description

Lying about 25 miles (40 km) north of the Chagos Bank, Peros Banhos is made up of some 36 major islands. Petite Ile bois mangue is a rat-infested island with a surface area of 8.5 hectares in the central northern part of the Peros Banhos atoll rim.

Birds

See the accompanying table for details of key species. Petite bois has had five species of seabirds recorded as breeding. These are Red-footed Boobies (1,200), Black-naped Terns (one pair), Brown Noddies (2,000), Lesser Noddies (12,000) and Common White-terns (20).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Petite bois (Mortimer and Day 1999).

Conservation issues/threats

Rat infestation will limit the spread of seabirds.

Further reading

See full details at end of chapter.

Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Lesser Noddy *Anous tenuirostris*	12,000
A4iii	More than 20,000 waterbirds occur regularly at this site	

IO009: Peros Banhos: Ile Parasol

Ref number	IO009
Admin region	British Indian Ocean Territory
Coordinates	72°50'E 5°15'S
Area	7.5 ha
Altitude	<6 m
IBA categories (details below)	A4i, A4iii
Status	As part of BIOT, Parasol has restricted access

Site description

Ile Parasol is sited some 6 miles (10 km) west of Petite Ile bois mangue along the Peros Banhos rim. It is a rat-infested island with a surface area of 7.5 hectares.

Birds

See the accompanying table for details of key species. Parasol has had five species of seabirds recorded as breeding. These are Red-footed Boobies (720), Sooty Terns (14,000), Brown Noddies (1,500), Lesser Noddies (620) and Common White-terns (10).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Parasol (Mortimer and Day 1999).

Conservation issues/threats

Rat infestation will suppress the recolonisation or spread of seabird colonies.

Further reading

See full details at end of chapter.

Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Sooty Tern *Sterna fuscata*	14,000
A4iii	More than 10,000 pairs of seabirds occur regularly at this site	

IO010: Peros Banhos: Ile Longue

Ref number	IO010
Admin region	British Indian Ocean Territory
Coordinates	72°52'E 5°16'S
Area	25.5 ha
Altitude	<6 m
IBA categories (details below)	A4i, A4iii
Status	As part of BIOT, Longue has restricted access

Site description

Ile Longue is about 1 mile (1.5 km) south-east of Ile Parasol in the Peros Banhos chain. It is a rat-infested island with a surface area of 25.5 hectares.

Birds

See the accompanying table for details of key species. Longue has had five species of seabirds recorded as breeding; it is likely that other species breed on the atoll. Species recorded to date are Red-footed Boobies (80), Sooty Terns (32,000), Brown Noddies (500), Lesser Noddies (500) and Common White-terns (15).

Other threatened/endemic wildlife

The Green Turtle *Chelonia mydas* (Endangered) and Hawksbill *Eretmochelys imbricata* (Critically Endangered) are recorded from Longue (Mortimer and Day 1999).

Conservation issues/threats

Rat infestation is likely to suppress the spread or recolonisation of Longue by seabirds.

Further reading

See full details at end of chapter.

Bourne (1971), Symens (1999).

Key species

Criteria	Key species	Number of breeding pairs (if known)
A4i	Sooty Tern *Sterna fuscata*	32,000
A4iii	More than 10,000 pairs of seabirds occur regularly at this site	

References

Baldwin, E. A., ed. (1975) *Report on Joint Services Expedition to Danger Island 1975*. London: MOD Publications.

Barnett, L. K., Emms, C. and Clarke, D. (1999) The Coconut or Robber Crab (*Birgus latro*) in the Chagos Archipelago, and its captive culture at London Zoo. In C. R. C. Sheppard and M. R. D. Seaward, eds., *Ecology of the Chagos Archipelago.* Linnean Soc. Occ. Publ. 2: 273–84.

Bellamy D. J. (1979) *Half of Paradise.* London: Cassell.

Benson, C. W. (1970) The systematic status of *Streptopelia picturata* on Diego Garcia. *Bulletin of the British Ornithologists' Club* 90: 32–5.

Bourne, G. C. (1886) General observations on the fauna of Diego Garcia. *Proceedings of the Zoological Society London* 1886: 331–4.

Bourne, W. R. P. (1971) The birds of the Chagos group, Indian Ocean. *Atoll Research Bulletin* 149: 175–207.

Bruner, P. L. (1995) Avifaunal and feral mammal survey of Diego Garica, Chagos Archipelago, British Indian Ocean Territory. *Natural Resources Management Plan.* Naval Support Facility, Diego Garcia.

Carr, P. (1996) Observations of the birds on Diego Garcia 26–29 March 1996. *Sea Swallow* 45: 95–9.

Carr, P. (1998) Expedition Report Diego Survey 97, 4–18 August 1997 (Pt 1 the seabirds). *Sea Swallow* 47: 9–22.

Carr, P. (2000) Expedition Report Diego Survey 97, 4–18 August 1997 (Pt 2 the landbirds). *Sea Swallow* 49: 30–5.

Carr, P. (2004) Further observations from Diego Garcia, 4–5 December 2002. *Sea Swallow* 52: 21–6.

Cochrane, M. C. N. (1992) Initial survey of New Coral Islet off Diego Garcia Atoll. *Sea Swallow* 41: 62.

Collar, N. J., Crosby, M. J. and Stattersfield, A. J. (1994) *Birds to watch 2; the world list of threatened birds.* Cambridge, UK: BirdLife International (BirdLife Conservation Series no. 4).

Curtis, W. R. F. (1975) The visit of RFA *Reliant* to the Chagos Archipelago, 6–10 October 1974. *Sea Swallow* 25: 11–13.

Feare, C. J. (1984) Seabird status and conservation in the tropical Indian Ocean. In J. P. Croxall, P. G. H. Evans and R. W. Schreiber, eds., *Status and conservation of the world's seabirds.* Cambridge, UK: International Council for Bird Preservation (Techn. Publ. 2): 457–71.

Finsch, O. (1887) Ein Besuch auf Diego Garcia im Indischen Ozean. *Deutsche geographische Bltter Bremen* 1887: 30–42.

Gadow, H. and Gardiner, J. S. (1907) The Percy Sladen Trust Expedition to the Indian Ocean. Aves, with some notes on the distribution of the land-birds of the Seychelles. *Transcripts of the Linnaean Society London, Zoology* 11, 12: 103–10.

Hirons, M. J. (1973) Notes on the birds of Egmont Chagos Archipelago. Unpublished expedition report.

Hirons, M. J., Bellamy, D. J. and Sheppard, C. R. C. (1976) Birds on the Chagos Bank. *Nature* 260: 387.

Howells, M. J. (1983) The birds of Diego Garcia. *Sea Swallow* 32: 42–7.

Hutson, A. M. (1975) Observations on the birds of Diego Garcia, Chagos Archipelago, with notes on other vertebrates. *Atoll Research Bulletin* 175.

IUCN (1996) *IUCN red list of threatened animals*. Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources.

Loustau-Lalanne, P. (1962) The birds of the Chagos Archipelago, Indian Ocean. *Ibis* 104: 67–73.

Mortimer, J. A. and Day, M. (1999) Sea turtle populations and habitats in the Chagos Archipelago. In C. R. C. Sheppard and M. R. D. Seaward, eds., *Ecology of the Chagos Archipelago.* Linnean Soc. Occ. Publ. 2: 159–72.

Nelson, J. B. (1978) *The Sulidae: gannets and boobies.* Oxford: Oxford University Press.

Ripley, S. D. (1969) Comments on the Little Green Heron of the Chagos Archipelago. *Ibis* 111: 101–2.

Sheppard, C. R. C. (1981) Discovery. In *Report on the Joint Services Expedition to Chagos 1978/1979.* London: MoD.

Sheppard, C. R. C., Seaward, M. R. D., Klaus, R. and Topp, J. M. W. (1999) In C. R. C. Sheppard and M. R. D. Seaward, eds., *Ecology of the Chagos Archipelago.* Linnean Soc. Occ. Publ. 2.

Symens, P. (1996) Status and conservation of seabirds in the Chagos Archipelago, BIOT. MSc Thesis, University of Warwick.

Symens, P. (1999) Breeding seabirds of the Chagos Archipelago. In C. R. C. Sheppard and M. R. D. Seaward, eds., *Ecology of the Chagos Archipelago.* Linnean Soc. Occ. Publ. 2: 257–72.

Sheppard, C. R. C. (1979) Introduction to the Joint Services Expedition Chagos Expedition 1978–79. In J. D. Griffiths, ed., *Chagos: the 1978–79 Expedition.* London: MoD Publications.

Topp, J. M. W. and Sheppard, C. R. C. (1999) Higher plants of the Chagos Archipelago. In C. R. C. Sheppard and M. R. D. Seaward, eds., *Ecology of the Chagos Archipelago.* Linnean Soc. Occ. Publ. 2: 225–41.

Wood, J. L. (2002) Squadron of the feathered kind visits. *Tropical Times,* 6 December.

Further reading

Burger, J. and Gochfeld, M. (1994) Predation and effects of humans on island-nesting seabirds. In D. N. Nettleship, J. Burger and M. Gochfeld, eds., *Seabirds on islands: threats, case studies, and action plans.* Cambridge, UK: BirdLife International (BirdLife Conservation Series no.1).

De Korte, J. and Silvius, M. J. (1994) Pelecaniformes in Indonesia: status, recent changes and management. In D. N. Nettleship, J. Burger and M. Gochfeld, eds., *Seabirds on* *islands: threats, case studies, and action plans.* Cambridge, UK: BirdLife International (BirdLife Conservation Series no.1).

Diamond, A. W. (1994) Seabirds of the Seychelles, Indian Ocean. In D. N. Nettleship, J. Burger and M. Gochfeld, eds. *Seabirds on islands: threats, case studies, and action plans.* Cambridge, UK: BirdLife International (BirdLife Conservation Series no.1).

Harrison, P. (1983) *Seabirds: an identification guide.* London: Croom Helm Ltd.

Reville, B. J. and Stokes, T. (1994) Conservation and management of seabirds on Christmas Island, Indian Ocean. In D. N. Nettleship, J. Burger and M. Gochfeld, eds., *Seabirds on islands: threats, case studies, and action plans.* Cambridge, UK: BirdLife International (BirdLife Conservation Series no.1).

Red Booby and chick