

LAKSHADWEEP



Photo: Nayyan Khanolkar

Only 11 out of 36 islands, atolls and coral reefs are inhabited. Nonetheless, human density is 1,894 per sq km, among the highest in India. The archipelago is poor in faunal diversity.

The Lakshadweep (8° 15' - 11°45' North and 72° 00' - 74° 00' East) archipelago is the smallest Union Territory of India. It has a geographical area of 3,200 ha only. It comprises a group of 36 coral islands covering 12 atolls, three reefs and sand banks which are submerged at high tide. Only 11 islands are inhabited, of which Agatti is the most populated. The other populated islands are Aminni, Andrott, Bangaram, Bitra, Chetlat, Kadmat, Kalpeni, Kavaratti, Kiltan and Minicoy. Minicoy is the southernmost island of this archipelago which is separated from the rest of the islands by a 9° Channel about 180 km in width and from the neighbouring Maldives in the south by an 8° Channel of about 120 km. These islands are irregularly scattered in the south Arabian sea, about 280 km to 480 km west of Kochi on the Kerala coast (Das 2002). The Lakshadweep, Maldivian and Chagos archipelagos form a contiguous mountain ridge in the ocean. This ridge is believed to be a continuation of the Aravalli mountain range of Rajasthan and Gujarat since the late tertiary times (Mukundan 1979).

The islands rise upto 5 m above sea level, are mostly flat, enclosed within coral reefs and situated generally on the windward reef on their eastern sides. The atolls and submerged reefs are crescent in shape. There are no natural forests, hillocks, bay creeks, estuaries, rivers, lakes or freshwater tanks on them (Das 2002). The soil of the islands is thin and quite porous, which retains very little moisture and is formed mostly of fragmented coral limestones and sedimentary rocks (Das 2002).

The average rainfall ranges between 1000 mm to 2,000 mm, under the influence of both the southwest and northeast monsoon. The temperature varies from 17° to 37° C with a slight increase from south to north.

In the 2001 census, the population of Lakshadweep was about 0.06 million. Of the total population, 55.5% is rural and 44.5% urban with an average population density of 1,894 persons per sq. km. The population is predominantly tribal (93.2%). The people belong to two different language groups (Malyalam in all the islands and Divehi in Minicoy) and are a well-integrated community (Mathew and Gandhi 2000). The literacy rate is high and over 95% of the population is Muslim and designated as a scheduled tribe. Coconuts and fisheries are the main economic base, with eco-tourism fast catching up.

About 1680 species of birds, reptiles, fish, crustaceans and corals have been reported from this archipelago (Anon. 1991), of which 172 species are terrestrial and the remaining marine. The archipelago is poor in faunal species, probably due to the small area of the landmass, uniform topography, climatic conditions and lack of forest or other habitats (Das 2002). Two species of amphibia, *Bufo melanostictus* and *Rana tigrina* have been recorded on the Kavaratti and Minicoy islands but they were introduced (Das 2002).

Vegetation

The Forest Survey of India report of 2001, records that the territory is devoid of any natural forest. An agro-forestry programme begun in 1988-89 was restricted to the distribution of seedlings to the people.

Important Bird Areas in India - Lakshadweep

Terrestrial flora and fauna of the archipelago are poor. No endemic plant species has been reported (Prain 1983). A large number of crop plants (rice, vegetables, fruits, tubers, spices, sugar, arecanut) were introduced from the Indian mainland, along with domestic livestock such as cattle, goats, domestic cats and poultry chicken. Domestic cats and dogs are now a major threat to local fauna.

IN-LD

IBA of Lakshadweep

IBA site code	IBA site name	IBA criteria
IN-LD-01	Pitti Island	A4iii



VIFAUNA

Only one site has been selected as an IBA i.e. Pitti Island. Its selection was mainly on the basis of the congregation of nesting seabirds. Pitti Island is an uninhabited barren reef with a sand bank. The island has been known, from the early nineteenth century, to harbour many varieties of terns and numbers have known to cross 20,000. Though some migratory waders are seen on Pitti, terns are the only breeding birds on the island. The tern species that nest in and feed around Pitti are Sooty Tern *Sterna fuscata*, Brown Noddy *Anous stolidus*, Large Crested Tern *Sterna bergii*, and Bridled Tern *Sterna anaethetus*. Waders reported from Pitti include Ruddy Turnstone *Arenaria interpres*, Eurasian Curlew *Numenius arquata*, and Lesser Sand Plover *Charadrius mongolus* (Anon. 1991). The island is devoid of any vegetation.

THREATS AND CONSERVATION ISSUES

The main threats to this IBA are human disturbance, natural events and unsustainable exploitation (of eggs). Although the island is uninhabited, fishermen from other islands in Lakshadweep visit Pitti for fishing, collecting shells and tern eggs (Anon 1991). This poses a severe threat to the colony throughout the year, except during the monsoons when the island becomes inaccessible to human beings. Heavy rains however take their toll on the chicks, as mortality is very high. Predation by crabs is another natural threat to the eggs. Introduction of vegetation has been suggested on Pitti Island (Anon 1991) but this would be disastrous to the nesting colony of terns.

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LD-01

PITTI ISLAND



IBA Site Code	: IN-LD-01
State	: Lakshadweep Islands
District	: Lakshadweep Islands
Coordinates	: 10° 46' 54" N, 73° 31' 59" E
Ownership	: State
Area	: 1.21 ha
Altitude	: 2 - 6 m
Rainfall	: 1,500 mm
Temperature	: 17 °C to 38 °C
Biogeographic Zone	: Islands
Habitats	: Sandy Island, Reef

IBA CRITERIA: A4iii ($\geq 20,000$ waterbirds)
PROTECTION STATUS: Not officially protected

GENERAL DESCRIPTION

Pitti Island is an uninhabited, barren reef with a sandbank located in the Lakshadweep archipelago, the smallest Union Territory of India, in the Arabian Sea, 280-480 km away from the city of Kochi (Cochin) in Kerala, India. The island is mostly made up of broken coral that has been pounded to a rough sand like consistency, with large boulders and loose stones. The island is a low plateau rising c. 2 m above msl at high tide, with sloping beaches all around. The island was formed by the accumulation of coral sand in the form of a sandbank with the action of the wind waves and currents (Anon. 1991).

AVIFAUNA

The island has been known from the early 19th century to harbour many varieties of terns, with numbers known to exceed 20,000 individuals. 67 species of birds are recorded in Lakshadweep archipelago by Daniels (1991) and 82 species of bird by Kurup and Zacharias (1994). Pitti is the breeding ground for four species of terns: Sooty Tern *Sterna fuscata*, Great Crested Tern *S. bergii*, Bridled Tern *S. anaethetus* and Brown Noddy *Anous stolidus* (Betts 1938, Kurup and Zacharias 1994). This island is of great importance as breeding colonies of pelagic birds are rare in the Indian territory (Anon. 1991). Though some migratory waders are seen on Pitti, terns are the only breeding birds on the islands. Waders reported from Pitti include the Ruddy Turnstone *Arenaria interpres*, Eurasian Curlew *Numenius arquata*, and Lesser Sand Plover *Charadrius*



Covering only 1.21 ha, Pitti Island is one of the smallest sanctuaries of India.

mongolus (Anon. 1991). The island is devoid of vegetation.

A study by the Madras Naturalist Society (MNS) estimated the number of terns present at 20,000 in October 1963, 12,000 in February 1978, 4,000 in May 1990, 2,000 in February 1991 and 8,000 in April 1991. Bridled Terns were not seen during the MNS survey, but were observed flying very close to Pitti Island during November 2001.

LAND USE

- ☐ Nature conservation and research

THREATS AND CONSERVATION ISSUES

- ☐ Disturbance to birds
- ☐ Natural disasters
- ☐ Unsustainable exploitation of eggs

Mathew *et al.* (1996) reported that collection of tern eggs from Pitti Island reached unsustainable levels, causing decline in the number of terns.

Although the island is uninhabited, fishermen from other islands in Lakshadweep visit it for fishing, collecting shells and tern eggs (Anon. 1991). This poses a severe threat to the colony throughout the year, except during the monsoon when the island becomes inaccessible to human beings. Heavy rains, however, take their toll on the chicks, and mortality is very high. Predation by crabs is another natural threat to the bird eggs. Introduction of vegetation has been suggested on Pitti Island (Anon. 1991), but this would be disastrous to the nesting colony of terns.

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