



# ENVIS NEWSLETTER

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## From the Director's Desk...

We are coming up with a new issue of environment everytime. This issue depicts about "Chilika: Visiting Birds' Paradise". I hope the information content in this issue will be useful. I appreciate the efforts of ENVIS Team in collecting the datas and information for this issue. I am thankful to Dr. Sudhakar Kar, Member: IUCN/SSC Crocodile and Water bird Specialist Group for his contribution & involvement in bringing out this Newsletter.



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## Chilika : Visiting Birds' Paradise

### ABSTRACT

*The multidimensional identity of Chilika has always been the most influential theme enlisting people of different walks of life. With its full-fledged natural scenic beauties mingled with some undeliniable poetics, Chilika has nested a permanent abode in millions of nature loving people across the globe. History reveals : To walk through the corridor of Chilika is to walk through the corridor of world aesthetics. Interestingly enough, the vibrant glorification of this largest brackish water lake in the entire Asia-continent is not only confined with this continent but spread to several spheres of life. One of the striking features of this lake that draws the attention of the whole world is - the world's largest birds' congress in winter.*

### INTRODUCTION

It is however, a universally accepted proposition that the study and understanding of Chilika with a particular reference to migratory birds is one of the best perks of world eco-heritage. To add some more information about the lagoon it may be inferred that the rich biological diversity abundantly available here is the prime cause responsible for making Chilika to be the nesting ground of both the endemic and migratory birds.

### Why Chilika attracts birds

In India, so far 25 wet-lands having international significance have been recognised and declared as Ramsar sites. Odisha is privileged with two Ramsar sites namely Chilika and Bhitarkanika declared in the years of 1981 and 2002, respectively. Spread across the districts of Puri, Khurda and Ganjam along the



east coast, and about 100 km from state capital Bhubaneswar, Chilika is known for its immaculate scenic beauty and rich bio-diversity. Every year about a million migratory water birds from distant places visit to the lake in October and return in March.

However, many rivers and rivulets like Daya, Bhargabi, Salia, Kusumi and Luna flow in to Chilika. As a result, the brackish quality of the lake varies with the change of seasons as it is dependent on inflow of sea-water and outflow of river water, depth of water, environmental parameters (temperature, humidity, etc.). In rainy season, the fresh water enter in to Chilika so that the brackish quality of the lake reduces to 0.5ppt and in summer it increases up to 8-10ppt. But the brackish quality of the lake is always almost increasingly high where the lake unites



with the Bay of Bengal. This makes a congenial habitat to have a large varieties of water plants, weeds, insects, fishes, crabs, molluscs etc. It may be easily accessed that the befitting climatic status of Chilika creates a make-believe paradise for the innumerable birds, endemic and migratory.

With a view to getting estranged from severe cold in winter and also in search of food, birds travelling thousands of miles from the remote lands like Saiberia, Mongolia, Caspian Lake, Baikal Lake, Ladakh and the Himalayas foothills visit to the wet lands available in India. These birds travel great distances, but it must be stressed, that the migratory birds probably follow much longer routes than the straight lines, possibly up to 12,000 km. to reach

Chilika. In comparison to other wetlands available in India, maximum numbers of migratory birds are seen in Chilika lagoon. It is, of course, true that the Keoladeo Ghana bird Sanctuary at Bharatpur in Rajsthan witnesses species wise bird diversity (more than 300) in comparison to Chilika. According to the census conducted in 2010, 9.04 lakh water birds of 114 species, from both local and long distance migratory birds visited Chilika during the last winter. Duck species was dominant among them. Prominent duck species include Pintail, Gadwal, Shoveller, Wigeon, Common pochard, Red-crested pochard, Garganey, Tufted duck which are mainly seen in Nalabana, Sorana, Mangalajori, etc in Chilika lagoon.

Interestingly, it has been observed that out of 84 varieties of shore birds in India, above 40 varieties are seen in Chilika during the winter months. Lesser Sand plover, Blacktailed godwit, Curlew sand piper, Little stint are dominant shore birds (waders) among them.

Last year over 8.91 lakh birds belonging to 155 species including 101 migratory species were counted in the lake.





### Rare migratory birds species

In each winter the scenic status of Chilika is elevated and enhanced with the presence of some rare bird species enlisting Indian skimmer, Pallas's fish eagle, Spotbilled pelican etc. The birds counted in the Nalban island (5.08 lakh) was above 50% of the total water bird population in 2010. The Gadwal, *Anas strepera* number (1.56 lakh) and Northern Pintail number (1.15 lakh) counted during the last migration season. The rare species to Chilika lake such as Baillon's crake, Greater crested grebe and Common Shelduck were recorded during the bird count. The number (16,852) of Asian Openbill-Stork, *Anastomus oscitans* is one of the interesting features of the count.



The total waders / shore birds counted were low due to the less arrival of three common wader species namely, Lesser sand plover, Curlew sandpiper and Little stint. The low waders number is probably due to the prevailing high water level in the lake. This can't be considered as the population decline, because their number may build up in a week or two as has been experienced in the previous years. Besides wetland birds, a total of 19956 nos. of 66 wetland dependent bird species were recorded from the lake during the 2010 census.



### Endangered Species

In Chilika one can find several endangered reptilian, bird and mammalian species. Most important and endangered species are included in the Schedule-1 of the Wildlife (Protection) Act, 1972 are:

- ❖ *Barkudia insularis*, a limb less lizard/skink (this skink is named after the "Barkuda" island of the lake)
- ❖ Irrawaddy dolphin, *Orcaella frevirostris*
- ❖ Fishing cat (*Felis viverrina*)
- ❖ White bellied Sea eagle, *Haliaeetus leucogaster*
- ❖ White spoonbill, *Platalea leucorodia*
- ❖ Osprey (*Pandion haliaetus*)
- ❖ Spoon billed sandpiper(*Eurynorhynchus pygmeus*)

### Food availability

The vast waterbody & bio-diversity is a major factor for visit of thousands of birds from different regions of the world. Chilika has always been potentially able to provide excellent hospitality to these guests (water birds) with food and shelter.



Depth of water in the lagoon vary from place to place so also the availability of weed & aquatic plants.

The southern part of Chilika being deep gives dwelling to duck species. They collect their food (weeds, insects, shrubs) present under water with a depth of 1.5 to 2 metre. Ducks such as Pintail & Wigeon, Common pochards collect their food under water within a depth of less than one metre.

### Internationally significance

Some special reasons have brought Chilika a world wide reputation. They are:

- ❖ The largest birds' congregation ground. About a million birds come here every winter.
- ❖ Nalabana Wildlife Sanctuary in the lagoon is the world's favourable abode of *Sterna aurantia*.

- ❖ Nalabana is the largest breeding ground of *Gelochelidena nilotica*. This species nests here in the month of April and May.
- ❖ It is to be noted that 5300 Cotton teal, *Netapus coromandelianus* were recorded to be at Mangalajodi area of Chilika in the month of January in 2006. This was one of the awe-inspiring ever recorded in any Ramsar sites of the world.

The birds generally come here in search of food, since it becomes a scarcity in their native land. The 15.53 sq km marshy Nalabana island has been declared as a Wildlife Sanctuary in 1987 by the state government.

### Notable places for Bird lovers in the lagoon

**Nalabana** It is a marshy island covered with reeds famous for feeding & roosting of large-range of migratory birds in winter.

**Birds island** It is heaven for resident and migratory birds. Here one can watch birds in their natural habitat.

**Mangalajodi** The marshy areas of Mangalajodi is gradually becoming potential feeding & roosting ground of migratory water birds especially duck species & waders.





### A substantial account on bird diversity

One of the most fascinating sights in Chilika is that of large flocks of flamingos feeding in the shallow waters of the lagoon. Flamingos come to Chilika from Iran and the Rann of Kutch in Gujarat. Recently, they have started staying for longer periods in larger numbers and a few remain the year round. Other Long-legged birds seen around Nalbana are Lesser Flamingos. Besides Grey and Purple herons, Egrets, Spoonbills, Storks and White Ibis assemble here in large number. Compact gregarious flocks Shovelers, Pintails, Gadwals, Teals, Pochards and Bar-headed Geese can be seen in and around Nalbana island.

The short-legged shorebirds restrict themselves to a narrow band along the shifting shores of the lake and islands. These include Plovers, Collard Pratincole, Ruff, Dunlin, Snipes, Sandpipers, Larks, Wagtails and Lapwings. Venturing into slightly deeper water are the longer-legged Avocets, Stilts and Godwits. The vegetated areas of the lake support moorhens, coots, Jacanas, etc. Pond herons, Night herons, egrets etc. are seen along the shores. The Little Cormorants are seen on perches around the lake and are increasingly using the bunds being built for aquaculture.

There are many raptors seen in and around the lagoon among which Pariah Kites and Brahminy Kites

are common. Marsh Harriers and Pallas's Fishing Eagles are also seen specially at Nalbana. The endangered White-bellied Sea eagle population has slightly increased in the lagoon. Winter visitors include the Kestrel and the globally threatened Peregrine Falcon.

Rare birds recorded at Chilika are the Spoonbill Sandpiper (*Eurynorhynchus pygmeus*), the Asian Dowitcher (*Limnodromus semipalmatus*) and the Goliath Heron (*Ardea goliath*). The Spoonbill sandpiper is a rare winter migrant and the global population is about 500. It has been recorded only four times in India over the last fifty years. Only one was recorded at Chilika in 1981. This tiny wader migrates all the way from Siberia to winter in India. A small number of Asian Dowitcher regularly visit Chilika. This bird is a rare vagrant in India. As many as 41 Dowitchers have been seen at Chilika at one time. The huge and rare Goliath heron is another species spotted in Chilika.

Five species of birds have been breeding and laying eggs on Nalbana island during March-April. These are the Little Tern, Gull-billed tern, Black-winged stilt, Eastern Skylark and Collard-Pratincole. Several other birds such as Water cocks, Moorhen, Bronze winged Jacana, Lesser whistling teal, spotbilled duck, etc. nest in the marshy areas of Mangalajodi.

During a recent survey, nesting colonies of Gull-billed Terns and River Terns was observed on the Nalabana Island which appear to be the largest known breeding colonies for these two species. The Indian River Tern which has restricted distribution range (India, Pakistan, Bangladesh, Nepal, South West China, Myanmar, and Malayan Peninsula) is one of the least studied species.

### **Birds as ecological significance**

Chilika gets benefitted by the birds both ecologically and economically. Ecologically because the amount of faecal (rich with nitrogen and phosphorus) is more than 50 tons which help the water plants to grow. On the contrary, fishes and crabs grow in numbers feeding on these water plant enriched with the nutrients. The entire process adds livelihood of about 2 lakhs fishermen depending on Chilika. Thus the birds indirectly influence the socio-economic status of the local inhabitants as well as of the State.

### **Threats**

The possible threats to the eco-system and migratory birds depending are as follows:

- ↪ The poachers have always stood as a major threat since time immemorial. This has been checked to a greater extent due to effective management.
- ↪ Prawn-gheries in shore areas of the lagoon pose threat for shore birds as they are prevented for feeding & roosting. Thus the birds can't enjoy the natural shore habitats of the lagoon.
- ↪ The increasing numbers of diesel boats also play a major role in disturbing the tranquility of the lagoon.
- ↪ The local domestic buffaloes enter into bird areas & damage the habitat of the migratory birds. As the buffaloes equally share the grasses along with the birds, the scarcity of food items arise in Nalabana and other areas for a few duck & wader species.

### **Legal provisions**

The State Wildlife Organisation in collaboration with the Chilika Development Authority (CDA) have taken several steps for protection and conservation of the local and long distant migratory birds. Protection camps and watch towers have been installed in strategic locations of Chilika and round the clock patrolling is also being carried out to check out the poaching of birds. Bird hunters are being vigilantly watched. These precautionary measures have been successful to avoid the unnatural death of the migratory birds. As per the Wildlife (Protection) Act, 1972 (amended in 2006) poaching of birds is strictly prohibited.

With the collective efforts taken by State Wildlife Organisation, Chilika Development Authority (CDA) and Bombay Natural History Society (BNHS), study on population status, migration trend and pattern of water birds through bird banding & fitting of transmitters, avian influenza threat etc. being undertaken.

Apart from this awareness and co-operation of the local people is highly essential for the betterment of the lagoon and protecting rich biological biodiversity including the avifauna and the lagoonal ecosystem. It is the duty of every human being to protect Chilika and to make it reach the perpetual height of growth and development.





Chilika , in her own tune, singing the muse of truth and beauty.

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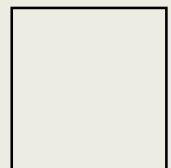
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