NOTES ON NATURAL HISTORY

A Preliminary Report on the Roosting and Nesting Sites of White Bellied Sea Eagle (*Haliaeetus leucogaster* Gmelin, 1788) from Chilika Lagoon, Odisha, East Coast of India

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Study Area: In around and along the coastline of Chilika lagoon, Odisha, India;

Coordination: 19°26'N; to 19°50'N; 85°06'E to 85°26'E

Key words: Parental care, Coastal forest, Casuarina forest, Ramsar site, Migratory waterfowl

Introduction:

A two-year intensive study was carried in and around Chilika lagoon during Irrawaddy dolphin research project in the year 2001 to 2003. Special attention was given on large preying birds including the biggest white-bellied sea eagle with naked eye areal observations. The white-bellied sea eagle is a large diurnal bird of prey in the family Accipitridae. Originally described by Johann Friedrich Gmelin in 1788, it is closely related to Sanford's sea eagle of the Solomon Islands, and the two are considered as superspecies. The other English common names are White-bellied Fish-Eagle or White-bellied Sea-eagle. The taxonomy is monotypic. (<http://www.iucnredlist.org/details/22695097/0>). The species is considered as Least Concern (LC) and Lower risk under IUCN Red list. (<http://www.iucnredlist.org/>). It is categorized as Schedule -I species and protected under the Indian Wildlife (Protection) Act of 1972.

As a distinctive bird, the adult white-bellied sea eagle has a white head, breast, under-wing coverts and tail. The upper parts are grey and the black under-wing flight feathers contrast with the white coverts. The tail is short and wedge-shaped as in all *Haliaeetus* species. Like many raptors, the female is slightly larger than the male, and can measure up to 90 cm long with a wingspan of up to 2.2 meters and weigh 4.5 kg. Immature birds have brown plumage, which is gradually replaced by white until the age of five or six years. The call is a loud goose-like honking. The breeding range is from India to Tasmania (Raja Sekhar *et al.*, 2004). Reports suggest that besides swamps, lakes, reservoirs, billabongs, saltmarsh and sewage ponds (Boekel, 1976; Favaloro, 1944; Gosper, 1981) this eagle is also apparent in and/or flying over a variety of terrestrial habitats (Marchant & Higgins 1993). This bird in coastal regions of Odisha is holistically conserved as a large size and power. People do not harm to the bird, the chicks or the nests. The bird is commonly and locally called as "Kurubala" in Odisha and it has described in Sanskrit

literature. It has a wide distribution range on the seacoast of India. It feeds mainly on sea snakes and fishes. It occupies the same localities for several years of succession and nests high up in Casuarina trees (*Casuarina equisetifolia*) near the seashore (Ali, 1996). The lagoon supports a unique assemblage of marine, brackish water, and freshwater biodiversity. Chilika is important for migratory waterfowl and wetland bird species from the Arctic and Central Asian regions. It is internationally important as Ramsar site of India since the year 1991. The average water spread area of the lagoon is 1055sq.km. In addition to the coastal ecosystems in the Odisha, Chilika provides an extra homing range towards the land as the lagoon provides ample fish food for this prey bird. The other large birds competing for fish prey with sea eagle are Perhia kite or black kite (*Milvus migrans*), Brahminy kite (*Heliastur indus*), migratory ospreys, large gulls, and fishing eagles..

Our observations:

Observations over coastal Casuarina forest bring so many information about the gliding movements and hunting practices of white-bellied sea eagles. Other observations were done in the coastal Casuarina forest strips for roosting, nesting and preying activities. A maximum observation was done near a village's sacred banian tree for nesting and parental care to chicks.

The 3- 4 km wide coastal casuarina forest plays an important role in nesting and roosting site for residential birds like white-bellied sea eagles. The entire habitat was covered and around 5 permanent nesting sites were marked. The permanent nests were occupied by the same couple of bird years together. They use the same and old nest by additional repairs by nest materials for more than 4 years. These preying birds have the more homing instinct within their nesting area. They have a better-protected territory and displays more parental care to their chicks.

Fish predation in Chilika: it was observed that the sea eagles can also catch live fishes when found to be surface

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Table-1: Tabulated Observations

Sl.	Places where White-bellied Sea Eagles were located	Nos-WBSE	Activities-Rosting / nesting / sitting/ prying/flying	Heights (in feet)	Period of observation
1	Rajahansa -Tall Casuarina tree	1 pair	Nesting and roosting	35 feet	2years
2	Satpada Sacred Baniyan tree	1 pair	Nesting and roosting	45 feet	2- 3 years
3	Solari Rly.Stn-Eucalyptus tree	1 pair	Nesting and roosting	25 feet	3- 4years
4	Parikudagada Mobile tower	1 pair	Nesting and roosting	75 feet	2-years
5	Nalaban Island Bird Sanctuary	5 Nos	Flying and roosting	15 feet	1-2months
6	Kailijai Island hill, Rambha Breakfast Island casew field	3 Nos	Flying, sitting prey for fish and other reptiles	35 feet	1-2 years
7	Kantiagada Mobile tower	1 pair	Nesting and roosting	60 feet	2 years
8	Rushikulya sea turtle Rookery	1 pair	Feeding turtle eggs	12 feet	1-2 hours
9	Humma Salt and paddy fields	1 pair	Flying low to ground	10 feet	1-hours
10	Prayagi casuarina forest		Shoaring above forest	100feet	½ hours
11	Over Berhampur town sky	1 pair	Flying high	700feet	½ hours

swimming in the Chilika and its coastal sea water. Small to medium fishes were seen to be falling from the nests on trees that were carried as feed for the chicks. The Parent birds also clean the fish skeletons and picked it out of the nests after use by the chicks. The bird was observing the captured fishes in fish cages and traps in lake bays. Most of the time the white-bellied sea eagles were seen sitting over fence poles in fishnets and barricades (locally called as gheries).

White-bellied sea eagle in around Nalban Bird Sanctuary: the sea eagles perch over bamboo poles and cemented boundary pillar near the Nalban area and observed preyed to small duck species. For white-bellied sea eagles, It was easy to capture the ducks when in swimming and in feeding in groups. The sea eagle takes the fleshy portions of the preyed bird and rests are left for other small preying birds. Fish trapped in nets catch the attention of White-bellied Sea Eagle in Chilika. Sea Eagles and other birds often perch near fish traps in the hopes of finding easy prey. Unfortunately, they risk entanglement in the nets themselves should they take the risk of diving into the traps. Most of the time they were seen over Nalaban bird sanctuary boundary pillars.

White-bellied sea eagle in Rushikulya region: the sand dune ecosystems harbour diverse faunal assemblages including sea turtle nesting and hatching process. It was observed that the white-bellied sea eagles visited and preyed on the dispersed sea turtle eggs by stray dog or jackal in Rushikulya arribada beach. As the white-bellied sea eagles are most active during day hours, early dawn visits for taking sea turtle eggs and hatchlings during sea turtle nesting season in the rookery. In the southern part of Chilika, I sighted a couple of white-bellied sea eagles glide overhead just a few feet high above ground during April 2017 near Humma town. I never encounter before that so close to the ground that these big birds fly. The low flights below 10 feet high above paddy field croplands may be done to prey over small rodents and lizards. The maximum areal ht. of sea eagle fly is accessed to be 600 meters above ground. (Das

Plate-1: Images of White-bellied sea eagle taken during the study.

et al., 2012)

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