

Some Observations on Birds and Marine Mammals of Karachi Coast

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Abstract

The population of bird and marine mammals was studied through beach and boat surveys, conducted along Karachi coast, extending from Khuddi Creek to Cape Monz. A total of 55 species of birds and 2 species of cetaceans were observed. The population status, occurrence and distribution were also studied.

Key Words: Birds, Marine mammals, Karachi Coast

Introduction

Karachi coast is known for high diversity of bird and marine mammals. A total of 62 species of birds were reported by Hasan (1994) from the coast of Sindh including Karachi. Hasan (1996) considered Korangi/Phitti Creek System, along Karachi, to have more diversified bird fauna as compared to Shah Bundar (located on the eastern side of the River Indus). The mangrove thickets at Korangi/ Phitti creek system provide an ideal habitat for various species of birds. Siddiqui *et al* (2001) have given a comprehensive account of coastal areas Sindh, including Cape Monze, Korangi/ Phitti creek, Rehri, Shah Bundar, Sando Bundar and Keti Bunder. Ghalib and Hasnain (1994, 1997) and Ahmed *et al* (1988), Hasan and Ahmed (2000), Javed and Hasan (2004 a,b have also studies bird fauna of the coastal areas of Pakistan.

Humpback dolphin (*Sousa plumbea*) is a common dolphin and is found throughout East Africa and Indo-Malayan seas (Roberts, 1997). There were several records of its direct sightings from coastal areas of Karachi. Most of the direct sightings of the species were recorded in the months of November to January throughout coastal areas of Pakistan. Maximum number of this species was observed from Gwater Bay near Jiwani, Balochistan coast, where 27 animals were sighted in area of 2-3 km². Bottlenosed dolphin (*Tursiops truncatus*) is another common species in waters of Arabian sea, Indian Ocean, Indonesia and Australia (Roberts, 1997). This species is also commonly found in coastal waters of Pakistan. There are several records of direct sightings of humpback dolphin (*Sousa plumbea*), bottlenose dolphin (*Tursiops truncates*) and black finless porpoise (*Neophocaena phocaenoides*) in Indus Delta (ZSD, unpublished records) while Roberts (1977) has recorded the presence of 5 species of dolphins, i.e., long-beaked dolphin (*Delphinus tropicalus*), rough-toothed dolphin (*Steno bredanensis*), Indian humpback dolphin (*Sousa plumbea*), bottlenose dolphin (*Tursiops truncatus*) and Electra dolphin (*Peponocephala electra*), and one species of porpoise i.e. black finless porpoise (*Neophocaena phocaenoides*) from coastal waters of Pakistan (Roberts 1997).

Keeping in view the importance of birds and marine mammals in the coastal ecosystem especially to protect the population of cetacean, present baseline study was conducted.

Material and Methods

For the estimation of population of birds, line transect method was used, in which direct counting was made with the help of binocular and spotting scope. The area comprises of different habitats, including small to large channels of creeks and bird populations are not evenly distributed. The areas near the water channels usually support high bird population densities which make the data biased if compared with open coastal areas. To avoid biased estimation bird population density along the water channels were calculated instead of estimating the population of the whole area by modifying the techniques mentioned in Ahmed (1988). On islands, where line transect method was not possible, the birds populations were estimated by counting a portion of bird population of a single species with spotting scope and multiplying it with the number of similar portions on a island. Birds in flying condition were directly counted. To avoid the biased estimation the birds which were not uniformly distributed were also directly counted.

For marine mammal, main water channels along western side of Bandal Island, eastern side of Bandal Island, Phitti Creek main channel, channels towards Khuddi Creek was surveyed on boat. Keeping the speed of the boat constant, sightings obtained from boat transects were used to estimate the density of dolphins within the area on one or both sides of boats tracts. The per unit area was then extrapolated to the total area of the region to an estimate of the total population (Evans, 1987).

Results and Discussions

Bird belonging to 17 families, 32 genera and 55 species were observed along the Karachi coast between Cape Monze and Khudi Creek (Table I) of which 36 species were common while 12 species were regarded as less common and 7 as rare. According to Hasan (1994), 62 species of bird were recorded from Sindh coast, while during present study, 55 species of birds were reported. Hasan (1996 noted that area of Shah Bundar has greater avifauna diversity than Korangi/Phitti creek. These studies and observations made during the present study revealed that there is not much difference in the species diversity in the three areas.

During study, only one species of dolphin, i.e. bottlenose dolphin (*Turiops truncatus*), was sighted at two different locations. Both the sighting were made from east coast of Karachi. One was observed at Phitti Creek while the other was observed in Khuddi Creek. The direction of the movement of the dolphins in both the cases was from east to west. In addition, one beached carcass of black finless porpoise (*Neophocaena phocaenoides*) was observed on the west coast of Karachi.

Table I. Species of birds, their status, occurrence and population estimation from Karachi coast (Khuddi Creek to Cape Monze).

Species	Population size (Density / Km ²)	Occurrence	Status	Distribution
Little Grebe (<i>Tachybaptus ruficollis</i>)	50	R	C	WC
White Pelican(<i>Pelicanis oncorotalus</i>)	8	Wv	Lc	EC, WC
Great Cormorant (<i>Phalacrocorax carbo</i>)	462	Wv	C	EC, C, WC
Indian Shag (<i>Phalacrocorax fuscicallis</i>)	6	Wv	Lc	WC
Little Cormorant (<i>Phalacrocorax niger</i>)	(20) 15	R	Lc	EC, C, WC
Pond Heron (<i>Ardeola grayii</i>)	(200) 30	R	C	EC, WC
Reef Heron (<i>Egretta gularis</i>)	(250) 145	R	C	EC,C, WC
Little Egret (<i>Egretta garzetta</i>)	(250)162	R	C	EC, C, WC
Median Egret (<i>Egretta intermedia</i>)	22	R	Lc	EC, WC
Large Egret (<i>Egretta alba</i>)	4	R	R	EC
Grey Heron (<i>Ardea cinerea</i>)	13	Wv	Lc	EC,C,WC
Spoonbill (<i>Platalea leucorodia</i>)	25	Wv		WC
Flamingo (<i>Phoenicopterus ruber</i>)	(100) 1500	R	C	EC,C,WC
Common Shoveller (<i>Anas clypeata</i>)	84	Wv	C	C
Pariah Kite (<i>Milvus migrans govinda</i>)	(200)	R	C	EC,C,WC
Brahminy Kite (<i>Haliastur indus indus</i>)	(40) 26	R	C	EC,C,WC
Osprey (<i>Pandion haliaetus haliaetus</i>)	12	Wv	C	EC,WC
Common Coot (<i>Fulica atra</i>)	42	R	C	C
Painted Snipe (<i>Rostratula bengalensis</i>)	2	R	R	Wc
Oystercatcher (<i>Haematopus ostralegus</i>)	200	Wv	C	EC,WC
Black winged Stilt (<i>Himantopus himantopus</i>)	(20)	R	C	EC,WC
Little Ringed Plover (<i>Charadrius dubius</i>)	500	Wv	C	EC,WC
Ringed Plover (<i>Charadrius hiaticula</i>)	25	Wv	Lc	EC,WC
Kentish Plover (<i>Charadrius alexandrinus</i>)	3500	R	C	EC, WC
Mongolian Plover (<i>Charadrius mongolus</i>)	25	Wv	C	EC,WC
Greater Sand Plover (<i>Charadrius eschenaultii</i>)	2	Wv	R	WC
Grey Plover (<i>Pluvialis squatarola</i>)	27	Wv	C	EC
Red-wattled Lapwing (<i>Vanellus indicus</i>)	7	R	R	EC,C
Sanderling (<i>Calidris alba</i>)	5500	Wv	C	EC,WC
Little Stint (<i>Calidris minuta</i>)	7000	Wv	C	EC,C,WC
Curlew Sandpiper (<i>Calidris ferruginea</i>)	25	Wv	Lc	EC,WC
Dunlin (<i>Calidris alpina</i>)	7200	Wv	C	WC
Ruff (<i>Philomachus pugnax</i>)	12	Wv	Lc	EC

Black-tailed Godwit (<i>Limosa limosa</i>)	10	Wv	Lc	EC,WC
Bartailed Godwit (<i>Limosa lapponica</i>)	2	Wv	R	EC,WC
Whimbrel (<i>Numenius phaeopus</i>)	1	Wv	R	EC
Curlew (<i>Numenius arquata</i>)	72	Wv	C	EC,WC
Red Shank (<i>Tringa totanus</i>)	(600) 375	Wv	C	EC,C,WC
Marsh Sandpiper (<i>Tringa stagnatilis</i>)	3	Wv	Lc	EC,WC
Green shank (<i>Tringa nebularia</i>)	10	Wc	Lc	C
Green Sandpiper (<i>Tringa ochropus</i>)	4	Wv	R	C
Terek Sandpiper (<i>Tringa terek</i>)	5	Wv	Lc	EC, WC
Common Sandpiper (<i>Actitis hypoleucos</i>)	(500)1050	Wv	C	EC,WC
Great Blackheaded Gull (<i>Larus ichthyaetus</i>)	5	Wv	LC	EC
Blackheaded Gull (<i>Larus ridibundus</i>)	6600	Wv	C	EC,C,WC
Brown-headed Gull (<i>Larus brunnicephalus</i>)	1	Wv	R	EC
Slenderbilled Gull (<i>Larus genei</i>)	25	Wv	LC	EC,WC
Herring Gull (<i>Larus argentatus</i>)	508	Wv	C	EC,C,WC
Lesser Blackbacked Gull (<i>Larus fuscus fuscus</i>)	812	Wv	C	EC,WC
Gull-billed Tern (<i>Gelochelidon nilotica</i>)	179	Wv	C	EC,C,WC
Caspian Tern (<i>Hydroprogeni caspia</i>)	382	Wv	C	EC,C,WC
Sandwitch Tern (<i>Thalassens sandcenses</i>)	300	Wv	C	EC,WC
Common Tern (<i>Sterna hirundo</i>)	200	Wv	C	EC,WC
Little Tern (<i>Sterna albifrons</i>)	26	Wv	C	EC,WC
House Crow (<i>Corvus splendens</i>)	Many	R	C	EC,C,WC

Occurrence: R –Residence, Wv- Winter visitor

Status: C- Common, Lc –Less Common, R- Rare

Distribution: EC- East Coast, WC- West Coast, C- Clifton

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