

MIGRATORY WATERFOWLS IN DEH AKRO-II WILDLIFE SANCTUARY (A RAMSAR SITE)

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ABSTRACT

Deh Akro-II Wildlife Sanctuary is located in Shaheed Benazirabad, District of Sindh province in tropical thorn forest sand dune type vegetation zone. This sanctuary is considered internationally important, because it represent, the example of a natural land ecosystem comprising of a complex of 32 wetlands.

These wetlands are formed by the seepages from Jamrow and Nara canal. A general survey of the area was conducted in the month of January 2006 and direct (field observation) and indirect (meeting with communities and wildlife staff) observation methods were used.

These lakes support a good population of waterfowls, Marsh crocodiles, otters and fish stock. About 1% of global population of globally threatened duck specie i.e. Marbled teal (*Marmaronetta angustisvostris*) breed in these lakes in May-July. According to the data Deh Akro II wildlife sanctuary provides good wintering ground to the migratory waterfowls, as there was least disturbance. Moreover, this lake is a good habitat for the crocodiles as 200 -250 Crocodiles of different sizes were recorded in these lakes.

INTRODUCTION

Deh Akro-II Wildlife Sanctuary is located in Shaheed Benazirabad, District of Sindh Province at N 26° 22' 40.1" and E 68° 27' 44.0" in tropical thorn forest sand dune type vegetation zone. This area of mixed desert and wetland habitat was declared as Wildlife Sanctuary in 1988 (IUCN, 1989). This sanctuary is considered internationally important, because it represent, the example of a natural land ecosystem comprising of a complex of 32 wetlands and unique desert habitat which support, large variety of fauna and flora.

The sanctuary area of approximately 20,500 hectare is typical stable sand desert, stabilized by desert vegetation and well developed dune formations having elevation of 5 to 10 meters in an east-west orientation.

There are also flat-bottomed valleys between the dunes. These lakes are formed by the seepage from Nara canal during 1960's. These lakes are recharged through seepage from Nara and Jamrow canal or through rainwater. Soil texture of the area is of two types, sandy in the desert and clay mixed sandy soil in the low-lying areas. These lakes cover an area of 20,500 hectares and are formed in an inter dunal valleys one after the other. Their sized, shapes, water quality and depth are different and the largest lake is about 750 hectares. Out of 32 lakes, 5 are fresh water and rests is brackish. Water depth of the sanctuary lakes varies from 4-5 meter to 15 meters (Bhaagat, 2006). About 1% of global population of globally threatened duck specie i.e. Marbled teal (*Marmaronetta angustisvostris*) breed in these lakes in May-July (Khursheed, 2000).

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OBJECTIVES

- i. To record the population of migratory waterfowls.
- ii. To identify threats.

MATERIAL AND METHOD

A general survey of the area was conducted in the month of December-January and direct and indirect (meeting with communities and wildlife staff) observation methods were used. The bird's identification was done with the help of binocular, spotting scope and a field guide and the vegetation was identified and recorded in the field.

RESULT AND DISCUSSION



(Deh Akro-II Wildlife Sanctuary)

Deh Akro-II Wildlife Sanctuary represents the true example of unique desert and natural inland eco-system of wetland habitat types. This sanctuary has four major habitat types. Desert Habitat, Wetland Habitat, Agricultural Habitat, Marshy Habitat.

1. Desert Habitat



(Desert Habitat)

Sand dunes are main characteristic features of this habitat. The flora consists of Kandi (*Prosopis cineraria*), Mesquet (*Prosopis juliflora*), Desert Acacia (*Acacia*

jacquemontii), Kikar (*Acacia nilotica*), Salvadoria (*Salvidora oleoides*), Kirir (*Capparis deciduas*), Calligonulm polygonoides, Thatch grass (*Socharum spontaneum*), Munj (*Saccharum bengalensis*), Tamarix (*Tamrix aphylla*), Zizyphus (*Zizyphus nummularia*) and Tupha grasses.

2. Wetland Habitat



(Wetland Habitat)

Deh Akro-II is a complex of 32 lakes of various sizes, shapes and depths. These wetlands are formed by the seepages from Jamrow and Nara canal, flowing along the South-east boundary line of the Akro-II Wildlife sanctuary. Reed vegetation and Atalir (*Tamarix spp.*) can be observed at the margins of these lakes. These lakes support a good population of waterfowls, Marsh crocodiles, otters and fish stock. About 1% of global population of globally threatened duck specie i.e. Marbled teal (*Marmaronetta angustisvostris*) breed in these lakes in May-July. The vegetation of these wetlands areas i.e. *Farsetia bamiltonnii*, *Limestone indicum*, *Tribulus longipetalus*, *Cynnodon dactylon* (Lawn grass) and *Stipagrostis plumosd* (Desert grass).

During the present study, eight wetlands i.e. Yare wari, Kharoro wassu Sanhri, Taakar Dhand, Powran waro, Bolahi and Chach of Deh Akro-II were surveyed and the following data was recorded.

Table 1. Waterfowls recorded during the survey

English Name	Scientific name	Powan Wari	Kharor	Wassoo	Sanri	Takar Dhand	Parin Waro	Bolahi	Chach	Total
Ruddy Shelduck	<i>Tadorna ferruginea</i>	96	-	-	-	-	-	01	-	97
Common Teal	<i>Anas crecca</i>	-	-	-	-	90	25	-	-	115
Gadwall	<i>Anas strepera</i>	110	-	-	01	120	08	03	02	244
Shoveller	<i>Anas clypeata</i>	70	-	-	-	70	15	09	-	164
Wigeon	<i>Anas Penelope</i>	02	-	-	-	-	-	-	-	02
Little Grebe	<i>Podiceps nigricollis</i>	61	01	-	-	-	-	18	05	85
Moorhen	<i>Gallinula chloropus</i>	-	-	02	-	-	-	-	-	02
Little Cormorant	<i>Phalacrocorat niger</i>	-	-	66	-	-	-	-	-	66
Grey heron	<i>Ardea cineria</i>	-	-	02	-	-	-	-	-	02
Glossy Ibis	<i>Pelegadis falcinellus</i>	-	-	-	03	-	09	01	-	13
Darter	<i>Anhigna</i>	-	-	-	01	-	-	-	-	01

English Name	Scientific name	Powan Wari	Kharor	Wassoo	Sanri	Takar Dhand	Parin Waro	Bolahi	Chach	Total
	<i>melanogaster</i>									
Little Egret	<i>Egretta garzetta</i>	-	04	-	-	-	-	-	-	04
	Total	339	05	70	05	280	57	32	07	795

According to the data Deh Akro II wildlife sanctuary provides good wintering ground to the Migratory waterfowls, as there is low disturbance. Moreover, this lake is a good habitat for the crocodile, where estimated population in Deh Akro II, wildlife Sanctuary is about 250 – 300 crocodiles. (Personal communication).

3. Agricultural Habitat



(Agricultural Habitat)

This habitat comprises of Patches of irrigated agriculture field lying adjacent to the desert habitat and in inter dunal valleys *Alhagi camel thorum*, *Azadirachta indica*, *Ziziphys nummularia*, *Prosopis cineraria*, *Tamarindus indica*, *Amaranthis viridis* etc. The fauna comprises of good number of Black partridges (*Francolinus fracolinus*) and Grey partridges (*Francolinus pedicerianus*).

4. Marshy Habitat



(Marshy Habitat)

The vegetation of this habitat is: *Saccharum spontamei*, *Ruceha laneolata*, *Prosopis cineraria* and *Limestone indicum*. The fauna is composed of Marsh crocodiles (*Crocodylus palustris*), Indian monitor lizard (*Varanus bengalensis*), jungle cat (*Felis chaus*) and large variety of birds.

Beside the waterfowls the following birds were also recorded in the sanctuary areas:

Table 2. Common birds recorded during the survey

English Name	Scientific Name
Indian Grey shrike	<i>Lamas excubitor</i>
Yellow wattled lapwing	<i>Vanellus malabaricus</i>
Black winged stilt	<i>Himantopus himantopus</i>
Common red shank	<i>Tringa totunus</i>
Crested lark	<i>Gallirida cristata</i>
Jungle babbler	<i>Turdoides striatus</i>
Collard dove	<i>Streptopelia decaocta</i>
Yellow wagtail	<i>Motacilla flava</i>
Common sand piper	<i>Tringa hypoleucos</i>
Ringed plover	<i>Charadrius dubius</i>
White wagtail	<i>Motacilla alba</i>
Little green bee eater	<i>Nerops orientalis</i>
Indian robin	<i>Saxicoloides fulicata</i>
Black Drango	<i>Dierurus adsimilis</i>
Crow Pheasant/Coucal	<i>Centropus sinensis</i>
Indian tree pie	<i>Dendrocitta vagabunda</i>
Purple horen	<i>Ardeidae purpurea</i>
Intermediate egret	<i>Egretta intermedia</i>
Large egret	<i>Egretta alba</i>
Pond heron	<i>Ardeola grayii</i>
Red shank	<i>Tringa totanus</i>
Green shank	<i>Tringa nebularia</i>
Ruff	<i>Philomachus pugnax</i>
Indian shag	<i>Phalacrocorax carbo</i>
Sand grouse	<i>Pterocles Spp.</i>
Quails	<i>Coturnix conturix</i>

Threats

During the survey of the area different communities i.e. fishermen, locals, farmers and wildlife staff were consulted. According to the gathered information and field observation, the following threats were identified:

1. Salinity and water logging are the common problems in the area.
2. Hunting, fishing, grazing and fuel wood collection.
3. Agricultural practices and use of pesticide and agro chemicals.
4. Increase in human settlement and encroachment over sanctuary land.
5. Oil and gas exploration activities.
6. Water scarcity.

CONCLUSION

Deh Akro II wildlife sanctuary represents a unique example of four major habitat types and is a complex of 32 lakes of different sizes, shapes and depth which are formed by the seepage from Nara and Jamrow canals. Many rare and endangered wildlife species not only inhabit but also breed in this area. The lake supports a good population of waterfowls, marsh crocodiles, and otter and fish stock.

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