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Observations on the Waterbirds of Jiwani Wetland Complex, Makran Coast (Balochistan)

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Abstract.- Jiwani has been identified as an important wetland complex of coastal and inland wetlands for waterbirds. It is also a Ramsar site (Wetland of International Importance). This paper reports 81 species of waterbirds belonging to 6 orders and 16 families from the area during the period 2000 - 2004.

Key words: Avi-fauna, North Arabian Sea, Makran Coast, Coastal birds, Ramsar site.

INTRODUCTION

Jiwani is situated on Makran coast of Balochistan, on the extreme southwest, near Pakistan - Iran border (Fig. 1). The area is a true representative of an arid climate. It has diverse habitat types like freshwater, desert, marine, tropical thorn forests, mangroves and scrub zone. In the west, pouch shaped Gwatar Bay lies between the headlands of Iran and the rocky platform of Jiwani, bordered by a swampy region, which is the delta of Dasht River, one of the largest rivers in Balochistan. The bay penetrates 30 km inside the land. The continental shelf bordering the bay is relatively narrow and measures about 30 km in width. There is a wide beach along the bay, behind which are barrier bars, islets, mudflats and tidal lagoons with clump of mangrove forests.

The area is of outstanding importance as it supports mangroves, endangered marine turtles, marine mammals, marsh crocodile and a variety of birds. Many migratory waterbirds use the area as staging or wintering ground. It is one of the 19 existing Ramsar sites in Pakistan. Gwader, which is only at a 70 km distance from Jiwani, is now hub of developmental activities. The developmental activities will move into a new dimension with the passage of time and their effects will certainly be observed in Jiwani. The future development plans may adversely affect the ecological character of Jiwani as well.

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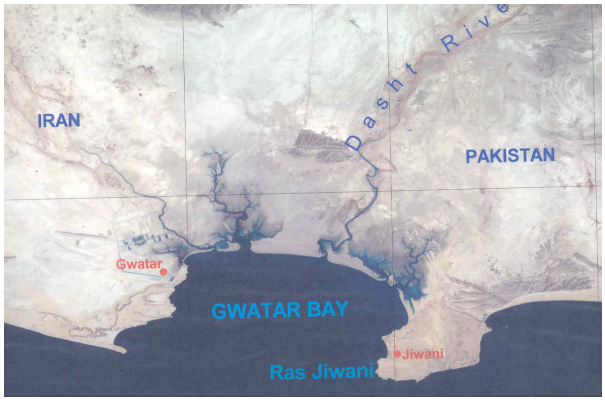

Fig. 1. Map of Makran coast of Balochistan, showing location of Jiwani, near Pakistan - Iran border.

Little knowledge exists about the species of birds occurring in the area. Roberts (1991) has given valuable information on birds of Pakistan but it lacks the particular information about the waterbirds of this area. Ahmed *et al.* (1992) have given a list of waterbirds of the Makran Coast but they have not given the details of occurrence of the birds on any particular locality. Ghalib and Hasnain (1997) have also given a list of birds distributed in the mangroves of Balochistan coast but they did not mention particular occurrence in Jiwani area. Arshad *et al.* (2002) recorded 125 species of birds including 62 species of waterbirds from the area. Ghalib *at al.* (2004) recorded 380 species of birds from Balochistan, out of which 128 species are waterbirds. They have also not given the specific localities of their occurrence.

MATERIALS AND METHODS

The following coastal and inland wetlands within Jiwani were selected for regular observation of birds. Mangrove swamps, Daran beaches, Akara Kaur and Saji Reservoirs, Dasht and Akara river estuaries. They are the representatives of the different wetland habitat types in Jiwani.

The study areas were visited at least once every month from January 2000 to December 2004 to record the waterbirds, which were observed and identified by using spotting scope.

Mid-winter waterbirds count was made on two wetlands viz. Jiwani mangroves and Akara Kaur Dam, representing coastal and inland wetlands respectively.

The identification of the birds in the field was carried out with the help of Sonobe and Usui (1993) and Grimmett *et al*. (1998).

RESUL TS AND DISCUSSION

Eight one species of waterbirds belonging to 6 orders and 16 families were recorded from the area (Table I). The area is important as some less common/rare species of birds such as dalmatian pelican, marbled teal, grey-lag goose, great thick-knee, black stork, ruddy shelduck, crab plover, red-breasted merganser, sanderling, knot and wood sandpiper have been recorded from different wetlands during these surveys. Greater thick-knee/great stone plover is very unusual in coastal area as it is usually found on inland lakes or rivers.

Table I.- List of Waterbirds recorded from Jiwani area.

Order	Family	Species	Common Name	Status	Habitat
Podicipediformes	Podicepididae	*Tachybaptus rubicollis*	Little Grebe	R, Common	Lakes, ponds, marshes
		Podiceps cristatus	Great Crested Grebe	W, Scarce	Lakes, marshes, estuaries, coastal waters
		Podiceps nigricollis	Black- necked Grebe	W, Scarce	Lakes, marshes, estuaries
Pelecaniformes	Pelecanidae	*Pelecanus onocrotalus*	Great White Pelican	W, Common	Lakes, marshes, estuaries, coasts
		Pelecanus crispus	Dalmatian Pelican	W, Scarce	Coasts, marshes
	Phalacrocoracidae	*Phalcrocorax carbo*	Great Cormorant	W, Scarce	Lakes, marshes, sheltered bays, coasts, estuaries
		Phalacrocorax niger	Little Cormorant	R, Common	Mangroves, marshes, lakes
		Anhinga melanogaster	Darter	W, Scarce	Mangroves, Coasts
Ciconiiformes	Ciconiidae	*Ciconia nigra*	Black Stork	W, Rare	Marshes, lakes
	Ardeidae	*Ardea cinerea*	Grey Heron	W, Common	Marshes, lakes, mudflats
		Ardeola grayii	Indian Pond Heron	R, Common	Marshes, lakes, mudflats
		Egretta alba	Great Egret	R, Scarce	Marshes, lakes, mudflats
		Egretta intermedia	Intermediate Egret	R, Scarce	Marshes
		Egretta garzetta	Little Egret	Common	Marshes, lakes, mudflats, mangroves

Continued

Order	Family	Species	Common Name	Status	Habitat
		Egretta sacra	Reef Heron	Common	Mangroves, mudflats, rocky coasts, marshes
	Threskionithidae	*Plegadis falcinellus*	Glossy Ibis	R, Scarce	Marshes, lakes
		Platalea leucorodia	White Spoonbill	Common	Marshes, estuaries, mangroves
	Phoenicopteridae	*Phoenicopterus ruber*	Greater Flamingo	R, Common	Estuaries, tidal mudflats
Anseriformes	Anatidae	*Anser anser*	Greylag Goose	W, Rare	Reservoir, lakes, marshes
		Tadorna ferruginea	Ruddy Shelduck	W, Rare	Saline ponds, marshes, lakes
		Tadorna tadorna	Common Shelduck	W, Scarce	Mudflats, saline/brackish h ponds
		Anas Penelope	Eurasian Wigeon	W, Common	Lakes, marshes
		Anas strepera	Gadwall	W, Common	Marshes, lakes, sheltered bays
		Anas crecca	Common Teal	W, Common	Lakes, marshes, pool
		Anas platyrhynchos	Mallard	W, Common	Lakes, marshes, sheltered bays
		Anas acuta	Pintail	W, Common	Lakes, marshes
		Anas clypeata	Shoveller	W, Common	Lakes, marshes
		Marmaronetta angustirostris	Marbled Teal	NBV, Scarce	Marshes, brackish pool
		Netta rufina	Red crested Pochard	W, Scarce	Lakes, marshes
		Aythya ferina	Common Pochard	W, Common	Lakes, rivers, marshes
		Aythya nyroca	Ferruginous Duck	W, Scarce	Lakes, marshes, bay
		Aythyafuligula	Tufted Duck	W, Common	Lakes, marshes
		Mergus serrator	Red breasted Merganser	W, Rare	Lakes, marshes
		Mergus merganser	Goosander	W, Rare	Lakes
Gruiformes	Rallidae	*Fulica atra*	Black Coot	W, Common	Lakes, reservoirs, ponds
		Gallinula chloropus	Moorhen	R, Common	Marshes
Charadriiformes	Dromadidae	*Dromas ardeola*	Crab Plover	W, Scarce	Coastal mudflats
	Haematopodidae	*Haematopus ostralegus*	Oystercatcher	W, Common	Rocky and sandy coasts, estuaries, mudflats
	Recurvirostridae	*Himantopus himantopus*	Black- winged Stilt	R, Common	Marshes, coasts, estuaries, mudflats
	Burhinidae	*Esacus recurvirostris*	Great Thick- knee or Great Stone Plover	R, Scarce	Coasts
	Charadriidae	*Vanellus indicus*	Red wattled Lapwing	R, Common	Marshes, ponds, estuaries
		Vanellus leucurus	White tailed Plover	PM, Scarce	Lakes, ponds

Continued

Order	Family	Species	Common Name	Status	Habitat
		Pluvialis squatarola	Grey Plover	W, Scarce	Coastal mudflats, sandflats
		Charadrius dubius	Little ringed Plover	W/R, Common	Coastal mudflats, sandflats
		Chardrius alexandrinus	Kentish Plover	W, Common	Coastal mudflats, sandflats
		Charadrius mongolus	Lesser Sand Plover	W/OS, Common	Coastal mudflats, sandflat
		Chardrius leschenaultia	Greater Sand Plover	W, Common	Coastal mudflats, sandflats
		Limosa limosa	Black tailed Godwit	Common	Coastal Mudflats
		Limosa lapponica	Bar tailed Godwit	Common	Sandflats
	Scolopacidae	*Numenius phaeopus*	Whimbrel	W/OS, Common	Mudflats
		Numenius arquata	Eurasian Curlew	W/OS, Common	Coasts, Mudflats
		Tringa tetanus	Common Redshank	W, Common	Coasts, mudflats, marshes
		Tringa nebularia	Common Greenshank	W, Common	Coasts, mudflats, marshes
		Tringa ochropus	Green Sandpiper	W, Scarce	Marshes
		Tringa glareola	Wood Sandpiper	W, Rare	Marshes, lakes
		Xenus cinereus	Terek sandpiper	W, Scarce	Mudflats
		Actitis hypoleucos	Common Sandpiper	W/OS, Common	Marshes, coast, mangroves, sandflats
		Calidris tenuirostris	Great Knot	W, Rare	Mudflats
		Calidris alba	Sanderling	W, Scarce	Sandy beaches, mudflats
		Calidris minuta	Little Stint	W/OS, Common	Mudflats
		Calidris temminckii	Temminck's Stint	W, Common	Marshes
		Calidris alpine	Dunlin	W/OS, Common	Mudflats, Sandflats
		Calidris ferruginea	Curlew Sandpiper	W, Scarce	Mudflats
		Limicola falcinellu	Broadbilled Sandpiper	W, Scarce	Mudflats
		Gallinago gallinago	Common/Fantail Snipe	PM, Scarce	Marshes
	Laridae	*Larus argentatus*	Herring Gull	W, Common	Coasts, marshes
		Larus fuscus	Lesser Black - backed Gull	W, Common	Coasts, marshes
		Larus ichthyaetus	Great Black - headed Gull	W, Scarce	Coasts, marshes
		Larus ridibundus	Black headed Gull	W/OS, Common	Coast, estuaries, mudflat, Lakes, marshes
		Larus genei	Slender billed Gull	R, Common	Coast, estuaries, marshes
		Larus hemprichi	Sooty Gull	R, Scarce	Coasts
		Gelochelidon nilotica	Gull-billed Tern	W/OS, Common	Coasts, estuaries, lakes, marshes
		Hydroprogne caspia	Caspian Tern	YRV, Common	Coasts, estuaries, lakes, Marshes

Continued

Order	Family	Species	Common Name	Status	Habitat
		Sterna albifrons	Little Tern	R, Common	Coasts, lakes
		Sterna hirundo	Common Tern	NBV, Common	Coasts
		Thalasseus bergii	Greater Crested Tern	R/YRV, Scarce	Coasts, Estuaries
		Sterna bengalensis	Lesser Crested Tern	YRV, Scarce	Coasts
		Thalasseus sandvicensis	Sandwich Tern	YRV, Common	Coasts, Marshes
		Sterna saundersi	Saunder's Tern	R, Scarce	Coasts, Marshes
		Sterna bergii	Swift tern -	YRV, Rare	Coasts
		Sterna anaethetus	Bridled Tern	YRV, Rare	Coasts

R, resident; W, winter visitor; YRV, year round visitor;
OS, over summering; NBV, Non-breeding visitor; PM, passage migrant

Table II.- Population of waterbirds recorded during mid winter (January) census.

Name of Wetland	1997	1999	2002	2003	2004	2005
Jiwani Mangroves (Panwan Hor)	4,174 (24 species)	5,896 (24 species)	960	1,534 (21 species)	2,150 (25 species)	4,611 (31 species)
Akara Kaur Dam	367 (7 species)	1,209 (11 species)		527 (9 species)		65 (7 species)

(Counts not done in 1998, 2000 and 2001).

Most of the waterbirds (64 species) observed in the area are migratory. They usually arrive in late August or September .and leave by the end of April. There are some migrants which over summer in the area like little ringed plover, sand plovers, little stint, dunlin and black-headed gull. Swift tern, bridled tern, whiskered tern and sandwich tern are year round visitors. Red knot and golden plover are vagrant. The wetlands of Jiwani are important for supporting the waders and gulls and terns even outside the migratory season and also marbled teal which migrates from Iran though in small numbers.

Midwinter waterbird counts made during the month of January, every year on two wetlands of Jiwani reveal that the population on the coastal wetland is stable and there is not much difference (Table II). About 4000 waterbirds use the area during the migratory season. However, the population of birds on the inland freshwater wetlands is declining due to increasing disturbances as a result of the developmental activities in nearby Gwadar town.

The population of waterbirds has recently fallen down on the wetlands of Pakistan, particularly due to degradation of most of the wetlands due to lack of management, disturbance and drought. Thus waterbird numbers have fallen down on the wetlands of Balochistan as well. There seems a hope for the improvement in the wetland situation in Balochistan in view of heavy rains in February 2005 after drought for seven years in the Province.

Most of the wetlands in the Balochistan Province are unprotected. There is a need to protect the fragile ecosystem of Mekran coast first by declaring the wetlands of Jiwani area as a protected site. There is also an urgent need to compile detailed baseline data (particularly for stock assessment of the fisheries resources). The Government of Pakistan has approved the implementation of Protection and Management of Pakistan Wetlands Project on 11th April 2005. It is hoped that the wetland biodiversity will be sustainably conserved through the design and implementation of progressive, consultative management plans for four

representative sites of the country which includes the Makran Coastal Wetland Complex.

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