



Short Communication

POPULATION DISTRIBUTION OF COASTAL BIRDS OF SINDH

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INTRODUCTION

Pakistan has been gifted with a huge coastal area with a coastline running along Sindh and Balochistan provinces. Sindh Coast is composed of about 230 km of area. Indus Delta and Karachi coastal regions are included in Sindh Coast which is surrounded by Sir Creek on the east with the South-eastern part of Pakistan between the Indian border while on the west side Balochistan coast and Hub river are located. Most important role has been played by Indus Delta covering the area of 2,560 sq. km which serve as the main pool of ecological richness. It comprises of about 85% of total coast line. Sindh Coastline is the combination of diverse features including patches of randomly distributed mangrove forests, many small islands and the ranges of tidal creeks (ESCAP, 1996).

Sufficient information about wetlands, waterbirds and coastal birds of Pakistan is available including Ahmed *et al.* (1999), Amjad and Kidwai (2003), Chaudhry *et al.* (2012), Damboureyeh and Ghalib (2014), Durrane *et al.* (2008), Ghalib and Hasnain (1994), Ghalib and Bhaagat (2004), Ghalib *et al.* (2002, 2006, 2009, 2013), Grimmett *et al.* (1998, 2008), Hassan (1994, 2005) Hasan and Brohi (2009), Hasan *et al.* (2005), Hussain (2014), IFAP (2009), Jabeen *et al.* (2014), Javed and Hassan (2004, 2005), Khan *et al.* (2014), Khan and Ghalib (2006), Khurshid (2000), Pernetta (1993), Mirza (2007), Roberts *et al.* (1986), Scott (1989), Scott and Poole (1989) and Siddiqui *et al.* (2001, 2008). The objective of present study was to review the distribution, status and current trends in the population of coastal birds of Sindh areas.

MATERIALS AND METHODS

Surveys were undertaken in the coastal areas of Sindh during 2012 to 2016 where the important study area included the intertidal zone and the area upto about 1km from it towards the landward side. This habitats for the birds were found including the sand flats, mud flats, salt marshes, brackish pools, lagoons, sand dunes, mangrove areas, gravel and pebble grounds, rocky beaches, cliffs,

rocky islands, wasteland and built up areas. The landward area supported majority of birds, other than the exclusively coastal ones, which are always quite active here due to the availability of a favorable habitats for them such as marshes, tidal lagoons, coastal vegetation including the mangrove forest, vicinity of villages and fishing sites.

DISCUSSION

Following coastal areas have been identified as very important for the coastal birds in Sindh.

Sindh Coast

1. Runn of Kutch

Runn of Kutch Wildlife Sanctuary bordering with India is a Ramsar site. The area has permanent saline marshes, coastal brackish lagoons, tidal mudflats and estuarine habitats. The site supports large number of migratory and resident birds including the Greater and Lesser Flamingos, White and Dalmatian Pelicans, Ducks and Shorebirds (Ghalib *et al.*, 2013).

2. Nurri-ri- Lagoon

Situated in Shaheed Fazil Raho Tehsil of Badin district, it is a shallow brackish-water lagoon with mudflats. In this area 85 species of birds have been reported (Javed and Hassan, 2004). The wetland is a Ramsar site.

3. Jubho/Kur

It is a large shallow brackish lagoon with mudflats at the end of the Karo Ghungro Outfall Drain on the edge of the salt flats of the great Runn of Kutch near Shaheed Fazil Raho in Thatta district. It is a Ramsar site. It is a important area for a wide variety of waterbirds notably Pelicans, Flamingos, Shelducks, Common Crane, Shorebirds, Gulls, Gullbilled and Whiskered Terns, and 28 species of birds have been recorded from the area (Javed and Hassan, 2005). Now, the wetland is mostly dry to seepage of its water into the adjacent sim nallah. Freshwater supply to the wetland has been discontinued from Muleha Canal due to overall scarcity of freshwater.

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The communities have established shops and tea stalls in the nearby area.

4. Indus Delta

The Indus Delta occupies an area of 600,000 ha and comprises of 17 major creeks, numerous minor creeks and extensive mudflats. It is a Ramsar Site. Keti Bunder and Kharo Chhan are the areas of great ecological value (Damboureyeh and Ghalib, 2014).

i. Keti Bunder

Situated in the Indus Delta at about 200 km southeast of Karachi, Keti Bunder stretches over 60,296 ha. There are four major creeks in the area viz. Chann, Hajamro, Khobar and Kangi/Turshan. Keti Bunder and the surroundings coastal areas are ecologically very rich (Hasnain, 2005). The coastal mangrove forests support a variety of marine and terrestrial fauna and a rich diversity of avifauna, and 68 species of birds have been recorded from the area (IFAP, 2009). Two Wildlife Sanctuaries have been declared viz. Keti Bunder North and Keti Bunder South mainly for the protection and conservation of waterbirds and the mangroves.

The migratory birds of the area include Pelicans, Herons and Egrets, Gulls and Terns, Waders, Birds of Prey, Black headed Ibis and Painted Stork. Total 51 species of birds have been recorded from Keti Bunder, Kharo Chhan and Shah Bunder area (Hassan *et al.*, 2005).

ii. Kharo Chhan

Another nearby coastal area is the Kharo Chhan area which is the part of the deltaic ecosystem. The area mostly consists of marshes, fallow land, agricultural area, water channels, river bank, coastal and creek area. The key species of the avifauna include Painted Stork, Oyster-catcher, Crab Plover, Black-bellied Tern and many birds of prey including the Brahminy Kite.

5. Karachi Coast

It contains the following important sites:

i. Korangi/ Rehri Creek Area

It extends from Gizri Creek at the mouth of Malir River in the West of Korangi Township, Korangi Industrial Area, Landhi, Landhi Industrial Area, Quaidabad, Cattle Colony and Lath Basti in the North, FOTCO jetty and Port Qasim Industrial Area in the Northeast; the Steel Mill in the far east, and the large mudflats covered by mangrove forest in addition to the navigation channel of Port Qasim in the south (IUCN, 2003, 2005).

The following birds were generally recorded in the area due to the presence of varied habitats in the area: Cattle Egret, Little Egret, Large Egret, Pond Heron, Reef Heron, Common Sandpiper, Redshank, Kentish Plover, Redwattled Lapwing, Little Stint, Blackwinged Stilt, Curlew, Temminck's Stint, Black tailed Godwit, Little

Tern, Black bellied Tern, House Crow, Little Brown Dove, Common Kite, Bank Myna, Common Myna, Green Bee-eater, White Cheeked Bulbul, House Sparrow, Indian Robin, Steppe Eagle, Blue Rock Pigeon, Crested Lark, Yellow Wagtail and Long tailed Bush Warbler.

ii. Sandspit/ Hawkes bay Area

Sandspit/ Hawkes bay area contains mangrove swamps, saline ponds, estuaries, salt pans and the main coast. These locations have immense significance in the coastal ecosystem, particularly for birds. As many as 104 species of birds have been recorded from the area (Durrane *et al.*, 2008). Another study, Jabeen *et al.* (2014) have recorded 96 species of birds from the Sandspit /Hawks bay Backwater area.

iii. Buleji Beach and Cape Monze

On the outskirts of Karachi along the Western seaboard, Buleji is situated about 39 km from the city center and the Cape Monze is about 45 km away. There is a rocky coastline with intervening sand beaches, and some degraded mangroves at the southern end. Important bird species include Pallas's Gull, Sooty Gull, Brown-headed Gull, Slender billed Gull, Caspian Tern, Gull billed Tern, Great Crested Tern, Lesser Crested Tern and Saunder's Tern throughout the year. During monsoon, White-cheeked Tern and Wilson's Storm Petrel can be seen off shore (Grimmett *et al.*, 2008). From Sandspit to Cape Monze 41 species of birds have been reported (Hassan and Brohi, 2009) and during this study, same species were recorded.

Species of the Birds Recorded from the Coastal and Nearby Areas

A total of 160 species of birds have been recorded from the Sindh Coastal and allied Areas (Table 2). These comprise of five main groups including the Waterbirds, (Grebbs, Pelicans, Cormorants, Indian darter, Herons, Egrets, Storks, Ibises, Spoonbill, Common coot, Ducks, Waders (Oyster catcher, Charadriids, Scolopacids, Painted snipe, Skuas, Black winged stilt, Avocet, Crab plover and Great thick-knee), Birds of Prey (Kites, Buzzards, Shikra, Vultures, Osprey, Marsh Harrier, Eagles, Kestrels, Peregrine Falcon and Hobby), Passerines (Blue Rock Pigeon, House Swift, Indian Roller, King fishers, Bee eaters and Common Hoopoe). The other group of birds comprises of Sea birds including the Arctic Skua and Pomarine Skua. The Waders are the dominant and widespread group in the coastal areas, followed by the Ardeids and birds of prey.

Status of the Coastal Birds

The most common, dominant, and widespread waterbirds on the Coast are the waders or the shorebirds. Majority of these birds are found in shallow water habitats during the non-breeding period.

As regards the species found to be restricted to (marine) Coastal areas, six species of birds have been recorded only from this particular habitat. These include: Sooty Gull, Sandwich Tern, Saunder's Tern / Black-shafted Ternlet, Great Crested Tern, Lesser Crested Tern, and White-cheeked Tern.

Eleven species of birds have been recorded either to be rare or localized over the coast. These include: Oystercatcher, Sanderling, Avocet, Crab Plover, Painted Stork, Black Stork, White Ibis, Black Ibis, Black headed Ibis, White-cheeked Tern and Black-shafted Ternlet.

As regards the seasonal status of the coastal birds, 62 species were recorded as resident, while 98 species were found to be migrant (Table 1).

Out of 160 species of birds recorded, 62 species were found to be resident, while 98 species were migratory. These migratory species may be classified as winter visitors (83 species), 02 passage migrants (Bluecheeked Bee-eater and Yellow Wagtail), 04 summer breeding visitors (Yellow Wattled Lapwing), Southern Grey Shrike, Blue Cheeked Bee-eater and Saunder's Tern). 03 summer visitors (Common Tern, White cheeked Tern and Sooty Gull), 06 irregular migrants (Crab Plover, Caspian Tern, Whiskered Tern, Large Crested Tern, Lesser Crested Tern and Sandwich Tern).

Threats

There is a significant decline in the numbers of majority of waterbirds visiting the coastal areas due to hunting, habitat degradation, loss of habitat (particularly at Karachi Coast) and disturbance. Actually, the species diversity and their numbers has considerably declined during the recent years mainly due to loss of habitat through land reclamation for the development of Defense Housing Authority schemes on the Karachi coast. Such land reclamation has also been responsible for sea intrusion in Keti Bunder area of Thatta district.

Threatened Species

The threatened birds recorded from the Coastal area include: Egyptian Vulture (E), Cinereous Vulture (E), Greater Spotted Eagle (V), Dalmatian Pelican (V) Painted

Stork (NT), Black bellied Tern (NT), and Rufous vented Prinia (NT), Indian Darter (NT), Lesser Flamingo (NT), Back tailed Godwit (NT), Eurasian Curlew (NT) and Black headed / Oriental White Ibis (NT).

Priority Actions

Sites which are Ramsar Sites such as Nurri-ri, Jubho, Indus Delta, Runn of Kutch, and the Important Bird Area (IBA_S) such as Hawkes bay / Sandspit, Runn of Kutch area and the Protected Areas (PA_S) such as Keti Bundar should be given special attention with regards to conservation and management of habitats.

The population of certain species of birds has been declining on the coast in recent years, such as Oyster catcher, Sanderling, Curlew Sandpiper, Broad billed Sandpiper, Great Knot and Grey Plover. The trends in their population need to be monitored through AWC to be undertaken regularly in the coastal areas.

Bird Monitoring programs may be undertaken with respect to the impacts of wind power energy projects on the biodiversity of the area, particularly migratory birds in Gharo Wind Corridor, district Thatta.

CONCLUSION

Indian Border in the east to Iranian border in the west possesses some very important habitats for birds. These habitats include sea beaches, mudflats, mangroves, marshes, rocky cliffs, headlands, bays, lagoons, estuaries and deltas. During the migratory season, the waterbirds migrating to Pakistan follow the Central Asian Flyway. The coastal habitats serve as the feeding, roosting, resting, staging and nesting areas for the Birds. Studies were undertaken on Sindh Coast to record the distribution, status and current trends in the population of coastal birds. The birds were recorded in the coastal areas along with their preferred habitats and status. As many as 160 species of birds were recorded from the area, out of which 65 species were resident, while 95 species were migratory. Major threats to coastal birds are habitat degradation, hunting and loss of habitat due to land reclamation. The species of special conservation interest have been listed, and priority actions for the conservation of threatened

Table1. Seasonal Status of the Coastal Birds.

S. No.	Birds	No. of Species recorded
01	Resident (R)	63
02	Winter Visitor (WV)	81
03	Passage Migrant (PM)	02
04	Migrant (M)	06
05	Summer Breeding Visitor (SBV)	04
06	Summer Visitor (SV)	03
	Total	159

birds and their habitats suggested such as development of network site, monitoring of coastal birds population and coastal bird's network, appropriate management of initiation of projects on coastal birds migration.

Table 2. A Checklist of Coastal Birds of Sindh.

S. No.	Order	Family	Scientific Name	Common Name	Status
1	Podicipediformes	Podicipedidae	<i>Podiceps cristatus</i>	Great Crested Grebe	WV
2	Podicipediformes	Podicipedidae	<i>Podiceps nigricollis</i>	Black Necked Grebe	WV
3	Podicipediformes	Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Grebe	R
4	Pelecaniformes	Pelecanidae	<i>Pelecanus onocrotalus</i>	White or Rosy Pink Pelican	WV
5	Pelecaniformes	Pelecanidae	<i>Pelecanus crispus</i>	Dalmatian Pelican	WV
6	Pelecaniformes	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	Large Cormorant	WV
7	Pelecaniformes	Phalacrocoracidae	<i>Phalacrocorax fuscicollis</i>	Indian Shag	R
8	Pelecaniformes	Phalacrocoracidae	<i>Phalacrocorax niger</i>	Little Cormorant	R
9	Pelecaniformes	Anhingidae	<i>Anhinga rufa</i>	Indian Darter	R
10	Ciconiiformes	Ardeidae	<i>Ardea purpurea</i>	Purple Heron	R
11	Ciconiiformes	Ardeidae	<i>Ardeola grayii</i>	Indian Pond Heron	R
12	Ciconiiformes	Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	R
13	Ciconiiformes	Ardeidae	<i>Butoroides striatus</i>	Little Green Heron	R
14	Ciconiiformes	Ardeidae	<i>Egretta intermedia</i>	Smaller or Median Egret	R
15	Ciconiiformes	Ardeidae	<i>Egretta garzetta</i>	Little Egret	R
16	Ciconiiformes	Ardeidae	<i>Egretta gularis</i>	Indian Reef Heron	R
17	Ciconiiformes	Ardeidae	<i>Nycticorax nycticorax</i>	Night Heron	R
18	Ciconiiformes	Ciconiidae	<i>Ibis leucocephalus</i>	Painted Stork	R
19	Ciconiiformes	Ciconiidae	<i>Ciconia nigra</i>	Black Stork	WV
20	Ciconiiformes	Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	R
21	Ciconiiformes	Threskiornithidae	<i>Pseudidris papillosa</i>	Black Ibis	WV
22	Ciconiiformes	Threskiornithidae	<i>Threskiornis melanocephalus</i>	Blackheaded Ibis	R
23	Ciconiiformes	Threskiornithidae	<i>Platalea leucorodia</i>	Eurasian Spoonbill	WV
24	Ciconiiformes	Phoenicopteridae	<i>Phoenicopterus roseus</i>	Flamingo	WV
25	Ciconiiformes	Phoenicopteridae	<i>Phoenicopterus minor</i>	Lesser Flamingo	WV
26	Anseriformes	Anatidae	<i>Tadorna tadorna</i>	Common Shelduck	WV
27	Anseriformes	Anatidae	<i>Anas acuta</i>	Pintail	WV
28	Anseriformes	Anatidae	<i>Anas crecca</i>	Common Teal	WV
29	Anseriformes	Anatidae	<i>Anas platyrhynchos</i>	Mallard	WV
30	Anseriformes	Anatidae	<i>Anas strepera</i>	Gadwall	WV
31	Anseriformes	Anatidae	<i>Anas penelope</i>	Wigeon	WV
32	Anseriformes	Anatidae	<i>Anas clypeata</i>	Shoveller	WV
33	Anseriformes	Anatidae	<i>Aythya ferina</i>	Common Pochard	WV
34	Anseriformes	Anatidae	<i>Aythya fuligula</i>	Tufted Duck	WV
35	Falconiformes	Accipitridae	<i>Milvus migrans</i>	Black Kite	R
36	Falconiformes	Accipitridae	<i>Haliastur indus</i>	Brahminy Kite	R
37	Falconiformes	Accipitridae	<i>Buteo buteo</i>	Common Buzzard	WV
38	Falconiformes	Accipitridae	<i>Buteo rufinus</i>	Longlegged Buzzard	WV
39	Falconiformes	Accipitridae	<i>Accipiter badius</i>	Central Asian Shikra	R
40	Falconiformes	Accipitridae	<i>Aegypius monachus</i>	Cinereous Vulture	WV
41	Falconiformes	Accipitridae	<i>Neophron percnopterus</i>	Egyptian Vulture	R
42	Falconiformes	Pandionidae	<i>Pandion haliaetus</i>	Osprey	WV
43	Falconiformes	Accipitridae	<i>Circus aeruginosus</i>	Marsh Harrier	WV

Table continued...

Table 2 continue...

S. No.	Order	Family	Scientific Name	Common Name	Status
44	Falconiformes	Accipitridae	<i>Aquila rapax</i>	Tawny Eagle	R
45	Falconiformes	Accipitridae	<i>Aquila nipalensis</i>	Steppe Eagle	WV
46	Falconiformes	Accipitridae	<i>Aquila clanga</i>	Greater Spotted Eagle	WV
47	Falconiformes	Falconidae	<i>Falco tinnunculus</i>	Kestrel	R
48	Falconiformes	Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon	WV
49	Falconiformes	Falconidae	<i>Falco subbuteo</i>	Hobby	WV
50	Gruiformes	Rallidae	<i>Fulica atra</i>	Common Coot	WV
51	Charadriiformes	Haematopodidae	<i>Haematopus ostralegus</i>	Oyster Catcher/Sea-Pie	WV
52	Charadriiformes	Charadriidae	<i>Vanellus leucurus</i>	White Tailed Lapwing	WV
53	Charadriiformes	Charadriidae	<i>Vanellus indicus</i>	Red Wattled Lapwing	R
54	Charadriiformes	Charadriidae	<i>Vanellus malsabaricus</i>	Yellow Wattled Lapwing	SBV
55	Charadriiformes	Charadriidae	<i>Pluvialis squatarola</i>	Grey Plover	WV
56	Charadriiformes	Charadriidae	<i>Charadrius leschenaultia</i>	Large Sand Plover	WV
57	Charadriiformes	Charadriidae	<i>Charadrius hiaticula</i>	Ringed Plover	WV
58	Charadriiformes	Charadriidae	<i>Charadrius dubius</i>	Little Ringed Plover	WV
59	Charadriiformes	Charadriidae	<i>Charadrius alexandrinus</i>	Kentish Plover	WV
60	Charadriiformes	Charadriidae	<i>Charadrius mongolus</i>	Lesser Sand Plover	WV
61	Charadriiformes	Scolopacidae	<i>Calidristenuirostris</i>	Great Knot	WV
62	Charadriiformes	Scolopacidae	<i>Numenius phaeopus</i>	Whimbrel	WV
63	Charadriiformes	Scolopacidae	<i>Numenius arquata</i>	Eurasian Curlew	WV
64	Charadriiformes	Scolopacidae	<i>Limosa limosa</i>	Black tailed Godwit	WV
65	Charadriiformes	Scolopacidae	<i>Limosa lapponica</i>	Bartailed Godwit	WV
66	Charadriiformes	Scolopacidae	<i>Tringa erythropus</i>	Spotted or Dusky Redshank	WV
67	Charadriiformes	Scolopacidae	<i>Tringa totanus</i>	Common Redshank	WV
68	Charadriiformes	Scolopacidae	<i>Tringa stagnatilis</i>	Marsh Sandpiper	WV
69	Charadriiformes	Scolopacidae	<i>Tringa nebularia</i>	Greenshank	WV
70	Charadriiformes	Scolopacidae	<i>Tringa ochropus</i>	Green Sandpiper	WV
71	Charadriiformes	Scolopacidae	<i>Tringa glareola</i>	Wood or Spotted Sandpiper	WV
72	Charadriiformes	Scolopacidae	<i>Tringa terek</i>	Terek Sandpiper	WV
73	Charadriiformes	Scolopacidae	<i>Tringa hypoleucos</i>	Common Sandpiper	WV
74	Charadriiformes	Scolopacidae	<i>Arenaria interpres</i>	Turnstone	WV
75	Charadriiformes	Scolopacidae	<i>Gallinago gallinago</i>	Common or Fantail Snipe	WV
76	Charadriiformes	Scolopacidae	<i>Calidris albus</i>	Sanderling	WV
77	Charadriiformes	Scolopacidae	<i>Calidris minutus</i>	Little Stint	WV
78	Charadriiformes	Scolopacidae	<i>Calidris temminckii</i>	Temminck's Stint	WV
79	Charadriiformes	Scolopacidae	<i>Calidris alpinus</i>	Dunlin	WV
80	Charadriiformes	Scolopacidae	<i>Calidris testaceus</i>	Curlew-Sandpiper	WV
81	Charadriiformes	Scolopacidae	<i>Limicola falcinellus</i>	Broadbilled Sandpiper	WV
82	Charadriiformes	Scolopacidae	<i>Philomachus pugnax</i>	Ruff	WV
83	Charadriiformes	Scolopacidae	<i>Phalaropus lobatus</i>	Rednecked Phalarope	WV
84	Charadriiformes	Rostratulidae	<i>Rostratula benghalensis</i>	Painted Snipe	R
85	Charadriiformes	Stercorariidae	<i>Stercorarius pomarinus</i>	Pomarine Skua	WV
86	Charadriiformes	Stercorariidae	<i>Stercorarius parastiticus</i>	Arctic Skua	WV

Table continued...

Table 2 continue...

S. No.	Order	Family	Scientific Name	Common Name	Status
87	Charadriiformes	Recurvirostridae	<i>Himantopus himantopus</i>	Blackwinged Stilt	R
88	Charadriiformes	Recurvirostridae	<i>Recurvirostra avosetta</i>	Avocet	WV
89	Charadriiformes	Dromadidae	<i>Dromas ardeola</i>	Crab Plover	M
90	Charadriiformes	Burhinidae	<i>Esacus recurvirostris</i>	Great Thick-Knee	R
91	Charadriiformes	Laridae	<i>Larus hemprichii</i>	Sooty Gull	SV
92	Charadriiformes	Laridae	<i>Larus argentatus</i>	Herring Gull	WV
93	Charadriiformes	Laridae	<i>Larus fuscus</i>	Lesser Black backed Gull	WV
94	Charadriiformes	Laridae	<i>Larus ichthyaetus</i>	Great Black headed Gull	WV
95	Charadriiformes	Laridae	<i>Larus brunnicephalus</i>	Brown headed Gull	WV
96	Charadriiformes	Laridae	<i>Larus ridibundus</i>	Black headed Gull	WV
97	Charadriiformes	Laridae	<i>Larus genei</i>	Slenderbilled Gull	R
98	Charadriiformes	Sternidae	<i>Chlidonias hybrida</i>	Indian Whiskered Tern	M
99	Charadriiformes	Sternidae	<i>Gelochelidon nilotica</i>	Gullbilled Tern	WV
100	Charadriiformes	Sternidae	<i>Hydroprogne caspia</i>	Caspian Tern	M
101	Charadriiformes	Sternidae	<i>Sterna hirundo</i>	Common Tern	SV
102	Charadriiformes	Sternidae	<i>Sterna repressa</i>	White checked Tern	SV
103	Charadriiformes	Sternidae	<i>Sterna albifrons</i>	Little Tern	R
104	Charadriiformes	Sternidae	<i>Sterna saundersi</i>	Black shafted Ternlet/ Sanuder's Tern	SBV
105	Charadriiformes	Sternidae	<i>Sterna bergii</i>	Large Crested Tern or Swift Tern	M
106	Charadriiformes	Sternidae	<i>Sterna bengalensis</i>	Indian Lesser Crested Tern	M
107	Charadriiformes	Sternidae	<i>Sterna sandvicensis</i>	Sandwich Tern	M
108	Charadriiformes	Sternidae	<i>Sterna acuticauda</i>	Black-bellied Tern	WV
109	Columbiformes	Columbidae	<i>Columba livia</i>	Blue Rock Pigeon	R
110	Apodiformes	Apodidae	<i>Apus affinis</i>	House Swift	R
111	Coraciiformes	Coraciidae	<i>Coracias benghalensis</i>	Indian Roller or Blue Jay	R
112	Coraciiformes	Alcedinidae	<i>Ceryle rudis</i>	Indian Pied Kingfisher	R
113	Coraciiformes	Alcedinidae	<i>Alcedo atthis</i>	Indian Small Blue Kingfisher	R
114	Coraciiformes	Alcedinidae	<i>Halcyon smyrnensis</i>	White breasted Kingfisher	R
115	Coraciiformes	Meropidae	<i>Merops superciliosus</i>	Blue cheeked Bee-eater	SBV
116	Coraciiformes	Meropidae	<i>Merops orientalis</i>	Green Bee-eater	R
117	Coraciiformes	Upupidae	<i>Upupa epops</i>	Hoopoe	WV
118	Passeriformes	Alaudidae	<i>Ammomanes deserti</i>	Desert Finch-Lark	R
119	Passeriformes	Alaudidae	<i>Ammomanes cincturus</i>	Bar-tailed Lark	R
120	Passeriformes	Alaudidae	<i>Alaemon alaudipes</i>	Hoopoe Lark	R
121	Passeriformes	Alaudidae	<i>Calandrella acutirostris</i>	Hume's Short toed Lark	WV
122	Passeriformes	Alaudidae	<i>Galerida cristata</i>	Crested Lark	R
123	Passeriformes	Alaudidae	<i>Galerida raytal</i>	Indus Sand Lark	R
124	Passeriformes	Hirundinidae	<i>Riparia paludicola</i>	Plain Martin	R
125	Passeriformes	Hirundinidae	<i>Hirundo rustica</i>	Common Swallow	WV
126	Passeriformes	Hirundinidae	<i>Hirundo daurica</i>	Redrumped Swallow	WV
127	Passeriformes	Lanidae	<i>Lanius excubitor</i>	Southern Grey Shrike	SBV
128	Passeriformes	Lanidae	<i>Lanius vitatus</i>	Baybacked Shrike	R
129	Passeriformes	Lanidae	<i>Lanius isabellinus</i>	Isabelline Shrike / Rufous tailed Shrike	R

Table continued...

Table 2 continue...

S. No.	Order	Family	Scientific Name	Common Name	Status
130	Passeriformes	Sturnidae	<i>Acridotheres ginginianus</i>	Bank Myna	R
131	Passeriformes	Sturnidae	<i>Acridotheres tristis</i>	Indian Myna	R
132	Passeriformes	Sturnidae	<i>Sturnus vulgaris</i>	Common Starling	R
133	Passeriformes	Corvidae	<i>Corvus splendens</i>	Sind House Crow	R
134	Passeriformes	Corvidae	<i>Corvus ruficollis</i>	Brown-necked Raven	R
135	Passeriformes	Pyconotidae	<i>Pycnonotus leucogenys</i>	White-cheeked Bulbul	R
136	Passeriformes	Pyconotidae	<i>Pycnonotus cafer</i>	Red-vented Bulbul	R
137	Passeriformes	Pyconotidae	<i>Prinia bunchanani</i>	Rufousfronted Wren-Warbler	R
138	Passeriformes	Sylviidae	<i>Orthotomus sutorius</i>	Tailor Bird	R
139	Passeriformes	Sylviidae	<i>Sylvia nana</i>	Desert Warbler	WV
140	Passeriformes	Turdidae	<i>Prinia gracilis</i>	Streaked Long-tail Warbler/ Graceful Prinia	R
141	Passeriformes	Turdidae	<i>Prinia burnesii</i>	Long tailed Grass Warbler/ Rufousvented Prinia	R
142	Passeriformes	Turdidae	<i>Saxicola picata</i>	Pied Chat / Pied Wheatear	R
143	Passeriformes	Turdidae	<i>Oenanthe isabellina</i>	Isabelline Wheatear	WV
144	Passeriformes	Turdidae	<i>Oenanthe deserti</i>	Desert Wheatear	WV
145	Passeriformes	Turdidae	<i>Oenanthe monacha</i>	Hooded Wheatear	R
146	Passeriformes	Turdidae	<i>Phoenicurus usochruros</i>	Black Redstart	WV
147	Passeriformes	Turdidae	<i>Saxicoloides caprata</i>	Pied Bushcat	WV
148	Passeriformes	Turdidae	<i>Saxicoloides fulicata</i>	Indian Robin	R
149	Passeriformes	Timallidae	<i>Turdoides caudatus</i>	Common Babbler	R
150	Passeriformes	Dicruridae	<i>Dicrurus macrocerus</i>	Black Drongo	R
151	Passeriformes	Motacillidae	<i>Motacilla cinerea</i>	Grey Wagtail	WV
152	Passeriformes	Motacillidae	<i>Motacilla flava</i>	Yellow Wagtail	PM
153	Passeriformes	Motacillidae	<i>Motacilla citreola</i>	Yellowheaded Wagtail	WV
154	Passeriformes	Motacillidae	<i>Motacilla alba</i>	White or Pied Wagtail	WV
155	Passeriformes	Nectariniidae	<i>Nectarinia asiatica</i>	Sind Purple Sunbird	R
156	Passeriformes	Passeridae	<i>Zosterops palpebrosa</i>	White Eye	R
157	Passeriformes	Passeridae	<i>Passer domesticus</i>	House Sparrow	R
158	Passeriformes	Passeridae	<i>Passer pyrrhonotus</i>	Sind Jungle Sparrow	R
159	Passeriformes	Passeridae	<i>Emberiza striolata</i>	House Bunting	R

Legend:

R = Resident

PM = Passage Migrant

E = Endangered

WV = Winter Visitor

SBV = Summer Breeding Visitor

V = Vulnerable

M = Migratory

SV = Summer Visitor

NT= Near-threatened

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