

An Overview of the Status of Shorebirds and Internationally Important Sites in Pakistan

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Abstract.- Lack of scientific research regarding the shorebirds is a major constraint in the international cooperation for the conservation of shorebirds in Pakistan. Detailed surveys were carried out for the past twenty five years. Shorebirds were searched for presence/ absence at a site, enlisted, their distribution and preferred habitats were noted and status was determined. A total of 57 species of shorebirds have been recorded from Pakistan, belonging to one order and 10 families. Among them 12 are resident, 2 breeding visitors, 12 winter visitor/ passage migrants, 04 vagrants, and 26 are winter visitors. Besides 13 already identified key wetlands that are important for shorebirds, three more were identified, as shorebirds were found to concentrate at those sites. Major threats to shorebirds are habitat degradation, land reclamation, hunting and drought. Development of shorebird network, appropriate management of network sites, monitoring of shorebird population and initiation of projects on shorebird migration are suggested for the better understanding of shorebirds and international cooperation for their conservation.

Key Words: Charadriiformes, sociable plover, shorebird conservation, wood snipe, wetlands.

INTRODUCTION

Shorebirds or waders are small to medium sized birds belonging to the order Charadriiformes and they often occur in large numbers at specific sites, e.g. coastal wetlands and freshwater marshes.

There are 214 species of shorebirds worldwide, out of which 85 species occur in the Asian region, 69 in the Indian subcontinent and 57 in Pakistan as detailed below:

S. No.	Shorebird family	World wide	Asian region	Indo-Pak Sub-continent	Pakistan
1	Jacaniidae	8	3	2	2
2	Rostratulidae	2	1	1	1
3	Dromadidae	1	1	1	1
4	Haematopodidae	11	2	1	1
5	Ibidorhynchidae	1	1	1	1
6	Recurvirostridae	7	2	2	2
7	Burhinidae	9	3	3	2
8	Glareolidae	17	6	5	4
9	Charadriidae	65	20	16	12
10	Scolopacidae	88	46	37	31
11	Pluvianellidae	1	-	-	-
12	Thinacoridae	4	-	-	-
	Total	214	85	69	57

In Asia-Pacific, for migratory shorebirds, three flyways have been recognized viz., Central Asian-Indian Flyway, East Asian-Australian Flyway, and West Pacific Flyway.

The Asia-Pacific migratory waterbirds conservation strategy outlines 16 countries in the Central Asian-Indian Flyway viz., Afghanistan, Azerbaijan, Bangladesh, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Maldives, Mongolia, Nepal, Pakistan, Russian Federation, Sri Lanka, Tajikistan and Uzbekistan (Anonymous, 1996). In Asia-Pacific there are over 130 populations of migratory shorebirds with a combined minimum population of 9 million. There are 11 species of special conservation interest of which only two waders viz., Sociable plover and Wood-snipe relate to Pakistan. These are vulnerable species hence threatened. It was felt that there is a need for International cooperation for their conservation. This led to the development of Asia-Pacific Shorebirds Conservation Strategy 1996-2000 (Anonymous, 1996) and the linked Asia-Pacific Shorebirds Action Plan 1998-2000 (SWGWIAS, 1999). These have now been updated for 2001-2005 period. The mission statement of the plan is "To achieve the long term conservation of migratory shorebirds and their habitats in Asia-Pacific through the establishment of networks of appropriately

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0030-9923/2009/0003-0165 \$ 8.00/0
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managed sites that are of international importance for migratory shorebirds”.

Under the Shorebirds Action Plan, the East Asian-Australian Site Network has been developed with a most active programme of activities because there is considerable documentation of the threats to shorebirds and their habitats, a significant knowledge base on shorebird population and important sites, the existing Site Network and a number of organizational structures to impart actions. Information is rather limited in the Central Asian-Indian Flyway and organizational structures are less developed. In the West Pacific Flyway Shorebirds are widely distributed in low abundance. A conservation network has recently been developed for this flyway as part of the North American Shorebird Conservation Plan. No detailed studies have been recently undertaken on the shorebirds of Pakistan. Ali and Ripley (1969) have given the overall distribution and status of these birds. Koning and Dijkzen (1971, 1974); Koning and Walmsley (1972, 1973) and Koning and Koning-Raat (1975, 1976) conducted waterfowl census on major wetlands of Pakistan and have also given population estimates of shorebirds on these wetlands. However, the data were not published and the coastal areas were not surveyed in detail. Roberts *et al.* (1986) have listed the birds including the shorebirds of lower Sindh but have not dealt with the shorebirds in other parts of Pakistan. Khanum *et al.* (1980) gave a checklist of birds of Pakistan with illustrated key to their identification. Scott (1989) has given the population of waders on the important wetlands of Pakistan. Roberts (1991) has described briefly the distribution and status of the shorebirds of Pakistan. Ghalib and Hussain (1994) have recorded the distribution and status of the waterbirds on Karachi coast. Hasnain and Ghalib (1995) have recorded the waders of the Karachi coast. Ward (1999) has recorded the shorebirds of Gharao creek and the Indus delta.

MATERIALS AND METHODS

Surveys were undertaken by the Zoological Survey Department and researchers from the University of Karachi throughout Pakistan from

1980 onwards and data were collected on the distribution and status of water birds; mainly during the midwinter waterbirds counts. Moreover, detailed year round surveys had also been undertaken regarding the shorebirds on Karachi coast and to some extent on the Balochistan coast. Data on vagrants or the species not personally recorded by the present authors have been taken from the published sources or through personal communications. Most of the counts on the shorebirds on the coastal areas were undertaken just after the highest tide when it started to recede.

For field identification a 15x60 telescope (Spottingscope) and 10x25 binoculars were used. The birds were identified with the help of Waterbirds of Asia (Sonobe and Usui, 1993) and Birds of Pakistan (Mirza, 2007).

RESULTS AND DISCUSSION

Fifty seven species of shorebirds have been recorded from Pakistan so far, belonging to one order and 10 families (Table I). Among them 12 are resident, 2 breeding visitors, 12 winter visitor/passage migrants, 4 vagrants and 26 are winter visitors.

On the basis of Asian Wetland Census 1987-91, the following 13 key wetlands have been identified as important sites for the shorebirds as they have been harbouring sufficient number of waders during the season; (1) Clifton beach, Karachi coast, (2) Hawkesbay, Karachi coast (3) Korangi creek, Karachi coast, (4) Jabho/Kur, Thatta district, (5) Nurr-ri, Thatta district, (6) Kalkanwari, Thatta district, (7) Warharo, Kadhan, district Badin, (8) Sandho, district Badin, (9) Ithpar, district Sanghar, (10) Ghauspur, district Jacobabad, (11) Beron Kirthar Canal, district Naseerabad, (12) Hingol Hor, district Lasbella and (13) Ras Jaddi, district Gwadar. Three more wetlands may be added to the list as the authors recorded large concentrations of waders on these wetlands: (1) Hadero lake, district Thatta, (2) Sonmiani bay, district Lasbella and (3) Ras Malan, Hingol National Park. Thus the entire Karachi coast, Indus delta, the inland wetlands of Sindh and the Makran coast are the most important areas for the shorebirds in Pakistan.

The major threats to the shorebirds are habitat degradation, land reclamation, hunting, disturbance and drought. Due to drought, most of the natural wetlands in Sindh and Balochistan such as Bund Khushdil Khan, Siranda lake, Zangi Nawar, Kund lake, Rap lake, and to a greater extent the Hub Dam had dried up during 1999-2000.

The following priority actions are suggested in line with those suggested in the strategy for the East Asia-Australasian Flyway:

A. *Development of shorebird network*

1. A map of sites of International importance for migratory shorebirds may be prepared.
2. An annual work plan for shorebird studies may be prepared to study the shorebirds on the Makran coast, Karachi Coast, Indus Delta and the inland wetlands regularly to compile up-to-date data about their population and status.

B. *Appropriate management of network sites*

3. Action may be taken to contact the communities in order to build community awareness.
4. Action may be taken to provide training to personnel in species monitoring, wetland management, management planning, education and public awareness, and project management.
5. Action may be taken for the development of management plans for network sites.
6. It is expedient to develop education and public awareness products to cover issues, such as shorebirds migration, habitat conservation and the network.

C. *Increasing the information base on migratory shorebirds*

7. It is necessary to develop statistically robust methodologies to monitor shorebird populations and design implementation projects.
8. It is also necessary to initiate projects on shorebirds migration with a special focus on the use of colour leg rings.

LIST SHOWING DISTRIBUTION AND STATUS OF SHOREBIRDS OF PAKISTAN

Order: Charadriiformes

Family: Jacanidae

1. *Hydrophasianus chirurgus* (Scopoli) (Pheasant-tailed Jacana)
Uncommon resident. Observed in Sindh (Haleji, Keenjhar, Khanjo, Manchar, Chotiari Reservoir Area, Ithpar); Punjab (Head Islam, Taunsa Barrage); Northern Area (Gilgit); Azad Kashmir.
2. *Metopidius indicus* (Latham) (Bronze-winged Jacana)
Rare winter vagrant, recorded in Sindh from Haleji Ghulamullah (Roberts, 1991), Mirza (2007) reported it from Lugh Lake, Larkana.

Family: Rostratulidae

3. *Rostratula benghalensis benghalensis* (Linnaeus) (Painted snipe)
Uncommon resident. Recorded from Sindh (Manchar Lake, Gizri Creek, Chotiari Reservoir area); Punjab (Kallar Kahar Lake, Chashma barrage); Rawal Lake, Islamabad; Balochistan (Hub Dam area; Hingol National Park).

Family: Haematopodidae

4. *Haematopus ostralegus ostralegus* (Linnaeus) (Oystercatcher or Sea-Pie)
Common winter visitor to Sindh (Karachi coast); Balochistan (Sonmiani, Ormara and Pasni coasts).

Family: Ibisornithidae

5. *Ibisornithus struthersii* (Vigors) (Ibisbill)
Vagrant or rare winter visitor to Northern Areas (Shigar valley and Deosai area). Winter record from Punjab (Soan Valley east of Islamabad, Mirza, 2007)

Family: Recurvirostridae

6. *Himantopus himantopus himantopus* (Linnaeus) (Black-winged Stilt)
Most common resident throughout Pakistan. Recorded from marshes and freshwater wetlands throughout Pakistan. Punjab (Head Islam, Kallarkahar); Sindh (Manchar Lake, Keenjhar Lake, Haleji lake, Ithpar, Bairwari, Ghungro and Lugh Lake, Gizri Creek); Balochistan (Bund Khushdil Khan, Siranda Lake, Beroon Kirthar Canal); NWFP (Tanda Dam; Malugul Dhand, Thanedarwala); Northern Areas (Deosai plateau).
7. *Recurvirostra avosetta* (Linnaeus) (Avocet)
Less common winter visitor to Sindh (Karachi Coast, Hawkesbay; Haleji, Hadero, Keenjhar, Sandho, Nurri, Jubho, Kur, Ithpar Lakes. Smaller groups are regularly sighted at Hawkesbay mainly in the months of July, August and September);

- Punjab (Taunsa Barrage, Kallar kahar, Kharrar Lake); Rawal Lake, Islamabad; Balochistan (Bund Khushdil Khan, Siranda Lake, Miani Hor). Roberts (1991) considers it a sporadic year round visitor only sporadically breeding.
- Family: Dromadidae**
8. *Dromas ardeola* (Paykull) (Crab Plover)
Status and distribution: Rare winter visitor and passage migrant to coastal areas. Sindh (Cape Monze, Indus Delta, Mangrove creeks, Rann of Kutch); Balochistan (Sonmiani lagoon).
- Family: Burhinidae**
9. *Burhinus oedicnemus* (Salvadori) (Stone Curlew)
Rare resident in Sindh (Hawkesbay, Thano Bulla Khan, Sehwan, Sunn); Balochistan (Zanginawar, Nag area); Punjab (Lal Sohanra, Attock, Mirza, 2007). N.W.F.P. (Areas of Khyber Pass and Kohat.
10. *Esacus recurvirostris* (Cuvier) (Great Stone Plover)
Rare resident in Sindh. Observed on Cape Monze and Hawkesbay mangrove area and in Keti Bander; Rawal Lake, Islamabad; Balochistan (Miani Hor); NWFP (Chashma Barrage).
- Family: Glareolidae**
11. *Glareola pratincola pratincola* (Linnaeus) (Pratincole or Collared Pratincole)
Less common summer breeding visitor to Sindh (Manchar lake, Nurr-ri; Rann of Kutch); Punjab (Ravi at Balloki); Balochistan (Sonmiani, Hingol River area).
12. *Glareola maldivarum* J. R. Froster (Large Indian Pratincole or Eastern Collared Pratincole)
Very rare resident in Sindh (Nara Canal area). Not recently sighted (Roberts, 1991)
13. *Glareola lactea* Temminck (Small Indian Pratincole)
Less common summer breeding visitor/winter visitor. Recorded in Punjab (Lal Sohanra Lake, Jinnah Barrage); Rawal Lake, Islamabad; NWFP (Baran Dam), recorded in Sindh as winter visitor (Rap Lake; Jati area).
- Family: Charadriidae**
14. *Charadrius dubius jerdoni* Legge (Indian Little Ringed Plover)
Common resident in Sindh (Karachi Coast-Clifton Beach, Hawkesbay-Sandspit, Cape-Monze, Sibli Creek; Rap Lake); Punjab (Nammal Lake, Head Islam); Balochistan (Surkhab valley in Pishin, Bund Khushdil Khan); NWFP (Kurram River area).
- 14a. *Charadrius dubius curonicus* Gmelin (European Little Ringed Plover)
Common winter visitor in Punjab (Salt Range, Taunsa Barrage); NWFP (Kabul River, Kheski, Tarbela Dam, Kurram Valley, Tanda Dam, Malugul Dhand); Balochistan (Miani Hor, Human-e-Mushkhel, Bund Khushdil Khan, Kund Lake); Sindh (Karachi Coast and the Indus Delta).
15. *Charadrius hiaticula* (Lowe) (Eastern Ringed Plover)
Uncommon winter visitor to Punjab (Gamagher Lake, Chashma Barrage); Sindh (Karachi coast, Haleji lake).
16. *Charadrius alexandrius* Linnaeus (Kentish Plover)
Common resident and local migrant. Recorded from Sindh (Karachi Coast-Clifton Beach, Sibli Creek, Haleji, Chateji, Hadero and Rap Lakes); Balochistan (Makran coast, Bund Khushdil Khan, Siranda Lake and Miani Hor); NWFP (Bannu, Kaghan valley). Winter visitor to Punjab (Ucchali Lake).
17. *Charadrius mongolus* Wagler (Lesser Sand Plover)
Common winter visitor to Sindh (Karachi Coast. Spring Passage migrant through saline lakes in Balochistan (Miani Hor and Makran Coast); Sindh (Hadero lake); Breeds in Northern Area (Deosai plateau).
18. *Charadrius leschenaultii* Lesson (Large Sand Plover)
Common winter visitor to Sindh (Karachi Coast); Balochistan (Makran Coast).
19. *Pluvialis dominica* (Gmelin) (Lesser Golden Plover)
Uncommon winter visitor to Sindh (Gizri Creek, Haleji and Hadero Lakes)
20. *Pluvialis apricaria* (Linnaeus) (Greater Golden Plover)
Very rare winter vagrant recorded from Sindh (Karachi Coast, Gizri Creek); Balochistan (Makran Coast-Gwadar)
21. *Pluvialis squatarola* (Linnaeus) (Black bellied or Grey Plover)
Less common winter visitor, chiefly to Sindh (Karachi Coast-Clifton Beach, Rap, Haleji, Chateji Lakes); Balochistan (Miani Hor, Baroon Kirthar Canal); NWFP (Malugul Dhand, Thanedarwala); Punjab (Kharrar Lake).
22. *Eudromias morinellus* (Linnaeus) (Dotterel)
Rare winter straggler to Karachi coast. A single bird in winter plumage was seen by Rolf Passburg on 24.11.1989 at Hawkesbay, Karachi.
23. *Hoplopterus malabaricus* (Boddaert) (Yellow-wattled Lapwing)
Uncommon summer breeding visitor to Sindh (Karachi, Thatta area); Balochistan (Beroon Kirthar Canal, Hub Dam area, Bund Khushdil Khan; Kund Lake, Lasbella).

24. *Hoplopterus indicus* (Boddaert) (Red-wattled Lapwing)
Common resident throughout Pakistan. Recorded from Sindh (Cape Monze, Haleji, Hadero, Keenjhar, Sandho, Sanghriaro, Manchar, Sindho Dhoru, Rap, Pugri Lakes); Punjab (Head Islam, Chashma Barrage, Taunsa Barrage, Kharrar Lake, Rasul Head Works); Balochistan (Beroon Kirthar Canal, Bund Khushdil Khan, Kund Lake, Kanki River, Hingol River); NWFP (Kabul River)
25. *Chetusia gregarius* (Pallas) (Sociable Lapwing)
Rare winter visitor to Sindh (Karachi Coast, Nagarparkar, Jacobabad); Punjab (Khabbaki Lake); Balochistan (Hingol River near Agor). Spring and autumn passage migrant through NWFP (Kurram Valley); Northern Areas (Gilgit).
26. *Chetusia leucura* (Lichtenstein) (White-tailed Lapwing)
Less common winter visitor to Sindh (Karachi-Mauripur, Manchar Lake, Haleji, Mahboob Shah, Jubho, Kur and Chotiari Reservoir area); Punjab (Head Islam); Balochistan (Zanginawar Lake, Bund Khushdil Khan).
27. *Vanellus vanellus* (Linnaeus) (Peewit, Lapwing or Green Plover)
Less common winter visitor to Punjab (Head Islam, Taunsa Barrage, Uchali Lake, Nammal Lake, Jinnah Barrage, Chashma Barrage, Rasul Head Works, Kallar Kahar, Lal Suhanra, Kharrar Lake); Sindh (Haleji Lake, Rap Lake); NWFP (Tanda Dam, Malugul Dhand, Khanpur Dam); Balochistan (Bund Khushdil Khan); Northern Area (Gilgit).
- Family: Scolopacidae**
Sub-family: Calidridinae
28. *Calidris tenuirostris* (Horsfield) (Great Knot or Eastern Knot)
Rare winter visitor to Sindh (Karachi Coast, Gizri Creek, Sando Lake, Badin); Balochistan (Sonmiani Lagoon).
29. *Calidris canutus* (Linnaeus) (Red Knot)
Rare vagrant recorded once in Balochistan from Bund Khushdil Khan.
30. *Calidris alba* (Pallas) (Sanderling)
Common winter visitor to the sea coasts only, Sindh (Karachi Coast); Balochistan (Makran Coast).
31. *Calidris minuta* (Leisler) (Little stint)
Common winter visitor to sea coasts but spring and autumn passage migrant to inland waters, Sindh (Karachi Coast, Haleji); Punjab (Taunsa Barrage, Lal Sohanra); Balochistan (Bund Khushdil Khan, Siranda Lake); NWFP (Kohat and Kurram Valleys).
32. *Calidris temminckii* (Leisler) (Temminck's Stint)
Less common winter visitor to inland wetlands in Sindh (Karachi Coast, Haleji); and passage migrant through Punjab (Uchhali Complex wetlands); Northern Areas (Gilgit, Deosai plateau).
33. *Calidris acuminatus* (Horsfield) (Sharp-tailed or Asian Pectoral)
Rare vagrant recorded on passage through Punjab (Kharrar Lake); Northern Areas (Gilgit and Deosai plateau).
34. *Calidris ferruginea* (Pontoppidan) (Curlew Sandpiper)
Common winter visitor to sea coasts, Sindh (Karachi Coast, Indus Delta Creeks); Balochistan (Makran Coast, Siranda Lake, Bund Khushdil Khan); passage migrant through Punjab; Rawal Lake, Islamabad.
35. *Calidris alpina* (Linnaeus) (Dunlin)
Common winter visitor to Sindh (Karachi Coast, Rap Lake); Balochistan (Makran Coast, Sonmiani Lagoon).
36. *Limicola falcinellus* (Pontoppidan) (Broad-billed Sandpiper)
Uncommon winter visitor mainly along the sea coasts only. Sindh (Karachi coast, Indus Delta creeks); Punjab (Rawal Lake); Balochistan (Hingol River estuary).
37. *Philomachus pugnax* (Linnaeus) (Ruff)
Common mainly on passage, Sindh (Soonahri lake, Sanghar); Rawal lake, Islamabad.
- Sub-family: Gallinaginae**
38. *Lymnocyptes minimus* (Brunnich) (Jack Snipe)
Rare winter visitor and passage migrant. NWFP (Kurram Valley); Rawal Lake, Islamabad; Sindh (Indus Delta, Haleji lake).
39. *Gallinago gallinago* (Linnaeus) (Common or Fantail Snipe)
Common winter visitor to Punjab (Gamaghar Lake); Sindh (Karachi Coast; Haleji, Drigh, Pugri, Rap and Manchar Lakes); passage migrant through Balochistan (Bund Khushdil Khan); NWFP (Malugul Dhand, Thanedarwala, Darwazai); Northern Areas (Deosai plateau).
40. *Gallinago stenura* (Bonaparte) (Pintail Snipe)
Rare winter visitor and passage migrant in lower Sindh (Thatta). Not recently recorded.
41. *Gallinago solitaria* (Hodgson) (Eastern Solitary Snipe)
Rare resident. Recorded from Balochistan (Zanginawar, Ziarat); N.W.F.P (Chitral); Northern Areas (Gilgit, Baltistan).
42. *Gallinago nemoricola* Hodgson (Wood Snipe)
Vary rare resident. Recorded once from NWFP (Mardan Distt.).

Sub-family: Scolopacinae

43. *Scolopax rusticola* Linnaeus (Eurasian Wood Cock)
Rare resident in NWFP (Kaghan valley, Parachinar); Balochistan (Quetta-Urak Valley) and Northern Areas (Gilgit).

Sub-family: Tringinae

44. *Limosa limosa* (Linnaeus) (Black-tailed Godwit)
Common winter visitor to Sindh (Haleji, Keenjhar, Hadero, Pugri, Jubho, Kur, Manchar, Rap and Soonahri lakes); Punjab (Taunsa Barrage); Balochistan (Miani Hor).
45. *Limosa lapponica* (Linnaeus) (Bar-tailed Godwit)
Less common winter visitor to Sindh (Karachi Coast, Indus delta); Balochistan (Makran Coast and Miani Hor); Punjab (Salt Range, Nammal Lake).
46. *Numenius phaeopus* (Linnaeus) (Whimbrel)
Common winter visitor and passage migrant in Sindh (Indus delta, Haleji, Keenjhar lakes, Karachi Coast); Balochistan (Sonmiani lagoon).
47. *Numenius arquata* (C.L. Brehm) (Eastern Curlew)
Common winter visitor to Sindh (Indus Delta and Karachi coast); Balochistan (Makran Coast; Miani Hor, Bund Khushdil Khan). Also recorded in Punjab (Salt Range lakes); Rawal Lake, Islamabad; Northern Areas (Deosai plateau).
48. *Tringa erythropus* (Pallas) (Spotted or Dusky Redshank)
Less common winter visitor to Sindh (Indus Delta, Ketu Bandar, Sandho Lake, Sadhori Lake, Pugri, Manchar, Haleji and Rap Lakes); Punjab (Nemmal lake, Kharrar lake); in autumn and spring passage in Balochistan (Bund Khushdil Khan).
49. *Tringa totanus* (Linnaeus) (Common Redshank)
Common winter visitor throughout Pakistan. Observed in Punjab (Head Islam, Nemmal Lake, Chashma Barrage, Jinnah Barrage, Kharrar Lake, Taunsa Barrage, Gamaghar Lake, Uchhali Lake, Lal Suhanra); Sindh (Rap lake, Hadero, Haleji, mouth of Indus, Sanghriaro, Lung and Sandho Lakes, Karachi-Coast-Cape Monze, Hawkesbay, Sandspit, Clifton Beach, Korangi Creek System); Balochistan (Sonmiani, Bund Khushdil Khan); Northern Area (Deosai plateau).
50. *Tringa stagnatilis* (Bechstein) (Marsh Sandpiper)
Common winter visitor and passage migrant to Punjab (Kharrar Lake, Taunsa Barrage); Rawal Lake, Islamabad; Sindh (Karachi Coast-Gizri Creek, Rap lake, Hadero, Haleji, Soonahri, Sanghriaro Lakes); Balochistan (Miani Hor); NWFP (Tanda Dam, Kheshki, Kabul River).
51. *Tringa nebularia* (Gunnerus) (Common

Greenshank)

Common winter visitor to Punjab (Nammal lake, Chashma Barrage, Jinnah Barrage, Taunsa Barrage); Sindh (Rap lake, Haleji, Mouth of Indus, Sanghriaro Lakes, Karachi Coast); Balochistan (Miani Hor, Makran Coast).

52. *Tringa ochropus* Linnaeus (Green Sandpiper)
Less common winter visitor recorded from Sindh (Rap Lake, Haleji, Soonahri, Sanghriaro Lake, Pugri Lakes); Punjab (Head Islam, Jinnah Barrage, Kharrar Lake, Taunsa Barrage, Gamaghar Lake, Lal Suhanra); Rawal Lake, Islamabad; NWFP (Thanedarwala); Northern Area (Deosai plateau); Balochistan (Hingol River area near Agor).
53. *Tringa glareola* Linnaeus (Wood Sandpiper)
Less common winter visitor recorded from Punjab (Head Islam, Chashma Barrage, Kharrar Lake, Gamaghar lake); Sindh (Indus Delta, Rap Lake, Soonahri, Sanghriaro, Manchar, Haleji and Lung Lakes, Karachi Coast-Gizri Creek; Buleji); Balochistan (Zanginawar).
54. *Tringa terek* (Latham) (Terek Sandpiper)
Less common winter visitor to Sindh (Indus Delta, Karachi Coast-Korangi Creek system); Rawal Lake, Islamabad; Balochistan (Makran Coast, Miani Hor); NWFP (Thanedarwala).
55. *Actitis hypaleucos* Linnaeus (Common Sandpiper)
Common winter visitor throughout Pakistan. Punjab (Chashma Barrage, Jinnah Barrage, Lal Suhanra, Taunsa Barrage); Sindh (Karachi Coast-Korangi Creek system, Clifton Beach; Haleji, Rap, Manchar, Sanghriaro Lake, Ithpar); NWFP (Kaghan Valley, Malugul Dhand, Thanedarwala, Baran Dam, Kabul River, Khanpur Dam, Kandar Dam, Darwazai); Northern Areas (Deosai plateau). It breeds in Kaghan Valley, Deosai plateau and Chitral (Roberts, 1991).

Sub-family: Arenariinae

56. *Arenaria interpres interpres* (Linnaeus) (Turnstone)
Less common winter visitor to Sindh (Karachi Coast, Hub Dam); Balochistan (Sonmiani), preferring rocky shores

Sub-family: Phalaropodinae

57. *Phalaropus lobatus* (Linnaeus) (Northern or Red-necked Phalarope)
Less common winter visitor to Arabian Sea and passage migrant to Sindh (Gizri Creek system, Hadero); Balochistan (Siranda Lake, Kund Lake, Zanginawar); NWFP (Chitral Distt. Drosch); Punjab (Kharrar Lake).

Table I.- Systematic list of shorebirds of Pakistan with status and preferred habitats.

S.No.	English name	Scientific name	Status	Preferred habitats
1	Pheasant-tailed jacana	<i>Hydrophasianus chirurgus</i>	R	Marshes, Lakes, Ponds
2	Bronze-winged jacana	<i>Metopidius indicus</i>	R	Marshes, Ponds
3	Painted snipe	<i>Rostratula benghalensis benghalensis</i>	R	Marshes, Ponds
4	Oystercatcher or sea-Pie	<i>Haematopus ostralegus</i>	WV	Rocky and sandy Coasts, Estuaries, mudflats
5	Ibis bill	<i>Ibidorhyncha struthersii</i>	R	Shingle banks along rivers
6	Black-winged stilt	<i>Himantopus himantopus</i>	R	Marshes, Rice-fields, Coastal and Estuarine Mudflats
7	Pied avocet	<i>Recurvirostra avosetta</i>	WV/R	Marshes, Rice fields, Coastal and Estuarine Sand flats and Mudflats
8	Crab plover	<i>Dromas ardeola</i>	WV/M	Coastal Mudflats
9	Stone curlew	<i>Burhinus oedinemus</i>	R	Rivers and Sand banks
10	Great stone plover	<i>Esacus recurvirostris</i>	R	Beside Lakes, Coastal areas
11	Pratincole or Collared pratincole	<i>Glareola pratincola pratincola</i>	R	Near Estuaries
12	Oriental collared pratincole	<i>Glareola maldivarum</i>	SBV	Open Habitats, Open Land
13	Little pratincole	<i>Glareola lacteal</i>	SBV	Near Lakes
14	Little ringed plover	<i>Charadrius dubius</i>	WV/R	Mudflats and Sand flats
15	Ringed plover	<i>Charadrius hiaticula</i>	WV/M	Near Coasts
16	Kentish plover	<i>Charadrius alexandrinus</i>	WV	Sandy Beaches, Coastal Mudflats
17	Lesser sand plover	<i>Charadrius mongolus</i>	WV	Coastal and Estuarine areas
18	Large sand plover	<i>Charadrius leschenaultii</i>	WV	Coastal and Estuarine Sandflats
19	Pacific golden plover	<i>Pluvialis dominica</i>	WV	Mudflats, Rice-fields, Grasslands
20	Greater golden plover	<i>Pluvialis apricaria</i>	WV	Muddy banks of rivers, lakes and ponds
21	Grey plover	<i>Pluvialis squatarola</i>	WV	Coastal Mudflats, Sandflats
22	Dotterel	<i>Eudromias morinellus</i>	V	Dry and Sandy areas
23	Yellow-wattled lapwing	<i>Hoplopterus malabaricus</i>	SBV	Scrub desert
24	Red-wattled lapwing	<i>Hoplopterus indicus</i>	R	Marshes, Farmlands, Open Country, Canal banks
25	Sociable lapwing	<i>Chettusia gregarius</i>	WV	Grasslands and Farmlands
26	White-tailed lapwing	<i>Chettusia leucura</i>	WV	Shallow margins of lakes
27	Peewit lapwing or green plover	<i>Vanellus vanellus</i>	WV	Wet open land
28	Great knot	<i>Calidris tenuirostris</i>	WV	Mudflats, Inlets
29	Red Knot	<i>Calidris canutus</i>	WV	Mudflats, Inlets
30	Sanderling	<i>Calidris alba</i>	WV	Sandy Shores, inlets
31	Little stint	<i>Calidris minuta</i>	WV	Mudflats, River banks, Coastal creeks
32	Temminck's stint	<i>Calidris temminckii</i>	WV	Mudflats, River banks, Rice-fields
33	Sharp-tailed or Asian pectoral	<i>Calidris acuminata</i>	WV	Rice-fields, Inlets
34	Curlew sandpiper	<i>Calidris ferruginea</i>	WV	Mudflats, Sandflats, Rice-fields, Inlets
35	Dunlin	<i>Calidris alpina</i>	WV	Mudflats, River banks
36	Broad-billed sandpiper	<i>Limicola falcinellus</i>	WV	Marshes, Mudflats, Coastal Inlets, Rice fields
37	Ruff	<i>Philomachus pugnax</i>	PM	Marshes, Mudflats, Rice fields
38	Jack snipe	<i>Lymnocyrtus minimus</i>	WV	Marshes, Rice fields, Lotus ponds
39	Common or Fantail snipe	<i>Gallinago gallinago</i>	WV	Marshes, Rice fields, River banks, Grasslands
40	Pintail snipe	<i>Gallinago stenura</i>	PM	Marshes, Rice fields, River banks
41	Eastern solitary snipe	<i>Gallinago solitaria</i>	WV	Marshes, Streams, Rice fields in hilly regions
42	Wood snipe	<i>Gallinago nemoricola</i>	
43	Eurasian woodcock	<i>Scolopax rusticola</i>	R	Forest glades in outer Himalayas

Continued

S.No.	English name	Scientific name	Status	Preferred habitats
44	Black-tailed godwit	<i>Limosa limosa</i>	WV	Mudflats, Grasslands
45	Bar-tailed godwit	<i>Limosa lapponica</i>	WV	Sand flats
46	Whimbrel	<i>Numenius phaeopus</i>	WV	Mudflats, Rice fields, River banks and mangroves
47	Eurasian curlew	<i>Numenius arquata</i>	WV	Coasts, Mudflats
48	Spotted redshank	<i>Tringa erythropus</i>	WV	Freshwater Marshes
49	Common redshank	<i>Tringa totanus</i>	WV	Marshes, Coastal wetlands
50	Marsh sandpiper	<i>Tringa stagnatilis</i>	WV/PM	Lakes, Marshes
51	Common greenshank	<i>Tringa nebularia</i>	WV	Mudflats, open coast
52	Green sandpiper	<i>Tringa ochropus</i>	WV	Lakes, Marshes
53	Wood sandpiper	<i>Tringa glareola</i>	WV/PM	Lakes, Marshes
54	Terek sandpiper	<i>Tringa terek</i>	WV	Estuaries, Mudflats
55	Common sandpiper	<i>Actitis hypoleucos</i>	WV	Rivers, Lakes, Marshes
56	Ruddy turnstone	<i>Arenaria interpres</i>	WV	Rocky Coasts, Sandy Beaches
57	Red-necked phalarope	<i>Phalaropus lobatus</i>	WV	Rivers, Rice fields, Marshes while on passage

Abbreviations: M, migrant; PM, passage migrant; SBV, summer breeding visitor; R, resident; WV, winter visitor; V, vagrant.

ACKNOWLEDGEMENT

The authors are grateful to Zoological Survey Department that facilitated the surveys. We also express our heartiest gratitude to our colleagues who assisted in collecting the data. We are also indebted with thanks to our supervisor Dr. Muhammad Zaheer Khan, Assistant Professor, Department of Zoology, University of Karachi for his sincere mentorship.

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(Received 5 September 2008, Revised 29 January 2009)