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## A REVISION AND PECTORAL GUIDE TO THE CHECKLIST OF BIRDS OF SALT RANGE

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### ABSTRACT

Birds as major important component of biodiversity provide a vital aspect of nature's beauty and completes important ecological role in ecosystem. Current study was designed to gather baseline information about birds of salt range which tends to be modifying with the passage of time. The area was surveyed, pictures of birds were taken and after identification a checklist was formulated and changes in biodiversity was notified.

**Key Words:** Birds, Salt Range, Pectoral guide

### INTRODUCTION

Biodiversity "The library of life" is the variety of all the genes, species and ecosystem which are found on our planet. The term includes all species of plants, animals and microorganisms their genetic material and ecosystem of which they are part. Flora (plants) and Fauna (animals) of any region is of great importance (Trivedi and Sharma, 2003). Avifauna that includes the birds possesses great importance. Birds are animals containing feathers, oviparous, warm-blooded belonging to class Aves of Sub phylum Vertebrata. Birds are classified as Passeriformes and Non-Passeriformes. Passeriformes birds are perching birds that fly from one place to tree trunk and other place for food e.g., crow, wagtail. Non-Passeriformes includes non-purching birds e.g., ducks, kite, eagle etc (Roberts, 1991).

Pakistan contains some of the most printine wilderness remaining in Asia. This region has long been recognized internationally for the diversity of its biological and geological resources. Excellent habitats for a wide variety of plants and animals are beauty of Pakistan's great ecological diversity. Each and every part of Pakistan shares a variety of Bird fauna. More than 664 birds live in 7, 96,096 km<sup>2</sup> area (Roberts, 1991). One of the most common inhabiting places for birds in Pakistan is Punjab Salt Range. Punjab Salt Range derives its name from extensive deposits of rock salts. The Punjab Salt Range runs from Jehlum River in the east and west to Kalabagh on the Indus River. The Punjab Salt Range area is 175km long and 80km wide between River Jehlum, Soan and Indus. Most of the Punjab Salt Range is composed of the salt deposits left behind when the sea that extended over the Potohar

plateau evaporated 800 million year ago (Ahmed, 1967).

Punjab Salt Range is famous for the lakes and gardens and in winters lakes are ideal for bird watching. There are four lakes which are present in Punjab Salt Range. These are Kallar kahar, Uchali, Khabaki and Jahalar. These lakes not only provide beauty but also important place for bird watching. Vegetation of Punjab Salt Range is dry sub tropical and temperate evergreen scrub forest. Some places have dune desert. Common plants are Kahu (*Olea ferfuginea*), Phuli (*Acacia modesta*). The latitude of Punjab Salt Range is 32.30N and longitude is 72.25E. Annual rain fall of Punjab Salt Range is 220mm to 500mm. Punjab Salt Range is important for the salt reservoir. World's largest salt mine Khewra is present in this Range. Mountainous location of Punjab Salt Range is important for birds. Many migratory birds come here during winter (Roberts, 1991). Current study was intended to assess the current avifauna status of selected region.

## MATERIALS AND METHODS

Salt Range was selected as study area and multiple visits of field area were done. The study area was divided into different zones and then each zone was visited. In each zone specific points were selected where maximum visibility of the bird was possible. Area was surveyed on weekly basis. While visiting the field materials taken were as followed: a note book for making field notes, a pair of binoculars (30 X 80) to view birds, digital camera (4X) for making photographs of birds and a field guide.

During field visit, light coloured clothes were worn as dark colours attract birds. Photographs of the birds were taken and after identification of birds a checklist was prepared. Field notes were prepared by noting the date, time, location of birds and by observing shape, size and color of the birds in the field. A checklist of previously reported birds were prepared from literature. Comparison of both lists was carried out in order to investigate the changes in avifauna status of selected region.

## RESULTS AND DISCUSSION

259 birds were identified by Roberts in Punjab Salt Range. However, during undertaken study only 112 birds were identified in this region.

### Passerines

Passerines of the study area are given below.

#### 1. Family *Alaudidae*

- 1) *Mirafra cantillans* (Singing Bush Lark) is not observed in Punjab Salt Range during study. As, the study period was limited. But, it has been reported in Dandot region of Punjab Salt Range in summer season (Roberts, 1992).
- 2) *Mirafra erythroptera* (Red Winged Bush Lark) is not reported in Punjab Salt Range. As it is only seen in winter. It was seen in Punjab Salt Range in winter season (Roberts, 1992).
- 3) *Eremopterix nigriceps* (Black Crowned Finch Lark) has not been observed during study in Punjab Salt Range. As, it

is a wintering bird. It was observed in Punjab Salt Range in winter season (Roberts, 1992).

- 4) *Eremopterix grisea* (Ashy Crowned Finch Lark) is observed during study in Punjab Salt Range and was also seen in Punjab Salt Range in summer and winter season (Roberts, 1992).
- 5) *Ammomanes phoenicurus* (Rufous Tailed Finch Lark) is not seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it has been reported in Punjab Salt Range in summer season (Roberts, 1992).
- 6) *Ammomanes deserti* (Desert Finch Lark) has been found in Punjab Salt Range. It was also observed in Punjab Salt Range in summer season (Roberts, 1992).
- 7) *Melanocorypha bimaculata* (Eastern Calandra Lark) has not been found in Punjab Salt Range. As it is a wintering bird. It was seen in Punjab Salt Range in winter season (Roberts, 1992).
- 8) *Calandrella brachydactyla* (Greater short toed lark) is not observed during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was seen in Punjab Salt Range in summer and winter season (Roberts, 1992).
- 9) *Calanrella Raytal* (Indian Sand Lark) has not been reported in Punjab Salt Range during Study. As, study period was limited for certain period of time but It was observed in Punjab Salt Range in

summer and winter season (Roberts, 1992).

- 10) *Galerida Cristata* (Crested Lark) is not reported in Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer season (Roberts, 1992).
  - 11) *Alauda gulgula* (Small Sky Lark) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).
  - 12) *Alauda arvensis* (Common Sky Lark) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).
- ## 2. Family *Hirundidae*
- 13) *Riparia paludicola* (Indian Sand Martin) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).
  - 14) *Ptyoroprogne rupestris* (Crag Martin) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in both seasons (Roberts, 1992).
  - 15) *Hirundo rustica* (Common Swallow) has not been seen during visits to Punjab

Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

16) *Hirundo fluvicola* (Indian Cliffs Swallow) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

### 3. Family *Motacillidae*

17) *Anthus similes* (Persian Rock Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

18) *Anthus novaeseelandiae* (Richard Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

19) *Anthus compestris* (Tawny Pipit) is reported during the visits to Punjab Salt Range. It was also reported in Punjab Salt Range in summer and winter Season (Roberts, 1992).

20) *Anthus similes* (Persian Rock Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

21) *Anthus trivialis* (Tree Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

22) *Anthus cervirius* (Red Throated Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

### 4. Family *Passeridae*

23) *Anthus roseatus* (Rosy Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

24) *Anthus spinoletta* (Water Pipit) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

25) *Motacilla flava* (Yellow Wagtail) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

26) *Motacilla citreola* (Yellow Headed Wagtail) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in

summer and winter season (Roberts, 1992).

27) *Motacilla Alba* (White Wagtail) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in lakes of Punjab Salt Range in summer and winter season (Roberts, 1992).

#### 5. Family *Campephagidae*

28) *Teprodornis pordicerianus* (Common Wood Shrike) has not been seen during visits to Punjab Salt Range. As it is found in a specific period in which study was not conducted. It was reported in Punjab Salt Range in late march and April (Roberts, 1992).

29) *Pericorcotus etholoan* (Long Tailed Minivet) has not been seen during visits to Punjab Salt Range. As, it is a wintering bird so not observed but it was reported in Punjab Salt Range in winter season (Roberts, 1992).

30) *Pericorcotus cinnamomeus* (Small Minivet) has been found in Punjab Salt Range. It was reported in Punjab Salt Range and photohar and was resident of this area (Roberts, 1992).

#### 6. Family *Pcynonotidae*

31) *Pcynonotus leucogenys* (White Checked Bulbul) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was found in Punjab Salt Range (Roberts, 1992).

32) *Pcynonotus cafer* (Red Vented Bulbul) has been seen in Punjab Salt Range. It was also reported in Punjab Salt Range (Roberts, 1992; Waite, 1938).

#### 7. Family *Prunellidae*

33) *Prunella atrogularis* (Black Throated Accentor) has not been seen during visits to Punjab Salt Range. As, this bird is only found in winter and study was conducted in summer. It was found in Mianwali district of Salt Range in winter season (Roberts, 1992; Waite, 1938).

#### 8. Family *Turdidae*

34) *Luscinic svecica* (Blue Throat) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

35) *Cercotrichas galactotes* (Rufous Tailed Bush Chat or Robin) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer season and this bird is migrant. It was seen as autumn migrant from 10-20 August found in Sakesar (Roberts, 1992; Waite, 1938).

36) *Luscinic svecica* (Blue Throat) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was reported in Punjab Salt Range in summer and winter season (Roberts, 1992).

37) *Copsychus saularis* (Indian Magpie Robin) has not been seen during visits to

- Punjab Salt Range. It is observed as occasional breeding bird found in Punjab Salt Range (Roberts, 1992).
- 38) *Phoenicurus ochruros* (Red start) has not been seen during visits to Punjab Salt Range. As, study was conducted only in summer and it is a wintering bird found in Punjab Salt Range (Roberts, 1992).
- 39) *Phoenicurus erythronotus* (Evrsmann's Red Start) has not been seen during visits to Punjab Salt Range. As, study was conducted during summer and it was found as wintering bird in Punjab Salt Range (Roberts, 1992).
- 40) *Rhyacornis fuliginosus* (Plumbeous Red Start) has not been seen during visits to Punjab Salt Range. As, study was conducted during summer and it was observed as occasional wintering bird found in Choa-SaidanShah (Roberts, 1992).
- 41) *Saxicola torquata* (Stone Chat) has not been seen during visits to Punjab Salt Range. As, study period was limited for certain period of time but it was observed as ordinary migrant of Punjab Salt Range (Roberts, 1992).
- 42) *Saxicola leucura* (White Tailed Bush Chat) is observed as resident of Punjab Salt Range during Study. It was also observed as resident of Jehlum River (Roberts, 1992).
- 43) *Oenanthe deserti* (Desert Wheatear) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer but it was observed as wintering bird of Punjab Salt Range (Roberts, 1992).
- 44) *Oenanthe xanthopyrna* (Red-Tailed Wheatear) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).
- 45) *Oenanthe picata* (Eastern Pied Wheatear) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).
- 46) *Saxicoloides fulicata* (Indian Robin) has been found in Punjab Salt Range. It was also observed as resident of Punjab Salt Range (Roberts, 1992).
- 47) *Monticola solifariua* (Blue Rock Thrush) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Kalabagh (Roberts, 1992; Waite, 1938).
- 48) *Myiophoneus caerulus* (Blue Whistling Thrush) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992; Mirza, 1965).
- 49) *Turdus ruficollis atrogularis* (Dark Throated Thrush) has not been seen

- during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).
- 50) *Cetie cetti* (Cetti's Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was probable wintering bird of Khar (Roberts, 1992).
- 51) *Cisticola juncidis* (Fan-Tailed Warbler) has been found in Punjab Salt Range during study. It is also observed as resident of Punjab Salt Range (Roberts, 1992).
- 52) *Prinia gracilis* (Streaked Long Tailed Warbler) has been found in Punjab Salt Range. It was also reported as resident of Punjab Salt Range (Roberts, 1992).
- 53) *Prinnia buchanani* (Rufous Fronted Wren Warbler) has been found during visits to Punjab Salt Range. It is also reported as resident bird of Punjab Salt Range. (Roberts, 1992).
- 54) *Prinnia burnesii* (Long Tail Grass Warbler) has been found during visits to Punjab Salt Range. It is also reported as resident bird of Punjab Salt Range (Roberts, 1992).
- 55) *Orthotomus sutorius* (Tailor Bird) has been found during study. It was also seen as resident of Punjab Salt Range (Roberts, 1992).
- 56) *Acrocephalus melanopogon* (Mustached Sedge Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).
- 57) *Acrocephalus agricola* (Paddy Field Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It is an ordinary migrant of Kallar Kahar (Roberts, 1992; Holmes, 1938).
- 58) *Acrocephalus dumetorum* (Blyths Reed Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time but it was observed in August in Punjab Salt Range (Roberts, 1992; Waite, 1938).
- 59) *Acrocephalus stentoreus* (Indian Grass Reed Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was found in April to May in Choa-Saidan Shah. (Roberts, 1992; Waite, 1938).
- 60) *Hippolais caligata* (Booted Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was found in July August in Punjab Salt Range (Roberts, 1992; Waite, 1938).
- 61) *Sylvia nana* (Desert Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in



summer and this bird is found in winter. It was observed as wintering bird found in foot hills of Punjab Salt Range (Roberts, 1992; Waite, 1938).

62) *Sylvia hortensis* (Orphean Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was observed from late July to August in foot hills of Punjab Salt Range (Roberts, 1992; Holmes, 1983; Waite, 1938).

### 9. Family *Sylviidae*

63) *Sylvia* (Lesser white throat) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).

64) *Sylvia communis* (Common White Throat) has not been seen during visits to Punjab Salt Range. As, study was conducted for certain period of time. It was found in Sakesar to Dandot from Aug-Sep (Roberts, 1992; Waite, 1938).

65) *Phyloscopus nitidus* (Green Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was found in Aug-Oct in Punjab Salt Range (Roberts, 1992; Waite, 1938).

66) *Phyloscopus trochiloides* (Greenish Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is

found in winter. It was observed as wintering bird of Sakesar and Dandot (Roberts, 1992; Waite, 1938).

67) *Phyloscopus subvuiridis* (Brooks's Leaf Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).

68) *Phyloscopus inornatus* (Yellow Browed Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).

69) *Phyloscopus grisevedus* (Sulphur Vellied Warbler) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was found in spring and autumn in Ching (Roberts, 1992; Waite, 1938).

70) *Phyloscopus collybita* (Chiff Chaff) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Kallar Kahar and Nammal Lake (Roberts, 1992; Waite, 1938).

### 10. Family *Muscicapidae*

71) *Muscicapa strialz* (Spotted Fly Catcher) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of

time. It was found in Aug-Sep in Sakesar and Sardi (Roberts, 1992; Waite, 1938; Whestler, 1916).

- 74) *Ficeclula parv* (Red Breasted Flycatcher) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as winter visitor of Punjab Salt Range (Roberts, 1992).

#### **11. Family Rhipidaridae**

- 75) *Rhipidaria aurcola* (White Brown Fan Tail Fly Catcher) has been found during study of Punjab Salt Range. It was also observed as resident of Punjab Salt Range (Roberts, 1992).

#### **12. Family Monarchidae**

- 76) *Terpsiphone pardisi* (Asian Paradise Fly Catcher) has not been seen during visits to Punjab Salt Range. Current study was conducted in summer and this bird is found in winter. It was ordinary migrant of Punjab Salt Range (Roberts, 1992).

#### **13. Family Timaliidae**

- 77) *Turdoides caudatus* (Common Babbler) has been found during study visit to Punjab Salt Range. It is also reported as resident bird of Punjab Salt Range (Roberts, 1992).

- 78) *Turdoides earlei* (Striated Babbler) has been found during study visit to Punjab Salt Range. It is also reported as resident bird of Punjab Salt Range (Roberts, 1992).

- 79) *Turdoides striata* (Jungle Babbler) has been found during study visit to Punjab Salt Range. It is also reported as resident bird of Choa-SaidanShah (Roberts, 1992; Waite, 1938).

#### **14. Family Certhiidae**

- 80) *Certhia Himalayan* (Bar-Tailed Tree Creeper) has not been seen during visits to Punjab Salt Range. Present study was conducted in summer and this bird is found in winter. It was observed as Punjab Salt Range wintering bird (Roberts, 1992).

#### **15. Family Nectariniidae**

- 81) *Nactrinia Asiatic* (Troublesome Bird) has not been seen during visits to Punjab Salt Range. Undertaken study was conducted for limited period of time. It was found in summer in Punjab Salt Range (Roberts, 1992).

#### **16. Family Zosteropidae**

- 82) *Zosterops palpivrosa* (Oriental White Eye) has been found during study visit to Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992; Waite, 1938).

#### **17. Family Oriolidae**

- 83) *Oriolus oriolus* (Golden Oriole) has not been seen during visits to Punjab Salt Range. Current study was conducted for limited period of time. It was found in summer, present in Sakesar (Roberts, 1992; Waite, 1938).

### 18. Family *Laniidae*

84) *Lanius isabellinus* (Isabelline Shrike) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Dandot (Roberts, 1992; Waite, 1938).

85) *Lanius vittatus* (Bay Bcked Shrike) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited perid of time. It was observed as summer breeding in Punjab Salt Range (Roberts, 1992).

86) *Lanius schach* (Rufous Bcked Shrike) has been found during study visit to Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

87) *Lanius excubiotur* (Great Gray Shrike) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was observed as summer breeding bird of Punjab Salt Range (Roberts, 1992).

### 19. Family *Dicruidae*

88) *Dicrurus maocercus* (Black Drongo) has been found during study of Punjab Salt Range (Figure 1). It is also reported as resident bird of Punjab Salt Range (Roberts, 1992).

89) *Dicrurus leucophaeus* (Grey Drongo) has not been seen during visits to Punjab Salt Range. As, study was conducted for

limited period of time. It was observed as summer breeding bird Punjab Salt Range (Roberts, 1992).



**Figure 1:** *Dicrurus macrocercus* (Black Drongo)

### 20. Family *Corvidae*

90) *Dendroutta vagabounda* (Indian Tree Pie) has been found during study of Punjab Salt Range. It was also reported as resident Bird of Punjab Salt Range (Roberts, 1992).

91) *Dendrocitta formosae* (Grey Treepie) has been found during study of Punjab Salt Range. It was also reported as resident of Punjab Salt Range (Roberts, 1992).

92) *Corvus monedula* (Jackdaw) has not been seen during visits to Punjab Salt Range. Present study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992).

93) *Corvus splendens* (Indian House Crow) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

94) *Corvus macrorhynchos* (Large Billed Crow) has not been seen during visits to Punjab Salt Range. Current study was conducted in summer and this bird is found in winter. It was reported as wintering bird of Punjab Salt Range (Roberts, 1992).

95) *Corvus frugilegus* (Rook) has not been seen during visits to Punjab Salt Range. Undertaken study was conducted in summer and this bird is found in winter. It was also observed as wintering bird of Punjab Salt Range (Roberts, 1992).

96) *Corvus coax* (Raven) has not been seen during visits to Punjab Salt Range. Present study was conducted for limited period of time. It was found in Punjab Salt Range (Roberts, 1992).

### 21. Family *Sturnidae*

97) *Acridotheres tristis* (Common Myna) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

98) *Acridotheres ginginianus* (Bank Myna) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Punjab Salt Range (Roberts, 1992; Waite, 1938).

### 22. Family *Passeridae*

99) *Passer domesticus* (House Sparrow) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

100) *Passer hispaniolensis* (Willow Sparrow) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was reported as winter bird of Punjab Salt Range (Roberts, 1992; Waite, 1938).

101) *Petronia xanthocollis* (Yellow Throated Rock Sparrow) has not been seen during visits to Punjab Salt Range. Undertaken study was conducted for limited period of time. It was observed as summer breeding bird of Punjab Salt Range (Roberts, 1992; Waite, 1938).

### 23. Family *Ploceidae*

102) *Ploceus philippinus* (Indian Baya Weaver) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

103) *Ploceus mania* (Streaked Weaver) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992).

### 24. Family *Esterlidae*

104) *Esterlida amandava* (Red Munia) has been found during study of Punjab Salt Range. It was also reported as resident of Punjab Salt Range (Roberts, 1992).

105) *Eodice malabrica* (White Throated Munia) has been found during study of Punjab Salt Range. It was also found in Punjab Salt Range (Roberts, 1992).

**Sub Family *Fringillinae***

106) *Fringilla coelebs* (Chaff Finch) has not been seen during visits to Punjab Salt Range. Current study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1992; Koning, 1972).

107) *Fringilla montfringilla* (Bramiding) has not been seen during visits to Punjab Salt Range. Present study was conducted for limited period of time. It was found in Ucchali, Khabaki Lake (Roberts, 1992; Koning, 1973; Waite, 1938).

**Sub Family *Carduelinae***

108) *Carduelis cardueli* (Eurasian Gold Finch) has not been seen during visits to Salt Range. As, study was conducted in summer and this bird is found in winter. It was found in Ching at Punjab Salt Range (Roberts, 1992; Gaston, 1979; Waite, 1938).

109) *Carduelis cannabina* (Linnet) has not been seen during visits to Punjab Salt Range. It was observed either in summer or winter in Punjab Salt Range (Roberts, 1992; Waite, 1938).

110) *Bucanetes githagineus* (Trumpeter Finch) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range (Roberts, 1992; Waite, 1938).

111) *Carpodacus grandis* (Red-Mantled Finch) has not been seen during visits to Punjab Salt Range. As, study was

conducted in summer and this bird is found in winter. It was found in Punjab Salt Range in winter. (Roberts, 1992).

112) *Carpodacus erythrineus* (Common Rose Finch) has not been seen during visits to Punjab Salt Range. As, study was conducted for limited period of time. It was found as summer breeding bird in Punjab Salt Range (Roberts, 1992; Waite, 1938).

**Sub Family *Emberizinae***

113) *Emberiza leucocephalos* (Pine Bunting) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was reported in Punjab Salt Range in winter (Roberts, 1992).

114) *Emberiza stewarti* (White Capped Bunting) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was reported in Punjab Salt Range in winter (Roberts, 1992).

115) *Eberiza cia* (Rock Bunting) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was found in Punjab Salt Range in winter (Roberts, 1992).

116) *Emberiza striolata* (House Bunting) has been found during study of Punjab Salt Range. It was also reported as

resident bird of Punjab Salt Range (Roberts, 1992).

- 117) *Emberiza buchanani* (Grey Necked Bunting) has not been seen during visits to Punjab Salt Range. As, study was conducted in summer and this bird is found in winter. It was observed in Khabaki Lake of Punjab Salt Range in winter (Roberts, 1992).
- 118) *Emberiza schoeniclus* (Reed Bunting) has not been seen during visits to Punjab Salt Range. Present study was conducted in summer and this bird is found in winter. It was found in Punjab Salt Range in winter (Roberts, 1992).
- 119) *Emberiza buniceps* (Red Headed Bunting) has not been seen during visits to Punjab Salt Range. Current study was conducted in summer and this bird is found in winter. It was ordinary bunting of Punjab Salt Range (Roberts, 1992; Waite, 1938).

## Non-Passerines

Non-Passerines of the study area are given below.

### 1. Family *Podicipedidae*

- 1) *Tachybaptus ruficollis* (Little Grebe) has been found during study of Punjab Salt Range. It was also reported as resident bird of Punjab Salt Range Lakes (Roberts, 1991).
- 2) *Podiceps nigricollis* (Black Necked Grebe) has not been found in Punjab Salt Range. Undertaken study was conducted

in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991; Ali and Ripley, 1971).

- 3) *Podiceps cristatus* (Great Crested Grebe) has not been found in Punjab Salt Range. Present study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991; Ali and Ripley, 1971).

### 2. Family *Phalacrocoracidae*

- 4) *Phalacrocorax carbo sinensis* (Great Cormorant) has not been found in Punjab Salt Range. This study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991; Ali and Ripley, 1971).

### 3. Family *Areidae*

- 5) *Botaurus stellaris* (Eurasian Bittern) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Khabaki Lake (Mallalieu, 1988; Ahmed, 1979).
- 6) *Dupetor flavicollis* (Black Bittern) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Khabaki Lake (Roberts, 1991).
- 7) *Ixobrychus sinensis* (Yellow Bittern) has not been found in Punjab Salt Range

during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Khabaki Lake (Roberts, 1991).

8) *Ixobrychus cinnamomeus* (Chestnut Bittern) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

9) *Ixobrychus minutus* (Little Bittern) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

10) *Ncyticorax ncyticorax* (Black Crowned Night Heron) has been found in Punjab Salt Range during study. It was also observed as resident or summer breeding bird of Punjab Salt Range (Roberts, 1991).

11) *Ardeola grayii* (Paddy Bird) is observed during the study of Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

12) *Bubulcus ibis* (Cattle Egret) has been found in Punjab Salt Range (Figure 2). It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

13) *Egretta garzetta* (Little Egret) is observed during study of Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

*Egretta intermedia* (Intermediate Egret) has not been found in Punjab Salt Range during study. As, study was conducted for limited period of time so this bird was not observed. It was observed as round visitor bird of Punjab Salt Range (Roberts, 1991).



**Figure 2:** *Bubulcus ibis* (Cattle Egret)

14) *Egretta Alba* (Large Egret) has not been found in Punjab Salt Range during study. As, study was conducted for a limited period of time. It was reported in Punjab Salt Range lakes (Roberts, 1991).

15) *Ardea cinerea* (Grey Heron) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

16) *Ardea purpurea* (Purple Heron) has not been found in Punjab Salt Range during study. As, study was conducted for a limited period of time so this bird was not observed. It was seen as year round visitor bird of Punjab Salt Range lakes (Roberts, 1991).

#### 4. Family *Ciconiidae*

17) *Ciconia ciconia* (White Stork) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Bikram, 2002; Roberts, 1991).

18) *Ciconia nigra* (Black Stork) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Bikram, 2002; Roberts, 1991).

#### 5. Family *Threskiomithidae*

19) *Platalea leucorodia* (Spoon Bill) has not been found in Punjab Salt Range during study. Present study was conducted in summer and this bird is found in winter. It was observed as winter visitor at Nammal Lake (Roberts, 1991).

#### 6. Family *Anatidae*

20) *Anser indicus* (Bar-Headed Goose) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was seen as double passage of Punjab Salt Range lakes & Khabaki Lake (Roberts, 1991).

21) *Tadrona ferruginea* (Brahminy Duck) has not been found in Punjab Salt Range during study. Undertaken study was conducted for limited period of time. It

was observed as ordinary migrant of Punjab Salt Range lakes (Roberts, 1991).

22) *Tadrona tadrona* (Common Shelduck) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range Lake (Roberts, 1991).

23) *Anas Penelope* (Eurasian Wigeon) has not been found in Punjab Salt Range during study. Present study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range lakes (Roberts, 1991).

24) *Anas querquedula* (Garganey) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant of Punjab Salt Range lakes (Roberts, 1991).

25) *Aythya ferina* (Common Pochard) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Khabaki Lake (Roberts, 1991).

26) *Netta rufina* (Red Crested Pochard) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant of Punjab Salt Range (Roberts, 1991).



- 27) *Anthya nyroca* (White Eyed Pochard) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant of Nammal and Khabaki lakes (Roberts, 1991; Savage, 1965)
- 28) *Anthya fuligula* (Tufted Duck) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was found in winter season in Punjab Salt Range (Roberts, 1991).
- 29) *Mergus albellus* (Smew) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was found in winter season in Punjab Salt Range (Savage, 1965).
- 30) *Mergus mergantsee* (Common Mergantsee) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range lakes (Roberts, 1991; Ahmed, 1979).
- 31) *Oxyura leucocephala* (White Headed Duck) has not been found in Punjab Salt Range during study. Present study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range Lakes (Roberts, 1991; Ahmed, 1979).
- 32) *Pernis apivorous* (Honey Buzzard) has not been found in Punjab Salt Range during study. Current study was conducted in summer and this bird is found in winter. It was observed as year round visitor bird of Punjab Salt Range lakes (Roberts, 1991).
- 33) *Elanus caeruleus* (Black Winged Kite) is seen in Punjab Salt Range during visits to Punjab Salt Range during study. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).
- 34) *Milvus migrans migrans* (Black Kite) is seen during Visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).
- 35) *Haliaeetus leucoryphus* (Ring Tailed Fish Eagle) has not been found in Punjab Salt Range during study. It was also seen as occasional bird of Punjab Salt Range lakes (Roberts, 1991).
- 36) *Neophron percnopterus* (Egyptian Vulture) has been seen as resident bird of Punjab Salt Range during study visits. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).
- 37) *Gyps fulvus* (Eurasian Griffon Vulture) has not been found in Punjab Salt Range during study. This bird has decreased its population due to less food available for them. It was observed as summer breeding bird of Punjab Salt Range (Roberts, 1991).
- 38) *Gyps bengalensis* (Oriental White Backed Vulture) has been seen during visits to Punjab Salt Range during study. It was also seen as summer breeding bird of Punjab Salt Range (Roberts, 1991).

## 7. Family *Accipetridae*

- 39) *Circateus gallicus* (Shot Toed Eagle) has not been found in Punjab Salt Range during study. This bird has reduced number in this area due to unavailability of food. It was seen as year visitor bird of Punjab Salt Range (Roberts, 1991).
- 40) *Circus aeruginas* (Marsh Harrier) has not been found in Punjab Salt Range during study. This bird has reduced number due to unavailability of food. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 41) *Circus macrourus* (Pallied Harrier) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 42) *Circus pygargus* (Montagu's Harrier) has not been found in Punjab Salt Range during study. As, study was conducted in limited period of time so this bird was not observed. It was observed as resident bird of Punjab Salt Range (Roberts, 1991).
- 43) *Accipiter nisus melaschictos* (Eurasian Sparrow Hawk) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was occasional wintering bird of Punjab Salt Range (Roberts, 1991).
- 44) *Accipiter badius cenchroides* (Shikkra) is seen during visits to Punjab Salt Range during study. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).
- 45) *Butastur tecca* (White Eyed Buzzard) is seen during visits to Punjab Salt Range for study. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991; Waite, 1938).
- 46) *Buteo rufinus* (Long Legged Buzzard) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).
- 47) *Aquila clanga* (Greater Spotted Eagle) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).
- 48) *Aquila heliaca* (Imperial Eagle) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 49) *Hieraaetus fasciatus* (Bonnelli's Eagle) is observed during study visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).
- 50) *Hieraaetus pennatus* (Booted Eagle) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

## 8. Family *Falconidae*

51) *Falco tinnunaulus* (Eurasian Kestrel) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

52) *Falco chiquera* (Red-Headed Merlin) has not been found in Punjab Salt Range during study. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

53) *Falco subbteo* (Northern Hobby) has not been found in Punjab Salt Range during study visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Sakesar Range (Roberts, 1991; Waite, 1938).

54) *Falco jugger* (Laggar Falcon) has been found during field visits to Punjab Salt Range. It was observed as resident bird of Punjab Salt Range (Roberts, 1991).

55) *Falco cherrug* (Saker Falcon) has not been found in Punjab Salt Range during study visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).

56) *Falco peregrinus* (Shaheen) has not been found in Punjab Salt Range during study visits. As, study was conducted in summer and this bird is found in winter.

It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

57) *Falco pelegrinoides* (Red Capped) has not been found in Punjab Salt Range during study visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

### Sub- family *Phasianidae*

58) *Alectoris chukar* (Chukar) has been found in Punjab Salt Range during field visits. It was also seen as resident bird of Chingi forest (Roberts, 1991).

59) *Ammoperdix griseogularis* (See-See Partridge) has been found in Punjab Salt Range during field visits. It was also observed as resident bird of hilly tracts of Punjab Salt Range (Roberts, 1991).

60) *Francolinus francolinus* (Black Partridge) is seen during field visits to Punjab Salt Range. It was also seen as resident bird of hilly tracts of Punjab Salt Range (Roberts, 1991).

61) *Francolinus pondicerianus* (Indian Grey Partridges) is seen during field visits to Punjab Salt Range. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).

62) *Coturnix coturnix* (Common Quail) is seen during field visits to Punjab Salt Range. It was also seen as ordinary migrant of Punjab Salt Range (Roberts, 1991).

63) *Pavo cristatus* (Indian Pea Fowl) has not been found in Punjab Salt Range during study visits (Figure 3). It was introduced in Kallar Kahar (Roberts, 1991).



**Figure 3:** *Pavo cristatus* (Indian Pea Fowl)

### 9. Family *Turnicidae*

64) *Turnix sylvatica* (Little Bustard Quail) has not been found in Punjab Salt Range during study visits. As, study was conducted for limited period of time so this bird is not observed. It was seen as summer breeding in Nurpur (Roberts, 1991; Waite, 1938).

65) *Rallus aquaticus* (Water Rail) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991; Waite, 1938).

66) *Porzana porzana* (Spotted Crane) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as

wintering bird of Kallar Kahar (Roberts, 1991).

67) *Porzana pusilla* (Baillon's Crane) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).

68) *Porzana fusca* (Ruddy Crane) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

69) *Gallinula chloropus* (Water Hen) has been found during field visits to Punjab Salt Range. It was observed as resident bird of Punjab Salt Range (Roberts, 1991).

70) *Fulica atra* (Black Coot) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

71) *Anthropoids Virgo* (Demoiselle Crane) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant bird of Punjab Salt Range (Roberts, 1991).

### 10. Family *Rostratulidae*

72) *Rostrula benghalensis* (Painted Snipe) has been found during field visits to Punjab Salt Range. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991; Konning, 1973).

### 11. Family *Recurvirostridae*

73) *Himantopus himantopus* (Black Winged Stilt) has not been found in Punjab Salt Range during field visits. As, study was conducted for limited period of time. It was observed as summer breeding in Kallar Kahar (Roberts, 1991).

74) *Recurvirostra avosetta* (Pied Avocet) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as winter visitor of Kallar Kahar (Roberts, 1991).

### 12. Family *Glareolidae*

75) *Cursorius coromanilicus* (Indian Courser) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as winter visitor of Punjab Salt Range (Roberts, 1991).

### 13. Family *Charadriidae*

76) *Charadrius dubius* (Little Winged Plover) has not been found in Punjab Salt Range during field visits. As, study was conducted for limited period of time so this bird was not found. It was observed as summer breeding bird of Punjab Salt Range (Roberts, 1991).

77) *Charadrius alexandrinus* (Snowy Plover) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

78) *Pluvialis squatarola* (Grey Plover) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant of Punjab Salt Range (Roberts, 1991).

79) *Hoplopetrus indicus* (Red Wattled Lapwing) has been found during field visits to Punjab Salt Range. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).

80) *Chettusia gregaria* (Sociable Plover) has not been found in Punjab Salt Range during field visits. It was observed as occasional wintering bird of Khabaki Lake (Waite, 1938).

81) *Chettusia lecura* (White Tailed Lapwing) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of KallarKahar (Roberts, 1991; Waite, 1938)

82) *Vanellus vanellus* (Lapwing) has been found during field visits to Punjab Salt Range. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

### 14. Family *Scolopacidae*

- 83) *Calidris temminckii* (Temminck's Stint) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).
- 84) *Calidris minute* (Little Stint) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as ordinary migrant of Punjab Salt Range (Roberts, 1991).
- 85) *Calidris alpine* (Dunlin) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was observed as wintering bird of Nammal lakes (Roberts, 1991).
- 86) *Philomachus pugnax* (Ruff) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as ordinary migrant of Punjab Salt Range (Bikrm, 2002; Roberts, 1991).
- 87) *Gallinago gallinago* (Common Snipe) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 88) *Numenius arquata* (Eurasian Curlew) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Kallar Kahar and Uchali Lake (Roberts, 1991; Waite, 1938).
- 89) *Tringa tetanus* (Red Shank) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as ordinary migrant of Punjab Salt Range (Roberts, 1991; Waite, 1938).
- 90) *Tringa nebuaria* (Green Shank) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 91) *Tringa glareole* (Wood Sandpiper) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was also seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 92) *Actitis hypoleucos* (Common Sand Piper) has not been found in Punjab Salt Range during field visits. As, study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Punjab Salt Range (Roberts, 1991).
- 93) *Larus khthyaetus* (Great Black Headed Gull) has not been found in Punjab Salt Range during field visits. As,

## 15. Family *Lariidae*

study was conducted in summer and this bird is found in winter. It was seen as wintering bird of Khabaki Lake and Ucchali Lake (Roberts, 1991; Waite, 1938).

#### 16. Family *Pteroclididae*

94) *Pterodes indicus* (Painted Sand Grouse) is seen during field visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991; Waite, 1938).

95) *Pterodes exustus* (Chestnut Bellied Sand Grouse) is seen during field visits to Punjab Salt Range. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).

#### 17. Family *Columbidae*

96) *Columba livia* (Rock Dove) is seen during field visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

97) *Columba palumbus casiotis* (Eastern Ring Dove) is seen during field visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

98) *Streptopelia decaocto* (Collared Dove) has been found during field visits to Punjab Salt Range. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

99) *Streptopelia tranquebarica* (Red Turtle Dove) has not been found in Punjab

Salt Range during field visits. As, study was conducted for limited period of time so this bird was not observed. It was also observed as summer breeding bird in Punjab Salt Range (Roberts, 1991).

100) *Streptopelia senegalensis* (Little Brown Dove) has been found in Punjab Salt Range during field visits. It was also observed as resident bird of Punjab Salt Range (Roberts, 1991).

#### 18. Family *Psittacidae*

101) *Psittacula eupatria* (Large Indian Parakeet) has not been found in Punjab Salt Range during field visits. It was seen as resident bird of Punjab Salt Range (Roberts, 1991).

102) *Psittacula krameri* (Rose Ringed Parakeet) has not been found in Punjab Salt Range during field visits. It was seen as resident bird of Punjab Salt Range (Roberts, 1991).

#### 19. Family *Cuculidae*

103) *Eudynamys scolopacea* (Koel) is seen during field visits to Punjab Salt Range. It was also observed as resident in Punjab Salt Range (Roberts, 1991).

104) *Hierococcyx varius* (Common Hawk Cuckoo) has not been found in Punjab Salt Range during field visits. As, study was observed for little period of time so it was not observed. It was seen as summer breeding in Punjab Salt Range (Roberts, 1991).

105) *Eudynamys scolopacea* (Koel) is seen during field visits to Punjab Salt Range. It was also observed as resident in Punjab Salt Range (Roberts, 1991).

106) *Centropus sinensis* (Greater Cocucal) is observed during field visits to Punjab Salt Range. It was also seen as resident bird of Punjab Salt Range (Roberts, 1991).

## 20. Family *Tytonidae*

107) *Otus bakkamoena* (Indian Scops Owl) has been found in Punjab Salt Range during field visits. It was observed as resident bird in Punjab Salt Range (Roberts, 1991).

108) *Otus brucei* (Pallid Scops Owl) has been found in Punjab Salt Range during field visits. It was seen as summer breeding bird in Punjab Salt Range (Roberts, 1991).

109) *Bubo bubo* (Northern Eagle Owl) has not been found in Punjab Salt Range during field visits. It was seen as resident in Punjab Salt Range (Roberts, 1991).

110) *Athene brama* (Spotted Owl) has not been found in Punjab Salt Range during field visits. It was observed as resident in Punjab Salt Range (Roberts, 1991).

111) *Asio flammeus* (Short Eared Owl) has not been found in Punjab Salt Range during field visits. It was observed as wintering bird of Punjab Salt Range (Roberts, 1991).

## 21. Family *Apodidae*

112) *Apus affinis* (Little Swift) is seen during field visits to Punjab Salt Range. It was seen as resident bird in Punjab Salt Range (Roberts, 1991).

## 22. Family *Caprimulgidae*

113) *Caprimulgus affinis* (Franklin's Night Jar) has not been found in Punjab Salt Range during field visits. It was seen as summer breeding bird in Punjab Salt Range (Roberts, 1991; Waite, 1938).

114) *Caprimulgus europreus* (Eurasian Night Jar) has not been found in Punjab Salt Range during field visits. It was seen as summer breeding bird in Punjab Salt Range (Roberts, 1991; Waite, 1938).

## 23. Family *Alcedinidae*

115) *Haleyon smyrnenis* (White Throated Kingfisher) is seen during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).

116) *Alcedo atthis* (Common Eurasian Kingfisher) has been found during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).

117) *Ceryle rudis* (Pied Kingfisher) is being watched during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).



#### 24. Family *Meropidae*

- 118) *Merops superciliosus* (Blue Cheeked Bee Eater) is seen during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).
- 119) *Merops orientalis* (Little green Bee Eater) is seen during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).
- 120) *Merops philippinus* (Blue Tailed Bee Eater) has been found during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).

#### 25. Family *Coraciidae*

- 121) *Coracias benghalensis* (Indian Roller) has been found during field visits to Punjab Salt Range. It was also observed as spring migrant bird Punjab Salt Range (Roberts, 1991).
- 122) *Coracias garrulus* (Kashmir Roller) has not been found in Punjab Salt Range during field visits. It was seen as spring migrant bird of Punjab Salt Range (Roberts, 1991).

#### 26. Family *UpUpidae*

- 123) *Upupa epops* (Hoopoe) is being watched during field visits to Punjab Salt Range. It was also observed as resident bird in Punjab Salt Range (Roberts, 1991).

#### 27. Family *Capitonidae*

- 124) *Magalaima haemacephala* (Copper Smith) has been found in Punjab Salt Range during field visits. It was also found as resident bird in Punjab Salt Range (Roberts, 1991).

#### 28. Family *Picidae*

- 125) *Jynx terquilla* (Eurasian Wry Neck) has not been found in Punjab Salt Range during field visits. It was observed as wintering bird in Punjab Salt Range (Roberts, 1991).
- 126) *Dinopium benghalense* (Golden Backed Wood Pecker) has been found in Punjab Salt Range during field visits. It was also observed as resident in Punjab Salt Range (Roberts, 1991).
- 127) *Dendrocopos assimilis* (Sind Pied Wood Pecker) has been found in Punjab Salt Range during field visits. It is also observed as resident bird in Punjab Salt Range (Roberts, 1991).

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