

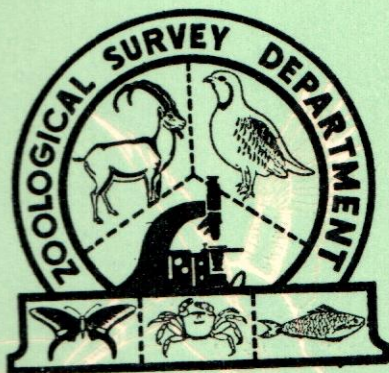
**A CHECK LIST OF BIRDS OF PAKISTAN WITH  
ILLUSTRATED KEYS TO THEIR IDENTIFICATION**

**By**

**ZAKIA KHANUM**  
Museum Taxonomist

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Karachi.



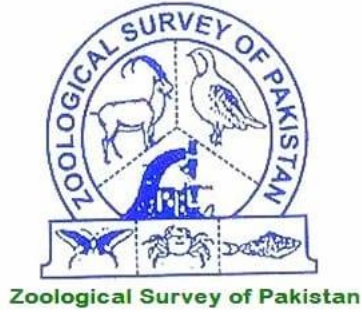
**Records Zoological Survey of Pakistan**

**Vol. IX**

**Numbers 1 & 2**

**JANUARY|JULY, 1980**

*Mohammad Farooq*



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## FOREWORD

Of all the fauna, birds are most interesting and attractive; they are fascinating even to watch. The significance of birds for agriculture, sport and as a part of our cultural heritage is receiving increasing appreciation. The information about the birds of Pakistan, however, is scattered and scanty.

2. I am pleased to note that the Zoological Survey Department is publishing an urgently needed hand-book on the identification of birds of Pakistan. It covers 612 species and gives illustrated keys to their identification. Though the description of the fauna of Pakistan, species-wise has not been given, which would have made the job of identification somewhat easier, this publication nevertheless is a creditable step forward, and I, with much pleasure, applaud the effort of the authors.

3. I am sure that this publication will be of help to the Zoologists, Naturalists and Research Workers. It will also be a useful reference book for the students of Zoology and Wildlife in the Universities of Pakistan.

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VICE ADMIRAL  
Minister for Food, Agriculture  
and Co-operatives  
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June 3, 1980.

(Mrs.) NASIMA MASOOM TIRMIZI,  
D. PHIL. (OXON), D. SC. (KAR.)  
*Professor of Zoology,*  
*University of Karachi, Pakistan.*

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(Mrs) NASIMA MASOUM TIRMIZI  
D.Phil. (Oxon), D.Sc. (Oxon)  
Professor of Zoology  
University of Karachi, Pakistan

June 3, 1960

## E R R A T A

S. No.	Page No.	Line No.	Incorrect entry	Correct entry
1.	25	18	Frnige	Fringe
2.	38	25	<i>S. tranquebarica</i>	<i>S. tranquebaria</i>
3.	87	5	2	1
4.	96	5	<i>capensus</i>	<i>capensis</i>
5.	97	22	<i>Threskiornithidae</i>	<i>Threskiornithidae</i>
6.	100	5	<i>pereonpterus</i>	<i>percnopterus</i>
7.	101	20	<i>tainki</i>	<i>tanki</i>
8.	101	22	<i>Graidae</i>	<i>Gruidae</i>
9.	101	24	<i>antigone antigone</i>	<i>G. antigone antigone</i>
9A.	102	16	R	R ?
10.	104	3	<i>C. aloinus alpinus</i>	<i>C. alpinus alpinus</i>
11.	104	12	<i>Recurvirstridae</i>	<i>Recurvirostridae</i>
12.	106	21	Bossom	Blossom
13.	107	4	—	Strigidae
14.	107	20	<i>Claucidium</i>	<i>Glaucidium</i>
15.	108	3	<i>Carimulgiformes</i>	<i>Caprimulgiformes</i>
16.	108	4	<i>Carimulgidae</i>	<i>Caprimulgidae</i>
17.	108	6	v/PM	Sv/PM
18.	111	10	S/b	S/bv
19.	123	17	<i>rubicillasevertzovi</i>	<i>rubicilla severtzovi</i>
20.	125	20	R	R ?

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## INTRODUCTION

In spite of the fact that birds of India and Pakistan had been most enthusiastically studied during the British period in undivided India, and in India even after partition of 1947, the glamour of avian studies has considerably dampened in Pakistan. Most of the information available presently on the bird fauna of Pakistan is derived from the studies of Salim Ali (1949 : 1964), Whistler (1949), Baker (1922-30), and Salim Ali and S.D. Ripley (1968-74) published in 10 volumes. Siddiqi (1969), and Khanum and Qadri (1972) published fragmentary information on some birds of Pakistan. None of the studies of birds can be called comprehensive or exhaustive in its subject matter on birds of this country.

The present handbook is an attempt to present in one volume the entire bird fauna of Pakistan, their check list consisting of their classification, common and scientific names, their status with respect to their geographical distribution, and a key to the identification of orders, families, in some cases subfamilies, genera, species and subspecies. In a number of cases, where necessary, keys have been prepared to identify sexes separately, as well as identifications of adults in different seasons. Figures, mostly line drawings have been prepared to make the keys easily understandable even for beginners, and amateurs, as well as scientific workers in the field of Ornithology. A total of 17 orders, 65 families, 26 sub-families, 267 genera, 612 species, and 638 subspecies have been keyed out in the present handbook.

The inspiration for the collective presentation of 612 species (and 638 subspecies) of Pakistani birds, and a key to their identification was mainly provided by the earlier studies on birds in the Zoological Museum of Karachi University (inherited from the collections of old Victoria Albert Museum, Karachi) and in the repository of Zoological Survey Department (Govt. of Pakistan) at Karachi, and some field studies by the authors under the guidance of late Prof. M.A.H. Qadri. Not all the species of birds of Pakistan have been preserved, stuffed and ready for observation and confirmation anywhere in Pakistan. A considerable part of the species keyed out here have been accepted uncritically out of records and observations published in apparently reliable manner, with the understanding that the birds observed "only once", "rarely", "only occasionally" do not exclude the possibility of their observation once more, or on more than one occasion, and the situation does not warrant their exclusion from the fauna of birds of Pakistan. In a number of cases where workers have presented conflicting opinion of the distribution of a species in territories included in Pakistan, those in favour have been preferred, and the species included in keys.

While preparing keys, the orders Gaviiformes and Procellariiformes have not been keyed out due to the controversial nature of occurrence of their species within the boundaries of Pakistan. The species *Falco concolor* (Falconidae : Falconiformes), *Crex crex* (Rallidae : Gruiformes) and *Stercorarius parasiticus* (Stercorariidae : Charadriiformes) have also not been included/listed in the avian fauna of Pakistan due to their unreliable reports from our territories. The family Fringillidae was divided by Baker (1926) into three subfamilies, i.e. Fringillinae, Emberizinae and Coccothraustinae. Ali and Ripley (1974) raised the subfamily Emberizinae to family level and included only one genus *Fringilla* in his new subfamily Fringillinae. At the same time he adopted the subfamily name Carduelinae to include many genera of Fringillinae other than *Fringilla* as well as all the genera of Coccothraustinae of Baker (1926). In the present key the genera of Fringillinae and Coccothraustinae have been treated in the manner as done by Baker (1926).

The well known dichotomously branching keys have been prepared in the handbook, with binomials or trinomials used by Salim Ali and Ripley (1968-74) as authentic names for Pakistani birds also. A major portion of characters used in keys have been basically drawn from the keys of Baker (1922-30), and latest treatise of (1968-74) by Salim Ali and Ripley, on the Handbook of the birds of India and Pakistan. Nevertheless the keys to species and subspecies apply most accurately to the living or freshly killed birds. While using it for dried specimens, some compensation has to be made for shrinkage of various parts of the specimens. The characteristics other than colouration, illustrated presentations of the exact sense in which they are mostly used by ornithologists and also used in the present work, are given for the benefit of readers who need to consult the keys.

The phenomenon of migration in birds, besides being fascinating has also paved the way of streams of migrants from various parts of USSR, although the information of the phenomenon in Pakistan are largely based on casual observations, and not on careful documentations. Whatever is known of migratory birds into India through Afghanistan and Kashmir, is more true about the migrants in Pakistan, as the migratory birds travel to India all through various parts of Pakistan, through Kaghan, Kurram, Hazara, Punjab, and then splitting into smaller streams, and entering India at various points. The most important of our winter visitors include the ducks and geese (Anatidae), waders (Charadriidae), cranes, swallows, passerines, wagtails, finches, warblers, thrushes, chats etc. etc. This does not account for the local movements of birds, not taking them out of our boundaries.

The present booklet is not an original contribution in any way on the systematics of birds, and so no attempt has been made on the validity and basis of using various names at different levels of classification. The sources of names from species level to the level of orders has been mostly the works of Salim Ali and Ripley (1968-74), and Baker's (1922-30) fauna of British India on Birds, which may be referred for detailed study. While making keys, a fairly large utilisation of keys in these works has been made in this work, with modifications. Keys have essentially a limited use, particularly when they encompass the fauna of a certain political area, not associable with natural geo-climatic region. So the keys suggested for the identification may be useful only and to a major extent while identifying birds of Pakistan. It does not and in fact cannot replace a full fledged account of the birds of Pakistan, which need be compiled on the pattern of Ali and Ripley's (1968-74) work, which however also deals with bird fauna of Pakistan, not separately, but jointly with account of Indian birds. As we are still far from a comprehensive collection of bird specimens of Pakistan for study, we would continue to be handicapped from achieving a reliable understanding of our bird fauna. The sooner we do it, the quicker we can start the next phase of their biology and ecology, and programmes of their conservation.

## KEY TO THE ORDERS OF PAKISTANI BIRDS

- |     |   |                  |  |
|-----|---|------------------|--|
| 1.  | Toes with membranous webs (fig. 34) .. ..   | 2                |  |
|     | Toes without membranous webs (fig. 35) ..   | 7                |  |
| 2.  | Toes directed forward, 4 in number (fig. 36) ..                                       | Pelecaniformes   |  |
|     | Toes directed forward, 3 in number (fig. 34) ..                                       | 3                |  |
| 3.  | Front toes all webbed together, partly (fig. 37) or completely (fig. 34) .. ..        | 4                |  |
|     | Front toes not webbed together, with lateral lobes (fig. 38) present separately .. .. | Podicipitiformes |  |
| 4.  | Front toes with interdigital web upto the tip of digits (fig. 39) .. ..               | Anseriformes     |  |
|     | Front toes with interdigital web not upto the tip of digits .. ..                     | 5                |  |
| 5.  | Hind toe at the level of front toes (fig. 40) ..                                      | Ciconiiformes    |  |
|     | Hind toe above the level of front toes (fig. 34) ..                                   | 6                |  |
| 6.  | Hind toe well developed except Bustards ..  | Gruiformes       |  |
|     | Hind toe usually absent (fig. 41), when present small in size .. ..                   | Charadriiformes  |  |
| 7.  | Toes zygodactylous (fig. 42) .. ..  | 8                |  |
|     | Toes not zygodactylous .. ..  | 10               |  |
| 8.  | Upper mandible movable .. ..  | Psittaciformes   |  |
|     | Upper mandible not movable .. ..  | 9                |  |
| 9.  | Oil gland tufted .. ..  | Piciformes       |  |
|     | Oil gland nude .. ..  | Cuculiformes     |  |
| 10. | Toes syndactylous (fig. 43) .. ..   | 11               |  |
|     | Toes not syndactylous .. ..   | 13               |  |
| 11. | Outer toe reversible .. ..  | Strigiformes     |  |
|     | Outer toe not reversible .. ..  | 12               |  |
| 12. | Bill long and stout .. ..   | Coraciiformes    |  |
|     | Bill short and weak .. ..   | Caprimulgiformes |  |
| 13. | Toes pamprodactylous (fig. 44) .. ..  | Apodiformes      |  |
|     | Toes not pamprodactylous .. ..  | 14               |  |

14. Upper mandible deeply hooked at the tip (fig. 85). Falconiformes  
 Upper mandible slightly curved, not hooked  
 (fig. 91) .. .. . 15
15. Tibiotarsal spur present in both sexes (fig. 47) .. Galliformes  
 Tibiotarsal spur lacking .. .. . 16
16. Wing with eleven primaries .. .. . Columbiformes  
 Wing with nine complete primaries, tenth obsolete,  
 or ten complete primaries and eleventh too small  
 to be seen .. .. . Passeriformes

## ORDER PODICIPITIFORMES

FAMILY PODICIPITIDAE : Grebes (Pandubi ; Churaka)

*Includes a single genus with four species from Pakistan.*

## Genus Podiceps Latham

## KEY TO THE SPECIES

1. Size equal to that of duck (19.5-23.5 inches) .. 2  
    Size smaller than duck (9-13 inches) .. .. 3
2. Neck slender ; bill straight ; head ornamented with  
    backward pointed tufts and a frill or ruff of  
    black chestnut feathers below (During summer  
    only) .. .. . *P. cristatus*  
        or  
    Neck slender ; head ornamentation reduced or  
    lacking, white eye-stripe present ; base of bill  
    pinkish (During winter only) .. .. *P. cristatus*  
    Neck thicker ; head ornamentation reduced or  
    lacking ; white eye-stripe absent ; base of bill  
    yellow (During winter only) .. .. *P. griseigena*
3. Bill needle-like, slightly curved upwards .. .. 4  
    Bill rather thick and straight .. .. 5
4. Head and neck black, with tufts of golden brown  
    feathers on sides of head (During summer only). *P. nigricollis*  
    Head and neck dark greyish black ; white of throat  
    extending around nape (During winter only) .. *P. nigricollis*
5. Sides of head and foreneck chestnut, cap greyish  
    black, upper throat black (During summer only). *P. ruficollis*  
    Sides of head and foreneck pale rufous, cap darker,  
    upper throat white (During winter only) .. *P. ruficollis*

## ORDER PELECANIFORMES

## KEY TO THE FAMILIES

1. Bill with a ventral pouch throughout its length (fig. 71) .. .. . Pelecanidae
- Bill without a ventral pouch .. .. . 2
2. Bill stout, slightly down curved at tip, but not hooked .. .. . Sulidae
- Bill slender, straight, pointed or hooked at tip .. Phalacrocoracidae

## FAMILY PELECANIDAE : Pelicans (Hawasil)

*Includes a single genus with two species from Pakistan.*

Genus *Pelecanus* Linnaeus

## KEY TO THE SPECIES

- Feathers of forehead end in a point (fig. 66) .. *P. onocrotalus*
- Feathers of forehead end in a transverse concave line (fig. 67) .. .. . *P. philippensis*

*Pelecanus philippensis* Gmelin

## KEY TO THE SUBSPECIES

- General coloration grey, no black in wings ; bill with blue spots ; pouch dull purple .. .. . *P. p. philippensis*
- General coloration white, with black primaries ; bill and pouch yellow to orange .. .. . *P. p. crispus*

## FAMILY SULIDAE : Boobies

*Includes a single genus with single species from Pakistan.*

*Sula dactylatra melanops*

## FAMILY PHALACROCORACIDAE : Cormorants and Darters (PanKawwa and Pan-Dubbi)

*Includes two genera and four species from Pakistan.*

## KEY TO THE GENERA

- Bill hooked at tip .. .. . *Phalacrocorax*
- Bill straight and pointed .. .. . *Anhinga*

Genus *Phalacrocorax* Brisson

## KEY TO THE SPECIES

## (SUMMER PLUMAGE)

1. Large approximately 32 inches ; glossy black above and below ; flanks white .. .. . *P. carbo*  
     Smaller approximately 20-25 inches ; glossy black above and below ; flanks not white .. .. . 2
2. Pure white tufts of feathers on each side of neck behind ear-coverts ; yellow gular skin present .. *P. fuscicollis*  
     Scattered silky white plumes on forecrown and sides of head ; yellow gular skin absent .. *P. niger*

## (WINTER PLUMAGE)

1. Throat speckled, head and neck black ; yellow gular skin present .. .. . *P. fuscicollis*  
     Throat white, no markings on sides of head ; with or without yellow gular skin .. .. . 2
2. Yellow gular skin present .. .. . *P. carbo*  
     Yellow gular skin absent .. .. . *P. niger*

*Anhinga rufa melanogaster*

## ORDER CICONIIFORMES

## KEY TO THE FAMILIES

1. Bill thick, lamellate (fig. 74) .. .. Phoenicopteridae  
    Bill not thick, not lamellate .. .. 2
2. Web uniting all the three front toes .. .. 3  
    Web uniting middle toe and outer toe (fig. 37) .. Ardeidae
3. Bill straight and pointed at tip .. .. Ciconiidae  
    Bill curved downwards or spoon-shaped at tip  
    (fig. 69) .. .. Threskiornithidae

FAMILY ARDEIDAE : Herons, Egrets and Bitterns (Bagla, Karchia  
 Bagla and Kancha Bagla)

*Includes nine genera and sixteen species from Pakistan,*

## KEY TO THE GENERA

1. Tail-feathers twelve .. .. 2  
    Tail-feathers ten .. .. 7
2. Tibia (fig. 26) much longer than inner toe and claw 3  
    Tibia shorter than inner toe and claw .. .. 4
3. Plumage grey above, varied below .. .. *Ardea*  
    Plumage white throughout .. .. *Egretta*
4. Wings, body and tail white .. .. 5  
    Wings, body and tail never white .. .. 6
5. Head and back white in winter, ochreous-buff in  
    breeding season; culmen (fig. 2) shorter than tar-  
    sus .. .. *Bubulcus*  
    Head and back always coloured, not buff or only  
    partly so culmen longer than tarsus .. .. *Ardeola*
6. Culmen longer than tarsus .. .. *Butorides*  
    Culmen about equal to tarsus .. .. *Nycticorax*
7. Middle toe and claw not longer than culmen .. 8  
    Middle toe and claw longer than culmen .. *Botaurus*
8. Length of wings under 160 mm .. .. *Ixobrychus*  
    Length of wings over 170 mm .. .. *Dupetor*

Genus *Ardea* Linnaeus

## KEY TO THE SPECIES

- Crown (fig. 4) and crest (fig. 91) vinous-chestnut,  
neck rufous-cinnamon .. .. . *A. goliath*
- Crown white, crest black, neck smoky white .. .. . *A. cinerea*
- Crown and crest slaty black, neck ferruginous .. .. . *A. purpurea*

*Ardea cinerea* Linnaeus

## KEY TO THE SUBSPECIES

- Darker grey above .. .. . *A. c. cinerea*
- Paler grey above .. .. . *A. c. rectirostris*
- Butorides striatus chloriceps*
- Ardeola grayii grayii*
- Bubulcus ibis coromandus*

Genus *Egretta* Förster

## KEY TO THE SPECIES

## (SUMMER PLUMAGE)

1. Crest absent .. .. . 2
- Crest present .. .. . 3
2. Breast plumes absent, back with lacy plumes .. .. . *E. alba*
- Breast plumes present, full plumes on back also .. .. . *E. intermedia*
3. Bill black .. .. . *E. garzetta*
- Bill yellow .. .. . *E. gularis*

*Egretta alba* Linnaeus

## KEY TO THE SUBSPECIES

- Wing 410-470 mm .. .. . *E. a. alba*
- Wing 354-391 mm .. .. . *E. a. modesta*

*Nycticorax nycticorax nycticorax**Dupetor flavicollis flavicollis**Botaurus stellaris stellaris*

Genus *Ixobrychus* Billberg

## KEY TO THE SPECIES

1. Tibia feathered throughout .. .. 2  
Tibia partly feathered .. .. *I. cinnamomeus*
2. Culmen equal to middle toe and claw .. .. *I. minutus*  
Culmen longer than middle toe and claw .. .. *I. sinensis*

## FAMILY CICONIIDAE : Storks (Laglag or Surmel)

*Includes five genera and seven species from Pakistan.*

## KEY TO THE GENERA

1. Centre of mandibles touching one another and showing no open space .. .. 2  
A wide open space (fig. 93) between the mandibles in the centre .. .. *Anastomus*
2. Bill straight .. .. 3  
Bill curved .. .. 4
3. Forehead, crown and cheeks feathered .. .. *Ciconia*  
Whole head or most of head unfeathered .. .. *Leptoptilos*
4. Bill slightly curved up at the tip .. .. *Xenorhynchus*  
Bill curved down at the end .. .. *Ibis*

Genus *Ciconia* Brisson

## KEY TO THE SPECIES

1. Bill straight .. .. 2  
Bill slightly upcurved at tip .. .. *C. nigra*
2. Plumage white, scapulars and wings black .. .. *C. ciconia*  
Neck white, head back and wings glossy black .. .. *C. episcopus*

*Ibis leucocephalus*

*Anastomus oscitans*

*Xenorhynchus asiaticus asiaticus*

*Leptoptilos dubius*

## FAMILY THRESKIORNITHIDAE : Ibises, Spoonbill (Baza and Chamach baza)

*Includes four genera and four species from Pakistan.*

## KEY TO THE GENERA

1. Bill spatula-shaped at end (fig. 69) .. .. *Platalea*  
Bill curved downwards (fig. 77) not spatulate at end 2

2. Tarsus covered with hexagonal scales .. .. 3  
 Tarsus covered with transverse scutellae in front ;  
 head feathered in adults and only face naked .. *Plegadis*
3. Whole head and neck naked in adults ; plumage  
 nearly all white .. .. *Threskiornis*  
 Head naked and neck feathered in adults ; plumage  
 mostly glossy black .. .. *Pseudibis*
- Threskiornis melanocephala*  
*Pseudibis papillosa papillosa*  
*Plegadis falcinellus falcinellus*  
*Platalea leucorodia major*

FAMILY PHOENICOPTERIDAE : Flamingos (Raj-Hans ; Bog-Hans)

*Includes two genera and two species from Pakistan.*

KEY TO THE GENERA

- Upper mandible overlapping lower ; throat naked *Phoenicopterus*  
 Upper mandible not overlapping lower ; throat fea-  
 thered .. .. *Phoeniconaias*

*Phoenicopterus roseus*  
*Phoeniconaias minor*

## ORDER ANSERIFORMES

FAMILY ANATIDAE : Ducks, Geese, Swans (Butkhe ; Hans; Rajhans)

*Includes thirteen genera and thirty four species from Pakistan.*

## KEY TO THE GENERA

- |     |  |                     |
|-----|--|---------------------|
| 1.  | Hind toe not lobed .. .. .   | 2                   |
|     | Hind toe lobed (fig. 39) .. .. .   | 4                   |
| 2.  | Neck as long as or longer than body .. .. .  | <i>Cygnus</i>       |
|     | Neck smaller than the body length .. .. .  | 3                   |
| 3.  | Plumage on sides of neck longitudinally furrowed;<br>tail white or tipped with white .. .. .                   | <i>Anser</i>        |
|     | Plumage on sides of neck unfurrowed; tail neither<br>white nor tipped with white .. .. .                       | <i>Sarkidiornis</i> |
| 4.  | Hind toe very narrowly lobed (fig. 39) .. .. .   | 5                   |
|     | Hind toe broadly lobed (fig. 56) .. .. .   | 8                   |
| 5.  | Bill convex and narrowed (fig. 80) .. .. .   | <i>Nettapus</i>     |
|     | Bill rather flat and broad (fig. 92) .. .. .   | 6                   |
| 6.  | Lower portion of tarsus in-front reticulated ;<br>(fig. 59) ; primaries equal to secondaries in length .. .. . | <i>Dendrocygna</i>  |
|     | Lower portion of tarsus in-front scutellated<br>(fig. 60) ; primaries longer than secondaries .. .. .          | 7                   |
| 7.  | Entire outer web of inner secondaries chestnut .. .. .   | <i>Tadorna</i>      |
|     | Outer web of inner secondaries not chestnut .. .. .  | <i>Anas</i>         |
| 8.  | Bill long and thin with saw-like teeth (fig. 88 )<br>on edges of both mandibles .. .. .                        | <i>Mergus</i>       |
|     | Bill not as above .. .. .  | 9                   |
| 9.  | Tail feathers narrow and very stiff .. .. .  | <i>Oxyura</i>       |
|     | Tail feathers not narrow and not stiff .. .. .   | 10                  |
| 10. | Under wing-coverts (fig. 32) not white .. .. .   | 11                  |
|     | Under wing-coverts white or whitish .. .. .  | 12                  |
| 11. | Nostrils (fig. 1) situated on culmen about one third<br>of the distance from base to tip .. .. .               | <i>Clangula</i>     |
|     | Nostrils situated on culmen about two thirds of<br>the distance from base to tip .. .. .                       | <i>Bucephala</i>    |
| 12. | Width of culmen becoming narrower towards<br>tip; lamellae coarse and prominent .. .. .                        | <i>Netta</i>        |
|     | Width of culmen becoming broader towards tip;<br>lamellae fine and not prominent .. .. .                       | <i>Aythya</i>       |

Genus *Anser* Brisson

## KEY TO THE SPECIES

1. Head with two black bands at nape .. .. *A. indicus*  
 Head without black bands at nape .. .. 2
2. No white or very little white on forehead ; rump  
 (fig. 15) grey ; legs pink .. .. *A. anser*  
 Considerable white on forehead and around base  
 of bill ; rump greyish-brown ; legs reddish to  
 orange-yellow .. .. 3
3. Wings over 380 mm .. .. *A. albifrons*  
 Wings under 380 mm .. .. *A. erythropus*

Genus *Cygnus* Bechstein

## KEY TO THE SPECIES

1. Lores (fig. 10) and triangular patch between  
 forehead and gape black; a knob at base of  
 bill in adults present .. .. *C. olor*  
 Lores and triangular patch between forehead  
 and gape yellow or orange-yellow; knob at  
 base of bill lacking .. .. 2
2. Yellow on bill extending upto or beyond nos-  
 tril towards tip of bill .. .. *C. cygnus*  
 Yellow on bill never reaching nostril and genera-  
 lly confined to a somewhat circular patch on  
 base .. .. *C. columbianus*

Genus *Dendrocygna* Swainson

## KEY TO THE SPECIES

- Upper tail-coverts (fig. 16) uniformly chestnut *D. javanica*  
 Upper tail-coverts whitish, sometimes marked  
 with black .. .. *D. bicolor*

Genus *Tadorna* Oken

## KEY TO THE SPECIES

- Body chestnut-coloured above and below; head  
 paler chestnut ; large white patch on bend of  
 wing; bill black .. .. *T. ferruginea*  
 Body black and white above and below; head  
 black; chestnut girdle around breast and  
 shoulders; bill red .. .. *T. tadorna*

Genus *Anas* Linnaeus

## KEY TO THE SPECIES

- ADULT MALES IN BREEDING PLUMAGE
1. Speculum wanting .. .. *A. angustirostris*  
 Speculum always present .. .. 2
  2. Bill spatulate .. .. *A. clypeata*  
 Bill not spatulate .. .. 3
  3. Outer wing-coverts blue or blue-grey .. .. *A. querquedula*  
 Outer wing-coverts not blue or blue-grey .. 4
  4. Central tail-feathers greatly lengthened and pointed, extending from 75 to 100 mm beyond upper tail-coverts .. .. *A. acuta*  
 Central tail-feathers moderate in length and not elongated .... .. 5
  5. Adult large-sized (24 in.) .. .. 6  
 Adult medium or smaller-sized .. .. 7
  6. Speculum purple-blue or green; outer webs of long pointed tertiaries edged with white .. *A. poecilorhyncha*  
 Speculum purple blue; no white on edges of tertiaries .. .. *A. platyrhynchos*
  7. Medium-sized (19-22 in.) .. .. 8  
 Smaller-sized (15-17 in.) .. .. 10
  8. Tail-coverts (fig. 16) longer than rectrices (fig. 17) .. .. *A. falcata*  
 Tail-coverts shorter than rectrices .. .. 9
  9. Central tail-feathers extending 30 mm or more beyond upper tail-coverts .. .. *A. penelope*  
 Central tail-feathers extending less than 30 mm beyond upper tail-coverts .. .. *A. strepera*
  10. Speculum with outermost secondaries black with narrow white tips, those next to them brilliant metallic green and their coverts tipped rufous .. *A. crecca*  
 Speculum with outer most secondaries black with wide white tips, those next to them bronze-green at base, then black tipped with white and their coverts tipped rufous .. .. *A. formosa*

## ADULT FEMALES AND MALES (IN ECLIPSE PLUMAGE)

- |   |                          |
|---|--------------------------|
| 1. Speculum lacking .. .. .   | <i>A. angustirostris</i> |
| Speculum always present .. .. .   | 2                        |
| 2. Bill spatulate .. .. .   | <i>A. clypeata</i>       |
| Bill not spatulate .. .. .  | 3                        |
| 3. Outer wing-coverts blue or blue-grey .. .. .   | <i>A. querquedula</i>    |
| Outer wing-coverts not blue or blue-grey .. .. .  | 4                        |
| 4. Underparts brown or mottled brown .. .. .  | 5                        |
| Underparts white or whitish .. .. .   | 8                        |
| 5. Small nuchal crest (fig. 62) present .. .. .   | <i>A. falcata</i>        |
| Nuchal crest absent .. .. .   | 6                        |
| 6. Outer edge of tertiaries white, forming conspicuous patch on wing ; speculum blue-violet or green .. .. .  | <i>A. poecilorhyncha</i> |
| Outer edge of tertiaries without a white patch on wing .. .. .  | 7                        |
| 7. Speculum purple-blue, bordered in front and behind with black and white band, the white predominating .. .. .  | <i>A. platyrhynchos</i>  |
| Speculum dark, dull brown, splotched with green or bronzy overtones .. .. .   | <i>A. acuta</i>          |
| 8. Speculum white .. .. .   | <i>A. strepera</i>       |
| Speculum otherwise .. .. .  | 9                        |
| 9. Speculum dull blackish, sometimes glossed with green and bordered inwardly by white edges of long pointed tertiaries .. .. .   | <i>A. penelope</i>       |
| Speculum with outermost secondaries (fig. 19) black with narrow white tips, those next to them brilliant metallic green sometimes narrowly tipped rufous .. .. .              | <i>A. crecca</i>         |
| Speculum with outermost secondaries black with wide white tips, those next to them bronze-green at base, then black tipped with white and their coverts tipped rufous .. .. . | <i>A. formosa</i>        |

Genus *Aythya* Boie

## KEY TO THE SPECIES

- |   |   |
|---|---|
| 1. Bill wider at tip than at base .. .. . | 2 |
| Bill same width at tip and base .. .. .   | 3 |

2. Head, neck and breast black .. .. . *A. fuligula* (♂)  
 Head, neck and breast brown or brownish black .. .. . *A. fuligula* (♀)
3. Wings lacking speculum .. .. . 4  
 Wings with white speculum .. .. . 5
4. Head and neck chestnut, back and wings pale grey *A. ferina* (♂)  
 Head and neck pale rufous, back and wings greyish  
 brown .. .. . *A. ferina* (♀)
5. Head, neck and breast chestnut .. .. . *A. nyroca* (♂)  
 Head, neck and breast dull brown .. .. . *A. nyroca* (♀)

### Genus *Mergus* Linnaeus

#### KEY TO THE SPECIES

1. Bill shorter than head .. .. . *M. albellus*  
 Bill longer than head .. .. . 2
2. Head and neck black, glossed with green .. .. . 3  
 Head and neck rufous .. .. . 4
3. Lowerparts white throughout .. .. . *M. merganser* (♂)  
 Lowerparts not white throughout .. .. . *M. serrator* (♂)
4. Chin white, back grey .. .. . *M. merganser* (♀)  
 Chin streaked with rufous, back brown .. .. . *M. serrator* (♀)

*Netta rufina*

*Nettapus coromandelianus coromandelianus*

*Sarkidiornis melanotos melanotos*

*Clangula hyemalis*

*Bucephala clangula clangula*

*Oxyura leucocephala*

## ORDER FALCONIFORMES

## KEY TO THE FAMILIES

- Upper mandible toothed (fig. 63) .. .. Falconidae  
 Upper mandible not toothed .. .. Accipitridae

FAMILY ACCIPITRIDAE : Hawks, Vultures, etc. (Cheel ; Baaz ; Shikra ; Gidh)

*Includes twenty one genera and thirty six species from Pakistan.*

## KEY TO THE GENERA

1. Head and neck bare .. .. 2  
 Head and neck feathered .. .. 5
2. Bill slender; nostrils elongate and horizontal (fig. 64) *Neophron*  
 Bill stout ; nostrils vertical or oval .. .. 3
3. Nostrils a narrow vertical slit (fig. 65) .. .. *Gyps*  
 Nostrils rounded or oval (fig. 63, 84) .. .. 4
4. Wattles absent .. .. *Aegyptus*  
 Wattles (fig. 68) present on either side of neck .. *Torgos*
5. Bill lengthened and vulturine (fig. 65) in shape ;  
 claws blunt (fig. 48); a tuft of long bristles on chin  
 (fig. 94) .. .. *Gypaetus*  
 Bill short and aquiline (fig. 85) in shape ; claws  
 sharp and generally greatly curved ; no tuft  
 on chin .. .. 6
6. Tarsus completely feathered in front and behind .. 7  
 Tarsus naked or partially feathered .. .. 10
7. Claws less curved, inner claw longer than hind .. *Ictinaetus*  
 Claws much curved, inner claw shorter than hind .. 8
8. Primaries exceeding secondaries by less than length  
 of tarsus .. .. *Spizaetus*  
 Primaries exceeding secondaries by more than  
 length of tarsus .. .. 9
9. Inner toe longer than culmen .. .. *Hieraetus*  
 Inner toe about same length as or shorter than  
 culmen .. .. *Aquila*
10. Lores feathered .. .. *Pernis*  
 Lores unfeathered .. .. 11

11. Tarsus long .. .. 12  
 Tarsus short .. .. 14
12. Ruff (fig. 72) present .. .. *Circus*  
 Ruff absent .. .. 13
13. Nuchal crest absent or pointed .. .. *Accipiter*  
 Nuchal crest broad covering whole nape .. .. *Spilornis*
14. Front of tarsus not scutellate .. .. 15  
 Front of tarsus scutellate .. .. 18
15. Front of tarsus covered with large overlapping hexagonal scales (fig. 54) .. .. *Butastur*  
 Front of tarsus covered with vermiculations or small hexagonal scales (fig. 46) .. .. 16
16. Size small ; second primary longest .. .. *Elanus*  
 Size larger ; third or fourth primary longest .. .. 17
17. Claws grooved beneath .. .. *Circaetus*  
 Claws not grooved beneath .. .. *Pandion*
18. Tail forked (fig. 123) .. .. *Milvus*  
 Tail not forked .. .. 19
19. Tarsus scutellated behind (fig. 58) .. .. *Buteo*  
 Tarsus with large reticulations or hexagonal scales behind .. .. 20
20. Third primary longest .. .. *Haliaeetus*  
 Fourth primary longest .. .. *Haliaastur*

Genus *Milvus* **Lacepede**

*Milvus migrans* (**Boddaert**)

KEY TO THE SUBSPECIES

1. Head in adult whitish with black streaks .. .. *M. m. migrans*  
 Head in adult fulvous with black streaks .. .. 2

2. Smaller ; wing ♂ 420—475 mm ; ♀ 432—499 mm,  
white underwing patch inconspicuous .. *M. m. govinda*

- Larger ; wing ♂ 475—529 mm., ♀ 480—552 mm.,  
white underwing patch conspicuous .. .. *M. m. lineatus*

*Elanus caeruleus vociferus*

*Pernis ptilorhynchus ruficollis*

*Haliastur indus indus*

*Buteo rufinus rufinus*

*Butastur teesa*

*Spizaetus nipalensis nipalensis*

*Ictinaetus malayensis perniger*

*Torgos calvus*

*Aegyptius monachus*

### Genus *Accipiter* Brisson

#### KEY TO THE SPECIES

1. Middle toe considerably longer than outer toe  
with claw .. .. . *A. nisus*  
Middle toe about as long as outer toe with claw .. 2
2. Larger ; wing ♂ 290—324 mm ; ♀ 353—362 mm *A. gentilis*  
Smaller ; wing ♂ 168—206 mm ; ♀ 180—226 mm *A. badius*

### *Accipiter badius* (Gmelin)

#### KEY TO THE SUBSPECIES

- Ashy blue-grey above .. .. . *A. b. dussumieri*  
Greyish brown above .. .. . *A. b. cenchroides*

### *Accipiter nisus* (Linnaeus)

#### KEY TO THE SUBSPECIES

- Paler, slaty-grey above .. .. . *A. n. nisosimilis*  
Darker, slaty-grey above .. .. . *A. n. melaschistos*

### Genus *Hieraetus* Kaup

#### KEY TO THE SPECIES

- Larger ; wing over 480 mm .. .. . *H. fasciatus*  
Smaller ; wing under 450 mm .. .. . *H. pennatus*

Genus *Aquila* Brisson

## KEY TO THE SPECIES

1. Nostrils elliptical or ear-shaped, higher than broad .. 2  
    Nostrils round, as high as broad .. .. 5
2. Claws very large ; hind claw over 50 mm .. *A. chrysaetos*  
    Claws moderate ; hind claw under 50 mm .. 3
3. Wing of ♂ under 530 mm, of ♀ under 575 mm .. *A. rapax*  
    Wing of ♂ over 530 mm, of ♀ over 600 mm .. 4
4. Plumage deep brown ; crown and nape tawny .. *A. heliaca*  
    Plumage deep umber-brown, with a pale patch  
    on the nape only .. .. *A. nipalensis*
5. Underparts streaked with pale .. .. *A. clanga*  
    Underparts unstreaked .. .. *A. pomarina*

Genus *Haliaeetus* Savigny

## KEY TO THE SPECIES

- Tail all white .. .. *H. albicilla*  
 Tail brown with a white cross-band .. .. *H. leucoryphus*

Genus *Gyps* Savigny

## KEY TO THE SPECIES

1. Tail-feathers twelve .. .. *G. bengalensis*  
    Tail-feathers fourteen .. .. 2
2. Bill smaller and more slender ; depth of base of bill  
    less than length of cere (fig. 65) .. .. *G. indicus*  
    Bill larger and less slender ; depth of base of bill  
    equal to length of cere .. .. 3
3. Lower plumage with narrow shaft-stripes .. .. *G. fulvus*  
    Lower plumage with broad shaft-stripes .. .. *G. himalayensis*

*Neophron percnopterus percnopterus**Gypaetus barbatus aureus**Circaetus gallicus gallicus**Spilornis cheela cheela**Pandion haliaetus haliaetus*

Genus *Circus* Lacepede

## KEY TO THE SPECIES

1. Outer webs of 2nd to 4th primaries notched  
(fig. 108) .. .. . 2
- Outer webs of 2nd to 5th primaries notched  
(fig. 109) .. .. . 3
2. Tarsus over 66 mm .. .. . *C. macrourus*
- Tarsus under 66 mm .. .. . *C. pygargus*
3. Bill from cere to tip over 29 mm .. .. . *C. aeruginosus*
- Bill from cere to tip under 29 mm .. .. . *C. cyaneus*

## FAMILY FALCONIDAE : Falcons (Shahin Laggar)

*Includes single genus with six species from Pakistan.*

Genus *Falco* Linnaeus

## KEY TO THE SPECIES

1. Size large ; middle toe over 40 mm in length .. 2
- Size small ; middle toe under 40 mm in length .. 3
2. First primary longer than third ; upperparts ashy-  
grey or slaty-grey .. .. . *F. peregrinus*
- First primary about equal to third ; upperparts not  
ashy or slaty-grey .. .. . *F. biarmicus*
3. Second primary longest ; first much longer than  
fourth .. .. . *F. subbuteo*
- Second and third primaries subequal ; first and  
fourth primaries subequal .. .. . 4
4. Back and scapulars (fig. 14) bright brick-red, with  
pear-shaped black spots .. .. . *F. tinnunculus*
- Back and scapulars not brick-red, without pear-  
shaped black spots .. .. . 5
5. Crown grey or brown .. .. . *F. columbarius*
- Crown chestnut .. .. . *F. chicquera*

*Falco biarmicus* Temminck

## KEY TO THE SUBSPECIES

1. A distinct narrow cheek-stripe ; middle tail-feathers  
entirely brown .. .. . *F. b. jugger*
- No cheek-stripe ; middle tail-feathers with white  
spots .. .. . 2

2. Plumage above with no bars .. .. . *F. b. cherrug*  
 Plumage above barred throughout .. .. . *F. b. milvipes*

*Falco peregrinus* **Tunstall**

KEY TO THE SUBSPECIES

1. Cheek-stripe narrow ; a buff nuchal collar present .. .. . *F. p. babylonicus*  
 Cheek-stripe broad ; nuchal collar lacking .. .. . 2  
 2. Above paler, below white or almost so .. .. . *F. p. japonensis*  
 Above much darker, below very ferruginous .. .. . *F. p. peregrinator*

*Falco subbuteo* **Linnaeus**

KEY TO THE SUBSPECIES

- Darker .. .. . *F. s. subbuteo*  
 Paler .. .. . *F. s. centralasiae*

*Falco columbarius* **Linnaeus**

KEY TO THE SUBSPECIES

- Darker both above and below .. .. . *F. c. insignis*  
 Paler both above and below .. .. . *F. c. christianiludoviei*

## ORDER GALLIFORMES

FAMILY PHASIANIDAE: Pheasants, Partridges, and Quails etc. (Teatar; mor; Murghi; Chukor).

*Includes fourteen genera and sixteen species from Pakistan.*

## KEY TO THE GENERA

## MALES

- |     |   |                     |
|-----|---|---------------------|
| 1.  | Feathers of tail or tail-coverts with large metallic ocelli .. .. . | <i>Pavo</i>         |
|     | No ocellations on tail or tail-coverts .. .. .                      | 2                   |
| 2.  | Wing over 200 mm .. .. .  | 3                   |
|     | Wing under 200 mm .. .. .   | 7                   |
| 3.  | Tail longer than wing .. .. .                                       | 4                   |
|     | Tail shorter than wing .. .. .                                      | <i>Lophophorus</i>  |
| 4.  | Crown with a fleshy erect comb (fig. 78) .. .. .                    | <i>Gallus</i>       |
|     | Crown without a fleshy comb .. .. .                                 | 5                   |
| 5.  | Tail slightly longer than wing .. .. .                              | 6                   |
|     | Tail much longer than wing .. .. .                                  | <i>Catreus</i>      |
| 6.  | Sides of head feathered .. .. .                                     | <i>Pucrasia</i>     |
|     | Sides of head unfeathered .. .. .                                   | <i>Lophura</i>      |
| 7.  | Tail shorter than or equal to wing .. .. .                          | 8                   |
|     | Tail longer than wing .. .. .                                       | <i>Tetraogallus</i> |
| 8.  | Tail shorter than wing .. .. .                                      | 9                   |
|     | Tail equal to wing .. .. .  | <i>Tragopan</i>     |
| 9.  | Size small; wing under 120 mm .. .. .                               | 10                  |
|     | Size moderate; wing over 120 mm .. .. .                             | 11                  |
| 10. | First primary longer than fourth .. .. .                            | <i>Coturnix</i>     |
|     | First primary shorter than fourth .. .. .                           | <i>Perdicula</i>    |
| 11. | Tail feathers 12 .. .. .  | <i>Ammoperdix</i>   |
|     | Tail feathers 14 .. .. .  | 12                  |
| 12. | Tarsus half feathered .. .. .                                       | <i>Lerwa</i>        |
|     | Tarsus naked .. .. .  | 13                  |
| 13. | Flanks barred .. .. .   | <i>Alectoris</i>    |
|     | Flanks not barred .. .. .   | <i>Francolinus</i>  |

## FEMALES

- |     |  |    |    |    |                     |
|-----|--|----|----|----|---------------------|
| 1.  | Feathers of head bushy, or elongated                     | .. | .. | .. | 2                   |
|     | Feathers of head neither bushy nor elongated             | .. | .. | .. | 7                   |
| 2.  | Sides of face unfeathered                                | .. | .. | .. | 3                   |
|     | Sides of face feathered                                  | .. | .. | .. | 6                   |
| 3.  | Tarsi partly feathered                                   | .. | .. | .. | <i>Lophophorus</i>  |
|     | Tarsi naked  | .. | .. | .. | 4                   |
| 4.  | Wing 300 mm or over                                      | .. | .. | .. | <i>Pavo</i>         |
|     | Wing under 300 mm  | .. | .. | .. | 5                   |
| 5.  | Tail longer than wing                                    | .. | .. | .. | <i>Catreus</i>      |
|     | Tail shorter than wing or only slightly longer than wing | .. | .. | .. | <i>Lophura</i>      |
| 6.  | Primaries longer than secondaries                        | .. | .. | .. | <i>Pucrasia</i>     |
|     | Primaries shorter than secondaries                       | .. | .. | .. | <i>Traoapan</i>     |
| 7.  | Sides of face unfeathered                                | .. | .. | .. | 8                   |
|     | Sides of face feathered                                  | .. | .. | .. | 9                   |
| 8.  | Wing over 250 mm   | .. | .. | .. | <i>Tetraogallus</i> |
|     | Wing under 250 mm  | .. | .. | .. | <i>Gallus</i>       |
| 9.  | Wing under 120 mm  | .. | .. | .. | 10                  |
|     | Wing over 120 mm   | .. | .. | .. | 11                  |
| 10. | First, second or third primary longest                   | .. | .. | .. | <i>Coturnix</i>     |
|     | First second or third primary shortest                   | .. | .. | .. | <i>Perdicula</i>    |
| 11. | About one-half of tarsi feathered                        | .. | .. | .. | <i>Lerwa</i>        |
|     | Tarsi not feathered                                      | .. | .. | .. | 12                  |
| 12. | Outer primaries graduated                                | .. | .. | .. | 13                  |
|     | Outer primaries not graduated                            | .. | .. | .. | <i>Francolinus</i>  |
| 13. | Primaries graduated on inner web only                    | .. | .. | .. | <i>Ammoperdix</i>   |
|     | Primaries graduated on inner and outer webs              | .. | .. | .. | <i>Alectoris</i>    |

Genus *Alectoris* Kaup*Alectoris chukar* (Gray)

## KEY TO THE SUBSPECIES

- |    |        |    |    |    |    |                         |
|----|--------|----|----|----|----|-------------------------|
| 1. | Paler  | .. | .. | .. | .. | <i>A. c. pallescens</i> |
|    | Darker | .. | .. | .. | .. | 2                       |

2. Crown conspicuously red-brown; pink of upper  
back very bright .. .. . *A.c. koroviakovi*
- Crown not so conspicuously red-brown; pink  
of upper back duller .. .. . *A.c. chukar*

**Genus Francolinus Stephens**

**KEY TO THE SPECIES**

- Quills transversely barred or spotted with buff on  
both webs .. .. . *F. francolinus*
- Quills without transverse bars or spots .. .. . *F. pondicerianus*

**Francolinus pondicerianus (Gmelin)**

**KEY TO THE SUBSPECIES**

- Paler; centre of throat creamy-white .. .. . *F. p. interpositus*
- Paler; centre of throat ochraceous-rufous .. .. . *F. p. mecranensis*

**Genus Coturnix Bonnaterra**

**KEY TO THE SPECIES**

- Outer webs of primaries barred with buff .. .. . *C. coturnix*
- Outer webs of primaries unbarred .. .. . *C. coromandelica*

*Lerwa lerwa*

*Ammoperdix griseogularis griseogularis*

*Tetraogallus himalayeris himalayensis*

*Perdicula asiatica punjaubi*

*Tragopan melanocephalus*

*Lophophorus impejanus*

*Lophura leucomelana hamiltonii*

*Gallus gallus murghi*

*Pucrasia macrolopha castanea*

*Catreus wallichii*

*Pavo cristatus*

## ORDER GRUIFORMES

## KEY TO THE FAMILIES

- |                               |         |            |
|-------------------------------|---------|------------|
| 1. Front toes long            | .. .. . | Rallidae   |
| Front toes short              | .. .. . | 2          |
| 2. Hind toe (fig. 31) present | .. .. . | Gruidae    |
| Hind toe absent               | .. .. . | 3          |
| 3. Bill slender               | .. .. . | Turnicidae |
| Bill stout                    | .. .. . | Otididae   |

## FAMILY TURNICIDAE: Bustard-Quails (Lowwa)

Genus *Turnix* Bonnaterra

*Includes single genus with three species from Pakistan.*

## KEY TO THE SPECIES

- |  |         |                      |
|--|---------|----------------------|
| 1. Breast (Fig. 25) barred across with black and white or black in the centre  | .. .. . | <i>T. suscitator</i> |
| Breast never barred or black in the centre                                     | .. .. . | 2                    |
| 2. Central tail-feathers lengthened; dark V-shaped markings on sides of breast | .. .. . | <i>T. sylvatica</i>  |
| Central tail-feathers not lengthened; dark breast markings rounded             | .. .. . | <i>T. tanki</i>      |

## FAMILY GRUIDAE: Cranes (Kunj)

*Includes two genera and four species from Pakistan.*

## KEY TO THE GENERA

- |                                    |         |                     |
|------------------------------------|---------|---------------------|
| Head and neck feathered throughout | .. .. . | <i>Anthropoides</i> |
| Head and neck unfeathered          | .. .. . | <i>Grus</i>         |

Genus *Grus* Pallas

## KEY TO THE SPECIES

- |  |         |                        |
|--|---------|------------------------|
| 1. Plumage white                                   | .. .. . | <i>G. leucogeranus</i> |
| Plumage otherwise, not white                       | .. .. . | 2                      |
| 2. Whole head and upper neck unfeathered           | .. .. . | <i>G. antigone</i>     |
| Head, except crown, feathered, neck also feathered | .. .. . | <i>G. grus</i>         |
- Anthropoides virgo*

## FAMILY RALLIDAE: Rails and Coots (Jal Murghi ; Kora ; Aari)

*Includes seven genera and nine species from Pakistan.*

## KEY TO THE GENERA

1. Frontal shield absent or only slightly developed .. 2  
Frontal shield well developed (fig. 79) .. .. 4
2. Second primary longest .. .. . *Porzana*  
Second primary shorter .. .. . 3
3. Tarsus (fig. 27) longer than middle toe; plumage  
banded below .. .. . *Rallina*  
Tarsus as long as or shorter than middle toe;  
plumage not banded below .. .. . *Amaurornis*
4. Toes with membranous fringe divided into lobes  
(fig. 61) .. .. . *Fulica*  
Toes without lobate fringe .. .. . 5
5. Plumage blue frontal shield truncate behind .. *Porphyrio*  
Plumage otherwise, not blue; frontal shield not  
truncated behind .. .. . 6
6. Toes with a narrow straight-edged lateral fringe;  
sexes alike .. .. . *Gallinula*  
Toes without any fringe; sexes dissimilar.. .. *Gallicrex*

*Rallina eurizonoides amauroptera*

*Gallicrex cinerea cinerea*

*Gallinula chloropus indica*

*Fulica atra atra*

Genus *Porzana* Vieillot

## KEY TO THE SPECIES

- Breast spotted with white; wings over 110 mm .. *P. porzana*  
Breast immaculate; wings under 110 mm .. *P. parva*

Genus *Amaurornis* Reichenbach

## KEY TO THE SPECIES

- Breast white; bill swollen at base .. .. *A. phoenicurus*  
Breast grey or rufous, bill not swollen at base .. *A. fuscus*

Genus *Porphyrio* Brisson*Porphyrio porphyrio* (Linnaeus)

## KEY TO THE SUBSPECIES

- Generally larger; tarsus 92 to 97 mm ; middle toe 100 to 104 mm .. .. . *P. p. seistanicus*  
 Smaller; tarsus 88 to 90 mm ; middle toe 90 to 95 mm .. .. . *P. p. poliocephalus*

## FAMILY OTIDIDAE : Bustards (Tuqdar ; Hukna)

*Includes four genera and five species from Pakistan.*

## KEY TO THE GENERA

1. A ruff on each side of neck; sexes alike .. .. . *Chlamydotis*  
     No ruff; sexes differing in size in breeding plumage or both .. .. . 2
2. Wing about four times the length of the tarsus .. .. . *Otis*  
     Wing two to three times the length of the tarsus .. .. . 3
3. Wing in males and females 180—248 mm .. .. . *Sypheotides*  
     Wing in males and females 460—762 mm .. .. . *Choriotis*

Genus *Otis* Linnaeus

## KEY TO THE SPECIES

- Length of wing in males 595—635 mm ; females 455—495 mm .. .. . *O. tarda*  
 Length of wing in males 241—256 mm ; females 242—260 mm .. .. . *O. tetrax*

*Choriotis nigriceps**Chlamydotis undulata macqueenii**Sypheotides indica*

## ORDER CHARADRIIFORMES

## KEY TO THE FAMILIES

- |    |   |         |                  |
|----|---|---------|------------------|
| 1. | All front toes not united by a common web                             | ..      | 2                |
|    | All front toes united by a common web (fig. 34)                       | ..      | Laridae          |
| 2. | Web uniting all toes only at the base (fig. 49)                       | ..      | 3                |
|    | Web uniting outer and middle toes broad, inner and middle toes narrow | .. .. . | 5                |
| 3. | Hind toe present  | .. .. . | 4                |
|    | Hind toe absent   | .. .. . | Haematopodidae   |
| 4. | Toes very long  | .. .. . | Jacanidae        |
|    | Toes short  | .. .. . | 8                |
| 5. | Bill with tip of upper mandible swollen or pitted                     |         | Charadriidae     |
|    | Bill with tip of upper mandible neither swollen nor pitted            | .. .. . | 6                |
| 6. | Bill long and slender   | .. .. . | 7                |
|    | Bill short and stout  | .. .. . | Dromadidae       |
| 7. | Mandibles grooved at the base   | .. .. . | Rostratulidae    |
|    | Mandibles not grooved at the base                                     | .. .. . | Recurvirostridae |
| 8. | Nostrils pervious   | .. .. . | Burhinidae       |
|    | Nostrils impervious   | .. .. . | Glareolidae      |

## FAMILY JACANIDAE : Jacanas (Pihō, Pihuya)

*Includes two genera and two species from Pakistan.*

## KEY TO THE GENERA

- |  |         |                       |
|--|---------|-----------------------|
| Frontal lappet present; no primary attenuated                | ..      | <i>Metopidius</i>     |
| Frontal lappet absent; first and fourth primaries attenuated | .. .. . | <i>Hydrophasianus</i> |

*Hydrophasianus chirurgus*

*Metopidius indicus*

## FAMILY HAEMATOPODIDAE : Oystercatchers (Darya Gajpaon)

*Includes single genus with single species from Pakistan.*

*Haematopus ostralegus ostralegus*

## FAMILY CHARADRIIDAE

*Includes thirteen genera and forty two species from Pakistan.*

## KEY TO THE SUBFAMILIES

- |    |   |    |    |    |              |
|----|---|----|----|----|--------------|
| 1. | Toes lobed (fig. 38)  | .. | .. | .. | Phalaropinae |
|    | Toes not lobed  | .. | .. | .. | 2            |
| 2. | Bill never decurved or recurved, with swollen area at tip of upper mandible                                     | .. | .. | .. | Charadriinae |
|    | Bill decurved or recurved; tip of upper mandible occasionally flattened and pitted but never swollen vertically | .. | .. | .. | Scolopacinae |

## SUBFAMILY CHARADRIINAE : Plovers (Titeeri ; Battan; Zirrea)

*Includes three genera and thirteen species.*

## KEY TO THE GENERA

- |    |  |    |    |    |            |
|----|--|----|----|----|------------|
| 1. | Tail (fig. 17) white, narrowly barred with dusky bars  | .. | .. | .. | Pluvialis  |
| 2. | Tail white or white basally with a broad black band on the distal half and often with a narrow white terminal band | .. | .. | .. | Vanellus   |
| 3. | Tail-feathers grey or brown, occasionally white-tipped; outer tail-feathers white or white tipped                  | .. | .. | .. | Charadrius |

## Genus Vanellus Brisson

## KEY TO THE SPECIES

- |    |   |    |    |    |                       |
|----|---|----|----|----|-----------------------|
| 1. | Tail white all along  | .. | .. | .. | <i>V. leucurus</i>    |
|    | Tail white only basally, with a broad black band on the distal half and often with a narrow white terminal band | .. | .. | .. | 2                     |
| 2. | Wings without any wing stripe   | .. | .. | .. | <i>V. vanellus</i>    |
|    | Wings with a broad wing stripe  | .. | .. | .. | 3                     |
| 3. | Hind toe present  | .. | .. | .. | 4                     |
|    | Hind toe absent   | .. | .. | .. | <i>V. malabaricus</i> |
| 4. | Wattles absent  | .. | .. | .. | <i>V. gregarius</i>   |
|    | Wattles (fig. 75) present   | .. | .. | .. | <i>V. indicus</i>     |

Genus *Pluvialis* Brisson

## KEY TO THE SPECIES

Axillaries (fig. 33) black	..	..	..	<i>P. squatarola</i>
Axillaries white	..	..	..	<i>P. apricaria</i>
Axillaries grey	..	..	..	<i>P. dominica</i>

Genus *Charadrius* Linnaeus

## KEY TO THE SPECIES

1. A white band behind neck	..	..	2
No white band behind neck	..	..	4
2. Breast band incomplete	..	..	<i>C. alexandrinus</i>
Breast band complete	..	..	3
3. White at base of outer webs of innermost primaries			<i>C. hiaticula</i>
No white at base of outer webs of innermost primaries	....	..	<i>C. dubius</i>
4. Upper breast chestnut; bill long (above 20 mm)			<i>C. leschenaultii</i>
Upper breast white or buffy; bill short (below 20 mm)	..	..	<i>C. mongolus</i>

*Charadrius dubius* Scopoli

## KEY TO THE SUBSPECIES

Smaller; wing 102 to 114 mm	..	..	<i>C. d. jerdoni</i>
Larger; wing 115 to 121 mm	..	..	<i>C. d. curonicus</i>

SUBFAMILY SCOLOPACINAE ; Curlews, Sandpipers, Snipe, Woodcock (Goar Goungh ; Chupka; Chhota Battan)

*Includes nine genera and twenty eight species.*

## KEY TO THE GENERA

1. Tibia feathered	..	..	2
Tibia unfeathered	..	..	3
2. Tibia entirely feathered	..	..	<i>Scolopax</i>
Tibia partly feathered	..	..	<i>Capella</i>
3. Toes partially webbed	..	..	4
Toes unwebbed	..	..	7

4. Bill long; over 65 mm .. .. 5  
 Bill moderate to short; under 65 mm .. .. 6
5. Bill curved down .. .. *Numenius*  
 Bill slightly curved up .. .. *Limosa*
6. No white on secondary coverts or upper tail-coverts (fig. 16) .. .. *Philomachus*  
 White on secondary coverts or upper tail-coverts .. .. *Tringa*
7. Bill sharply pointed; profile of lower mandible generally inclined upwards .. .. *Arenaria*
- Bill generally same width beyond base to slightly decurved tip; occasionally widened towards middle .. .. *Limicola*
- Bill generally depressed in width towards middle, expanded slightly towards tip .. .. *Calidris*

#### Genus *Numenius* Brisson

#### KEY TO THE SPECIES

- Crown streaked; tarsus 77 mm or more .. .. *N. arquata*  
 Crown not streaked; tarsus less than 75 mm .. .. *N. phaeopus*

#### *Numenius arquata* (Linnaeus)

#### KEY TO THE SUBSPECIES

- Lower parts broadly streaked; axillaries white with bold streaks of blackish colour .. .. *N. a. arquata*  
 Lower parts finely streaked; axillaries pure white or thinly streaked with blackish colour .. .. *N. a. orientalis*

#### Genus *Limosa* Brisson

#### KEY TO THE SPECIES

- Tail white at base, terminal half black .. .. *L. limosa*  
 Tail barred black and white over the whole of the outer rectrices and most of the central ones .. .. *L. lapponica*

#### Genus *Tringa* Linnaeus

#### KEY TO THE SPECIES

1. Upper tail-coverts not white .. .. 2  
 Upper tail-coverts white or barred .. .. 3

- |    |   |    |    |    |                       |
|----|---|----|----|----|-----------------------|
| 2. | Bill curved upwards                                 | .. | .. | .. | <i>T. terek</i>       |
|    | Bill not curved upwards                             | .. | .. | .. | <i>T. hypoleucos</i>  |
| 3. | Outer web of secondaries (fig. 19) barred with grey |    |    |    | <i>T. erythropus</i>  |
|    | Outer web of secondaries not barred with grey       | .. |    | 4  |                       |
| 4. | Outer web of secondaries white                      | .. | .. |    | <i>T. totanus</i>     |
|    | Outer web of secondaries not white                  | .. | .. | 5  |                       |
| 5. | Bill 48 mm or above                                 | .. | .. | .. | <i>T. nebularia</i>   |
|    | Bill less than 48 mm                                | .. | .. | .. | 6                     |
| 6. | Axillaries white                                    | .. | .. | .. | <i>T. stagnatilis</i> |
|    | Axillaries white barred with fuscous                | .. | .. | .. | <i>T. glareola</i>    |
|    | Axillaries blackish, narrowly barred with white     | .. | .. | .. | <i>T. ochropus</i>    |

Tringa totanus (Linnaeus)

KEY TO THE SUBSPECIES

- |  |    |    |    |    |                      |
|--|----|----|----|----|----------------------|
| Much darker above and much less suffused with rufous                 | .. | .. | .. | .. | <i>T.t. totanus</i>  |
| Much paler above and the upper plumage strongly suffused with rufous | .. | .. | .. | .. | <i>T.t. eurhinus</i> |

Genus Capella Frenzel

KEY TO THE SPECIES

- |    |  |    |    |    |    |                      |
|----|--|----|----|----|----|----------------------|
| 1. | Crown with no median pale band ; tail-feathers pointed                                     | .. | .. | .. | .. | <i>C. minima</i>     |
|    | Crown with median pale band; tail-feathers rounded   | .. | .. | .. | .. | 2                    |
| 2. | Wing over 150 mm; borders of scapulars (fig.14) white                                      | .. | .. | .. | .. | <i>C. solitaria</i>  |
|    | Wing under 150 mm; borders of scapulars buff or rufous                                     | .. | .. | .. | .. | 3                    |
| 3. | Distance between tip of shortest secondary and that of longest primary not exceeding 55 mm | .. | .. | .. | .. | <i>C. nemoricoja</i> |
|    | Distance between tip of shortest secondary and that of longest primary exceeding 55 mm     | .. | .. | .. | .. | 4                    |
| 4. | Outer tail-feathers narrow and stiff   | .. | .. | .. | .. | <i>C. stenura</i>    |
|    | Outer tail-feathers not narrow and stiff   | .. | .. | .. | .. | <i>C. gallinago</i>  |

Genus *Calidris* Merrem

## KEY TO THE SPECIES

1. Upper tail-coverts white or white barred with dark brown; sharply contrasting with back .. 2  
     Upper tail-coverts grey, dark brown or similar to back, never barred .. .. 4
2. Bill decurved (fig. 77) .. .. *C. testaceus*  
     Bill straight .. .. 3
3. Bill 39 mm or above .. .. *C. tenuirostris*  
     Bill below 39 mm .. .. *C. canutus*
4. Hind toe absent .. .. *C. albus*  
     Hind toe present .. .. 5
5. Culmen 21 mm or above .. .. *C. alpinus*  
     Culmen below 21 mm .. .. 6
6. Shafts of only first primary white, others brown .. *C. temminckii*  
     All shafts of primaries (fig. 20) more or less white .. *C. minutus*

*Arenaria interpres interpres**Scolopax rusticola rusticola**Limicola falcinellus falcinellus**Philomachus pugnax*

## SUBFAMILY PHALAROPINAE: Phalaropes

*Single genus with single species.**Phalaropus lobatus*

## FAMILY RECURVIROSTRIDAE: Stilts, Avocets and Ibisbill (Tinghur; Kusya Chaha; Puggah)

*Includes three genera and three species from Pakistan.*

## KEY TO THE GENERA

1. Bill straight .. .. *Himantopus*  
     Bill curved .. .. 2
2. Bill curved upwards (fig. 73) .. .. *Recurvirostra*  
     Bill curved downwards (fig. 77) .. .. *Ibidorhyncha*

*Himantopus himantopus himantopus**Recurvirostra avosetta**Ibidorhyncha struthersii*

FAMILY BURHINIDAE : Stone Curlews and Thick-Knees (Barsiri ; Bada Karwanak)

*Includes two genera and two species from Pakistan.*

KEY TO THE GENERA

- Bill much longer than head and compressed laterally .. *Esacus*  
 Bill not longer than head and not compressed .. *Burhinus*

**Genus Burhinus Illiger**

*Burhinus oedicnemus (Linnaeus)*

KEY TO THE SUBSPECIES

- Larger ; wing 228-244 mm; paler and less buff .. *B.o. saharae*  
 Smaller ; wing 203-222mm; darker and more buff .. *B.o. indicus*

*Esacus magnirostris recurvirostris*

FAMILY GLAREOLIDAE : Coursers (Courier Plovers), Pratincoles (Nukri)

*Includes two genera and four species from Pakistan.*

KEY TO THE GENERA

- Hind toe absent; tarsus equal to about one-third of wing or more .. .. . *Cursorius*  
 A small hind toe present; tarsus equal to about one-fifth of wing .. .. . *Glareola*

**Genus Cursorius Latham**

KEY TO THE SPECIES

- Crown rufous in front, grey behind (adult) ; or if lacking, breast cream coloured (immature) .. *C. cursor*  
 Crown chestnut throughout with small black nuchal spot (adult); or if lacking, breast dull rufous (immature) .. .. . *C. coromandelicus*

**Genus Glareola Brisson**

KEY TO THE SPECIES

- Tail deeply forked; wing exceeding 170 mm .. *G. pratincola*  
 Tail nearly even ; wing under 170 mm .. .. *G. lactea*

## Glareola pratincola (Linnaeus)

## KEY TO THE SUBSPECIES

- Outer tail-feathers exceeding central tail-feathers  
by about 50 mm .. .. . *G.p. pratincola*
- Outer tail-feathers exceeding central tail-feathers  
by 25 mm or less .. .. . *G.p. maldivarum*

## FAMILY LARIDAE : Gulls, Terns (Dhomra, Tehari or Koorari)

*Includes seven genera and twenty one species from Pakistan.*

## KEY TO THE GENERA

1. Both mandibles equal .. .. . 2  
Both mandibles unequal (fig.102) .. .. . 6
2. Outermost tail-feather short .. .. . *Anous*  
Outermost tail-feather long .. .. . 3
3. Tail short, equal to less than half length of wing .. 4  
Tail long, equal to more than half length of wing 5
4. Webs between toes deeply emarginate .. .. . *Chlidonias*  
Webs between toes strongly developed .. .. . *Hydroprogne*
5. Bill stout to moderate, culmen somewhat curved .. *Gelochelidon*  
Bill slender, culmen straight or nearly so .. .. . *Sterna*
6. Upper mandible much shorter than the lower .. .. . *Rynchops*  
Upper mandible longer than the lower .. .. . *Larus*

Genus *Larus* Linnaeus

## KEY TO THE SPECIES

1. Size medium ; wing between 270-355 mm .. 2  
Size large ; wing above 390 mm .. .. . 5
2. Three outer primaries wholly black .. .. . *L. hemprichii*  
Three outer primaries not wholly black .. .. . 3
3. Outer primaries white basally, black apically ;  
mirrors usually present .. .. . *L. brunnicephalus*  
Outer primaries white, edged with black ; mirrors  
absent .. .. . 4
4. Head white .. .. . *L. genei*  
Head brown .. .. . *L. ridibundus*

5. Bill banded with black .. .. . *L. ichthyætus*  
 Bill not banded with black .. .. . 6
6. Primaries (fig. 20) black broadly tipped white ;  
 conspicuous tongues, a mirror on the outer,  
 frequently on the next inner primary .. .. . *L. argentatus*
- Primaries black, with white apical spots ; tongues  
 absent or diminished, a mirror on the outer,  
 rarely on the next inner primary .. .. . *L. fuscus*

*Larus argentatus* **Pontoppidan**

KEY TO THE SUBSPECIES

- Mantle dark slaty grey ; legs and feet yellow .. .. . *L. a. heuglini*  
 Mantle paler ; legs and feet pale fleshy pink or  
 bluish .. .. . .. . *L. a. mongolicus*

**Genus *Sterna* Linnaeus**

KEY TO THE SPECIES

1. Bill longer (over 49 mm) slightly curved throughout 2  
 Bill shorter (under 49 mm), straight .. .. . 4
2. Bill black, tipped yellow .. .. . *S. sandvicensis*  
 Bill yellow all over .. .. . 3
3. Wing under 300 mm .. .. . *S. bengalensis*  
 Wing over 300 mm .. .. . *S. bergii*
4. Mantle dark brown or black .. .. . *S. anaethetus*  
 Mantle grey .. .. . 5
5. Wing under 200 mm .. .. . *S. albifrons*  
 Wing over 200 mm .. .. . 6
6. Bill stout and yellow in all seasons .. .. . *S. aurantia*  
 Bill slender and not always yellow .. .. . 7
7. Outer tail-feathers with inner webs grey or dusky *S. acuticauda*  
 Outer tail-feathers with outer webs grey or dusky 8
8. Upper tail-coverts pale grey .. .. . *S. repressa*  
 Upper tail-coverts white .. .. . *S. hirundo*

## Sterna albifrons Pallas

## KEY TO THE SUBSPECIES

Black on top of head not tapering to a point but with straight edge across forehead ; white of forehead not reaching eyes ; legs and feet dusky yellowish olive ; shafts of first three primaries black .. .. . *S. a. saundersi*

Black on top of head tapering to a point in front ; white of forehead touching eyes (fig. 5), legs and feet orange-yellow to yellow ; shafts of first three primaries dark brown to brownish white .. .. . *S. a. albifrons*

*Rynchops aibicollis*

*Anous stolidus pileatus*

*Chlidonias hybrida indica*

*Gelochelidon nilotica nilotica*

*Hydroprogne caspia caspia*

## FAMILY DROMADIDAE : Crab Plovers (Eshunga)

*Includes single genus with single species from Pakistan.*

*Dromas ardeola*

## FAMILY ROSTRATULIDAE : Painted Snipe (Rajchaha)

*Includes single genus with single species from Pakistan.*

*Rostratula benghalensis benghalensis*

## ORDER COLUMBIFORMES

## KEY TO THE FAMILIES

Basal portion of upper mandible covered with a cere or soft skin (fig. 87) .. .. . Columbidae

Basal portion of upper mandible not covered with a cere or soft skin .. .. . Pteroclididae

## FAMILY PTEROCLIDIDAE : Sandgrouse (Bhat Tectar, Kuhar)

*Includes single genus with six species from Pakistan.*

Genus *Pterocles* Temminck

## KEY TO THE SPECIES

1. Two central tail-feathers greatly lengthened .. 2  
No tail-feather greatly lengthened .. .. 5
2. Abdomen (fig. 25A) white throughout in both sexes .. .. . *P. alchata*  
Abdomen not white .. .. . 3
3. Middle of abdomen barred black and rufous .. *P. exustus* ♂  
Middle of abdomen only black but not barred .. 4
4. Breast with a black band across .. .. *P. exustus* ♂  
Breast without a black band across .. .. *P. senegallus*
5. Abdomen all black .. .. . *P. orientalis*  
Abdomen buff, or banded black and white .. 6
6. Abdomen spotted buff ♂; unspotted buff ♂ .. *P. coronatus*  
Abdomen banded black and white .. .. 7
7. Two blackish pectoral bands .. .. . *P. indicus* ♂  
No blackish pectoral bands .. .. . *P. indicus* ♂

*Pterocles indicus* (Gmelin)

## KEY TO THE SUBSPECIES

## MALES

1. No bars across hindneck .. .. . *P. i. indicus*  
Hindneck (fig.8) finely barred .. .. *P. i. arabicus*

## FEMALES

2. Chin (fig. 9) unspotted, tarsus spotted or barred *P. i. indicus*  
Chin spotted, no spots or bars on tarsus .. *P. i. arabicus*

## FAMILY COLUMBIDAE : Pigeons and Doves (Kabutar and Fakhta)

*Includes three genera and thirteen species from Pakistan.*

## KEY TO THE GENERA

1. Tail with fourteen feathers .. .. *Treron*  
Tail with twelve feathers .. .. 2
2. Wing above 200 mm or if 180-200 mm, outer tail-feathers blackish at tips .. .. *Columba*  
Wing below 180 mm, or if 180-200 mm, outer tail-feathers white or grey at tips .. .. *Streptopelia*

Genus *Columba* Linnaeus

## KEY TO THE SPECIES

1. Neck-feathers acuminate (fig. 100) and lengthened, tipped with same colour as crown .. .. *C. hodgsonii*  
Neck-feathers not as above .. .. 2
2. Tail less than two-third length of wing .. .. 3  
Tail more than two-third length of wing .. .. *C. palumbus*
3. Tail with a white band across dorsal surface .. 4  
Tail with no white band .. .. 5
4. Head and foreneck grey .. .. *C. rupestris*  
Head and foreneck black .. .. *C. leuconota*
5. Head lilac, large area of naked skin around eye .. *C. eversmanni*  
Head purple-grey, area around eye not as above .. *C. livia*

Genus *Streptopelia* Bonaparte

## KEY TO THE SPECIES

1. Sexes differing ; first and second quills longest .. *S. tranquebarica*  
Sexes alike ; second and third quills longest .. 2
2. A collar of black feathers on one side of neck .. 3  
A collar of black feathers on both sides of neck (fig. 12) .. .. 5
3. A collar of black feathers with rufous tips around front of the neck .. .. *S. senegalensis*  
A collar of black feathers around back of the neck 4

4. Collar feathers plain black .. .. *S. decaocto*  
 Collar feathers ending in a double white spot .. .. *S. chinensis*
5. Tips to feathers of neck-patch white .. .. *S. turtur*  
 Tips to feathers of neck-patch grey .. .. *S. orientalis*

*Treron phoenicoptera phoenicoptera*

## ORDER PSITTACIFORMES

## FAMILY PSITTACIDAE : Parrots (Tota)

*Includes single genus with four species from Pakistan.*

Genus *Psittacula* Cuvier

## KEY TO THE SPECIES

- |    |                                  |    |    |    |                          |
|----|----------------------------------|----|----|----|--------------------------|
| 1. | Crown green                      | .. | .. | .. | 2                        |
|    | Crown colour otherwise not green | .. | .. | .. | 3                        |
| 2. | Red patch on wing-coverts        | .. | .. | .. | <i>P. eupatria</i>       |
|    | No red patch on wing-coverts     | .. | .. | .. | <i>P. krameri</i>        |
| 3. | Red patch on wing-coverts        | .. | .. | .. | 4                        |
|    | No red patch on wing-coverts     | .. | .. | .. | 5                        |
| 4. | Head grey or dark lavender       | .. | .. | .. | <i>P. himalayana</i> ♂   |
|    | Head bluish red                  | .. | .. | .. | <i>P. cyanocephala</i> ♂ |
| 5. | Rump bluish green                | .. | .. | .. | <i>P. cyanocephala</i> ♀ |
|    | Rump grass or yellow green       | .. | .. | .. | <i>P. himalayana</i> ♀   |

## ORDER CUCULIFORMES

## FAMILY CUCULIDAE : Cuckoos (Papiya ; Koel)

*Includes six genera and eleven species from Pakistan.*

## KEY TO THE GENERA

- |    |   |    |    |                   |
|----|---|----|----|-------------------|
| 1. | Tarsus more or less feathered anteriorly                        | .. | .. | 2                 |
|    | Tarsus naked  | .. | .. | 4                 |
| 2. | Head crested (fig. 70); tarsus feathered at top only            | .. | .. | <i>Clamator</i>   |
|    | Head not crested ; tarsus feathered throughout in front         | .. | .. | 3                 |
| 3. | Larger; wing 150 mm or over                                     | .. | .. | <i>Cuculus</i>    |
|    | Smaller; wing under 150 mm                                      | .. | .. | <i>Cacomantis</i> |
| 4. | Plumage of head and shoulders not spiny                         | .. | .. | <i>Eudynamys</i>  |
|    | Plumage of head and shoulders spiny                             | .. | .. | 5                 |
| 5. | Claw of hind toe much lengthened and nearly straight (fig. 50). | .. | .. | <i>Centropus</i>  |
|    | Claw of hind toe not as above                                   | .. | .. | <i>Taccocua</i>   |

*Clamator jacobinus serratus*

Genus *Cuculus* Linnaeus

## KEY TO THE SPECIES

- |    |   |    |    |    |                         |
|----|---|----|----|----|-------------------------|
| 1. | Length of secondaries two-third of primaries or more        | .. | .. | .. | 2                       |
|    | Secondaries scarcely exceeding half the length of primaries | .. | .. | .. | 3                       |
| 2. | Tail 197 mm or above  | .. | .. | .. | <i>C. sparverioides</i> |
|    | Tail under 197 mm   | .. | .. | .. | <i>C. varius</i>        |
| 3. | Upper side of tail with a broad black subterminal band      | .. | .. | .. | <i>C. micropterus</i>   |
|    | Tail without a subterminal black band                       | .. | .. | .. | 4                       |
| 4. | Edge of wing white  | .. | .. | .. | <i>C. saturatus</i>     |
|    | Edge of wing not white                                      | .. | .. | .. | 5                       |
| 5. | Edge of wing ashy   | .. | .. | .. | <i>C. poliocephalus</i> |
|    | Edge of wing mixed brown and white                          | .. | .. | .. | <i>C. canorus</i>       |

## Cuculus canorus Linnaeus

## KEY TO THE SUBSPECIES

Colour of upper parts pale .. .. . *C. c. subtelephonus*

Colour of upper and under parts little darker .. .. . *C. c. canorus*

*Cacomantis merulinus passerinus*

*Eudynamys scolopacea scolopacea*

*Taccocua leschenaultii sirkee*

*Centropus sinensis sinensis*

## ORDER STRIGIFORMES

## FAMILY STRIGIDAE

*Includes nine genera and nineteen species from Pakistan.*

## KEY TO THE SUBFAMILIES

- Middle claw pectinate (fig. 55) on inner side .. Tytoninae  
 Middle claw not pectinate .. .. . Striginae

## SUBFAMILY STRIGINAE : Owls (Ulloo, Choghad)

*Eight genera and eighteen species.*

## KEY TO THE GENERA

1. Ear-tufts (fig. 95) present .. .. . 2  
 Ear-tufts absent .. .. . 4
2. Wing over 350 mm .. .. . *Bubo*  
 Wing under 350 mm .. .. . 3
3. Wing 280 to 330 mm .. .. . *Asio*  
 Wing under 250 mm .. .. . *Otus*
4. Wing 245 mm or above .. .. . 5  
 Wing 240 mm or below .. .. . 6
5. Plumage entirely white or white barred with sepia *Nyctea*  
 Plumage otherwise, not as above .. .. . *Strix*
6. Plumage uniform above .. .. . *Ninox*  
 Plumage barred or spotted above .. .. . 7
7. Plumage barred above .. .. . *Glaucidium*  
 Plumage spotted above .. .. . *Athene*

Genus *Otus* Pennant

## KEY TO THE SPECIES

1. Fourth or fifth quill longest ; first primary much shorter than eighth .. .. . 2  
 Third quill longest; first primary longer than eighth .. .. . 3
2. Hindneck with a distinct pale collar .. .. . *O. bakkamoena*  
 Hindneck without any distinct collar .. .. . *O. spilocephalus*
3. Feathers of tarsus extending to base of toes .. .. . *O. brucei*  
 Feathers of tarsus not extending to base of toes .. .. . *O. scops*

## Otus scops (Linnaeus)

## KEY TO THE SUBSPECIES

- Third primary longest ; first primary equal to sixth  
or between fifth and sixth or sixth and seventh  
in length .. .. . *O. s. pulchellus*
- Fourth primary longest ; first primary sometimes  
equal to sixth, but usually between sixth and  
seventh or seventh and eighth in length .. *O. s. sunia*

## Otus bakkamoena Pennant

## KEY TO THE SUBSPECIES

- Toes feathered to the subterminal phalanx .. *O. b. plumipes*
- Toes not feathered .. .. . *O. b. deserticolor*

## Genus Bubo Dumeril

## KEY TO THE SPECIES

1. Tarsus feathered throughout .. .. . 2
- Tarsus partly or wholly naked .. .. . *B. zeylonensis*
2. General colour buff and blackish-brown .. *B. bubo*
- General colour greyish-brown .. .. . *B. coromandus*

## Bubo bubo (Linnaeus)

## KEY TO THE SUBSPECIES

- Dark brown; wing 370-433 mm .. .. . *B. b. bengalensis*
- Paler and more grey; wing 435-513 mm .. *B. b. turcomanus*
- Palest but with brown streaks sharper on the hind  
crown and nape; wing 433-508 mm .. *B. b. hemachalana*
- Nyctea scandiaca*

## Genus Glaucidium Boie

## KEY TO THE SPECIES

- Collar distinct; wing under 105 mm .. .. . *G. brodiei*
- Collar not distinct ; wing over 110 mm .. *G. cuculoides*

## Genus Athene Boie

## KEY TO THE SPECIES

- Abdomen longitudinally streaked .. .. . *A. noctua*
- Abdomen transversally barred .. .. . *A. brama*
- Ninox scutulata lugubris*

**Genus Strix Linnaeus****KEY TO THE SPECIES**

1. Lower plumage with both longitudinal streaks  
and transverse bars .. .. . *S. aluco*  
Lower plumage with either streaks or bars .. 2
2. Lower surface streaked only .. .. . *S. butleri*  
Lower surface with bars only .. .. . *S. leptogrammica*

**Strix aluco Linnaeus****KEY TO THE SUBSPECIES**

- Upper plumage streaked as well as barred .. *S. a. biddulphi*  
Upper plumage not streaked but barred only .. *S. a. nivicola*

**Genus Asio Brisson****KEY TO THE SPECIES**

- Transverse as well as longitudinal markings on  
abdomen (fig. 25A) .. .. . *A. otus*  
No transverse markings on abdomen .. .. . *A. flammeus*

**SUBFAMILY TYTONINAE : Barn Owls (Kuraya; Buri Chwi)**

*Single genus with single species.*

*Tyto alba stertens*

## ORDER CAPRIMULGIFORMES

## FAMILY CAPRIMULGIDAE : Nightjars (Chappa or Chippak)

*Includes single genus with six species from Pakistan.*

Genus Caprimulgus Linnaeus

## KEY TO THE SPECIES

1. Greater part or whole of tarsus feathered .. 2  
    Tarsus almost naked .. .. . 3
2. Four outer pairs of tail-feathers with subterminal white spots in male .. .. . *C. indicus*  
    Two outer pairs of tail-feathers tipped white in male .. .. . *C. europaeus*
3. Distinct but narrow black streaks on back .. *C. asiaticus*  
    No distinct black streaks on back .. 4
4. Outer tail-feathers tipped white in male, buff in female .. .. . *C. mahrattensis*  
    Outer tail-feathers tipped buff in male, obsolete in female .. .. . *C. aegyptius*  
    Outer tail-feathers all white except at tip in male, mottled through-out in female .. .. . *C. affinis*

## ORDER APODIFORMES

FAMILY APODIDAE : Swifts (Ababil; Basanti)

## SUBFAMILY APODINAE

*Includes two genera and five species from Pakistan.*

## KEY TO THE GENERA

- Shafts of tail-feathers spiny .. .. . *Chaetura*  
 Shafts of tail-feathers not spiny .. .. . *Apus*

Genus *Apus* Scopoli

## KEY TO THE SPECIES

1. No white on rump .. .. . 2  
     Rump white .. .. . *A. affinis*  
 2. Abdomen (fig. 25A) white .. .. . *A. melba*  
     Abdomen otherwise .. .. . 3  
 3. Abdomen blackish brown .. .. . *A. apus*  
     Abdomen much paler, general coloration hair-  
     brown .. .. . *A. pallidus*

*Apus melba* (Linnaeus)

## KEY TO THE SUBSPECIES

- Pale brown band across breast, white throat-patch *A. m. melba*  
 Darker; breast band wider, throat-patch smaller .. *A. m. nubifuga*

*Chaetura caudacuta nudipes*

## ORDER CORACIIFORMES

## KEY TO THE FAMILIES

1. Outer (fig. 30) and middle (fig. 29) toes united at the base only (fig. 43) .. .. Coraciidae  
Outer and middle toes united less than half or more than half of their length .. .. 2
2. Inner (fig. 28) and middle toes united .. .. 3  
Inner and middle toes separate .. .. 4
3. Bill straight .. .. Alcedinidae  
Bill curved .. .. Meropidae
4. Bill with a dorsal casque (fig. 96) .. .. Bucerotidae  
Bill without a casque .. .. Upupidae

FAMILY ALCEDINIDAE : Kingfishers (Koryala; Kilkila)

*Includes three genera and three species from Pakistan.*

## KEY TO THE GENERA

1. Plumage black and white .. .. *Ceryle*  
Plumage otherwise, not black and white .. .. 2
2. Tail shorter than bill .. .. *Alcedo*  
Tail longer than bill .. .. *Halcyon*

Genus *Alcedo* Linnaeus

*alcedo atthis* ((Linnaeus))

## KEY TO THE SUBSPECIES

- Larger and paler in tone, with colour of upper-parts more green, less blue .. .. *A. a pallasii*  
Smaller and darker in tone, with colour of upper-parts more green, less blue .. .. *A. a bengalensis*

*Ceryle rudis leucomelanura*

*Halcyon smyrnensis smyrnensis*

FAMILY MEROPIDAE : Bee-eaters (Patringa or Harrial)

*Includes single genus with four species from Pakistan.*

Genus *Merops* Linnaeus

## KEY TO THE SPECIES

1. Throat (fig. 11) yellow .. .. *M. apiaster*  
Throat not yellow .. .. 2

2. Throat green .. .. . *M. orientalis*  
 Throat chestnut .. .. . 3
3. Tail (fig. 17) and rump (fig. 15) green .. .. . *M. superciliosus*  
 Tail and rump blue .. .. . *M. philippinus*

**FAMILY CORACIIDAE Rollers or Blue Jays (Nilkant)**

*Includes single genus with two species from Pakistan.*

**Genus Coracias Linnaeus**

**KEY TO THE SPECIES**

- Lower plumage pale blue throughout .. .. . *C. garrulus*  
 Breast rufous, abdomen and lower tail coverts blue *C. benghalensis*

**FAMILY UPUPIDAE : Hoopoes (Hudhud)**

*Includes a single genus with single species from Pakistan.*

*Upupa epops epops*

**FAMILY BUCEROTIDAE : Hornbills (Dhanesh)**

*Includes a single genus with single species from Pakistan.*

*Tockus birostris*

## ORDER PICIFORMES

## KEY TO THE FAMILIES

- |  |               |
|--|---------------|
| 1. Tail wedge-shaped, rarely rounded .. .. | Picidae       |
| Tail otherwise, not wedge shaped .. ..     | 2             |
| 2. Tail-feathers 12; primaries 9 .. ..     | Capitonidae   |
| Tail-feathers 10; primaries 10 .. ..       | Indicatoridae |

## FAMILY CAPITONIDAE : Barbets (Basantha)

*Includes single genus with three species from Pakistan.*

Genus *Megalaima* Gray

## KEY TO THE SPECIES

- |  |                        |
|--|------------------------|
| 1. Under tail-coverts (fig. 18) red .. ..  | <i>M. virens</i>       |
| Under tail-coverts green .. ..             | 2                      |
| 2. Second primary shorter than tenth .. .. | <i>M. asiatica</i>     |
| Second primary longer than tenth .. ..     | <i>M. haemacephala</i> |

## FAMILY PICIDAE : Woodpeckers (Katphora)

*Includes six genera and twelve species from Pakistan.*

## KEY TO THE SUBFAMILIES

- |   |            |
|---|------------|
| 1. Shafts of tail-feathers stout and rigid .. ..                                    | Picinae    |
| Shafts of tail-feathers soft and flexible .. ..                                     | 2          |
| 2. Nostrils concealed by feathers .. ..   | Picumninae |
| Nostrils not concealed by feathers but partly covered by a membrane (fig. 86) .. .. | Jynginae   |

## SUBFAMILY JYNGINAE

*Includes single genus with single species.*

Genus *Jynx* Linnaeus*Jynx torquilla* Linnaeus

## KEY TO THE SUBSPECIES

- |   |                         |
|---|-------------------------|
| Pale above, sparingly spotted .. ..           | <i>J. t. torquilla</i>  |
| Grey brown, barred, rather than spotted .. .. | <i>J. t. himalayana</i> |

## SUBFAMILY PICINAE

Three genera and ten species.

## KEY TO THE GENERA

1. Nostrils concealed by feathers (fig. 76) .. .. 2  
    Nostrils exposed .. .. *Dinopium*
2. Mantle wholly or partly green .. .. *Picus*  
    Mantle black and white .. .. *Picoides*

Genus *Picus* Linnaeus

## KEY TO THE SPECIES

- Lower parts streaked ; male with crimson, female  
 with black cap; tail barred throughout .. *P. squamatus*
- Lower parts not streaked ; crown crimson and  
 occiput black in male, both black in female .. *P. canus*

*Picus squamatus* Vigors

## KEY TO THE SUBSPECIES

- Darker; under plumage with broad dark brown  
 edges .. .. *P. s. squamatus*
- Much paler; under plumage with narrow pale  
 edges .. .. *P. s. flavirostris*

Genus *Picoides* Lacepede

## KEY TO THE SPECIES

1. Back (fig. 13) black, unbarred .. .. 2  
    Back black, but barred with white .. .. 3
2. Scapulars (fig. 14) black .. .. *P. himalayensis*  
    Scapulars white .. .. *P. assimilis*
3. Size 7-8 inches .. .. 4  
    Size 5-5½ inches . .. .. 6
4. Crown (fig. 4) yellow .. .. *P. mahattensis*  
    Crown otherwise, not yellow .. .. 5
5. Crown and occiput crimson in male, black in  
    female .. .. *P. macei*  
    Crown umber-brown, occiput crimson and yellow  
    in male dull yellow in female .. .. *P. auriceps*

- 6. Crown brown .. .. . *P. nanus*
- Crown ashy-grey .. .. . *P. canicapillus*
- Dinopium benghalense dilutum*

SUBFAMILY PICUMNINAE

*Includes a single genus with single species.*

*Picumnus innominatus innominatus*

FAMILY INDICATORIDAE : Honeyguides

*Includes a single genus with one species from Pakistan.*

*Indicator xanthonotus radcliffi*

## ORDER PASSERIFORMES

## KEY TO THE FAMILIES

- |   |               |
|---|---------------|
| 1. Edges of mandibles not serrated .. .. 2  |               |
| Edges of mandibles serrated (fig. 103) .. ..  | Dicaeidae     |
| 2. Tongue not tubular .. .. 3   |               |
| Tongue tubular .. ..  | Nectariniidae |
| 3. Eyes (fig. 5) with white ring .. .. Zosteropidae                                       |               |
| Eyes without white ring .. .. 4   |               |
| 4. Hinder part of tarsus laminated (fig. 35) longitudinally .. .. 5                       |               |
| Hinder part of tarsus laminated transversely (fig. 48)                                    | Aiaudidae     |
| 5. Wing with ten primaries, 11th rudimentary 6  |               |
| Wing with nine primaries, 10th rudimentary 21   |               |
| 6. Nostrils near frontal commissure .. .. 7   |               |
| Nostrils near culmen (fig. 107) .. ..   | Ploceidae     |
| 7. Tail not forked .. .. 8  |               |
| Tail forked (fig. 123) .. ..  | Dicruridae    |
| 8. Nostrils completely concealed by feathers or bristles (fig. 81) .. .. 9                |               |
| Nostrils naked slightly covered with hair, or merely overhung by hairs or plumes .. .. 10 |               |
| 9. First primary at least half the length of second .. Corvidae                           |               |
| First primary less than half the length of second   | Paridae       |
| 10. Nostrils partly covered by hairs or a membrane .. 11                                  |               |
| Nostrils exposed or overhung by plumes .. 17  |               |
| 11. Nostrils covered by a membrane (fig. 82) .. 12  |               |
| Nostrils partly covered by hairs (fig. 83).. .. 13  |               |
| 12. Rictal bristles (fig. 83) present .. .. Prunellidae                                   |               |
| Rictal bristles absent .. ..  | Cinclidae     |
| 13. Rictal bristles present .. .. 14  |               |
| Rictal bristles absent .. .. 16   |               |
| 14. Inner and hind toe unequal .. .. Sittidae   |               |
| Inner and hind toe equal .. .. 15   |               |

- |     |  |    |    |    |               |
|-----|--|----|----|----|---------------|
| 15. | Wings rounded at apex                                | .. | .. | .. | Muscicapidae  |
|     | Wings pointed at apex                                | .. | .. | .. | Pycnonotidae  |
| 16. | Tail-feathers stiff and pointed                      | .. | .. | .. | Certhiidae    |
|     | Tail-feathers soft and rounded                       | .. | .. | .. | Troglodytidae |
| 17. | Nostrils overhung by plumes (fig. 70)                | .. | .. | .. | 18            |
|     | Nostrils exposed                                     | .. | .. | .. | Oriolidae     |
| 18. | Rictal bristles present                              | .. | .. | .. | 19            |
|     | Rictal bristles absent                               | .. | .. | .. | Sturnidae     |
| 19. | Upper and under tail-coverts very long               | .. | .. | .. | Irenidae      |
|     | Upper and under tail-coverts short                   | .. | .. | .. | 20            |
| 20. | Shafts of rump-feathers soft                         | .. | .. | .. | Laniidae      |
|     | Shafts of rump-feathers spiny                        | .. | .. | .. | Campephagidae |
| 21. | Shafts of secondaries with wax-like prolongations    | .. | .. | .. | Bombycillidae |
|     | Shafts of secondaries without wax-like prolongations | .. | .. | .. | 22            |
| 22. | Bill short and conical (fig. 90)                     | .. | .. | .. | 23            |
|     | Bill long and not conical                            | .. | .. | .. | 24            |
| 23. | Gap between both mandibles present                   | .. | .. | .. | Emberizidae   |
|     | Gap between both mandibles absent                    | .. | .. | .. | Fringillidae  |
| 24. | Bill slender and narrow                              | .. | .. | .. | Motacillidae  |
|     | Bill flat and broad                                  | .. | .. | .. | Hirundinidae  |

FAMILY ALAUDIDAE : Larks (Aggia)

*Includes nine genera and sixteen species from Pakistan.*

KEY TO THE GENERA

- |    |  |    |    |    |                    |
|----|--|----|----|----|--------------------|
| 1. | Wing with nine primaries, the first long reaching near the tip of wing | .. | .. | .. | 2                  |
|    | Wing with ten primaries, the first always very small                   | .. | .. | .. | 3                  |
| 2. | A tuft of narrow feathers on each side of the crown (fig. 89)          | .. | .. | .. | <i>Eremophila</i>  |
|    | No tuft of feathers  | .. | .. | .. | <i>Calandrella</i> |
| 3. | First primary exceeding primary-coverts in length                      | .. | .. | .. | 4                  |
|    | First primary not exceeding primary-coverts                            | .. | .. | .. | 6                  |

4. Bill as long as head .. .. . *Alaemon*  
 Bill much shorter than head .. .. . 5
5. Nostrils not covered by plumelets .. .. . *Mirafra*  
 Nostrils quite concealed by plumelets (fig. 89) .. .. . *Ammomanes*
6. Crest absent, or short and covering whole crown 7  
 Crest present, formed of a few long feathers springing from centre of crown .. .. . *Galerida*
7. Hind claw long and straight (fig. 50) .. .. . 8  
 Hind claw short and curved (fig. 53) .. .. . *Eremopterix*
8. Wings long, reaching almost the tip of tail; inner secondaries falling short of tip of wing by more than length of tarsus .. .. . *Meianocorypha*  
 Wings shorter, falling decidedly short of tip of tail; inner secondaries falling short of tip of wing by less than length of tarsus .. .. . *Alauda*

**Genus Mirafra Horsfield**

**KEY TO THE SPECIES**

- Inner web of outer rectrices largely white or very pale rufous .. .. . *M. javanica*  
 Inner web of outer rectrices all brown .. .. . *M. erythroptera*

**Genus Eremopterix Kaup**

**KEY TO THE SPECIES**

- Forehead (fig. 3) and crown ashy brown .. .. . *E. grisea*  
 Forehead white, crown blackish .. .. . *E. nigriceps*

**Genus Ammomanes Cabanis**

**KEY TO THE SPECIES**

- Tail brown throughout, tinged with rufous .. .. . *A. deserti*  
 Tail deep rufous tipped with black .. .. . *A. phoenicurus*

**Ammomanes phoenicurus (Franklin)**

**KEY TO THE SUBSPECIES**

- Larger; wing mostly over 100 mm .. .. . *A. p. phoenicurus*  
 Smaller; wing mostly under 100 mm .. .. . *A. p. zarudnyi*  
*Alaemon alauidipes doriae*

Genus *Calandrella* **Kaup**

## KEY TO THE SPECIES

- |  |                        |
|--|------------------------|
| 1. Inner secondaries falling short of wing-tip         | 2                      |
| Inner secondaries reaching tip of wing .. ..           | 3                      |
| 2. 2nd primary nearly equal to 3rd and 4th ..          | <i>C. raytal</i>       |
| 2nd primary shorter than 3rd and 4th .. ..             | <i>C. rufescens</i>    |
| 3. 5th primary decidedly shorter than 2nd, 3rd and 4th | <i>C. cinerea</i>      |
| 5th primary about equal to 2nd, 3rd and 4th ..         | <i>C. acutirostris</i> |

*Calandrella acutirostris* **Hume**

## KEY TO THE SUBSPECIES

- |  |                           |
|--|---------------------------|
| White on tail less extensive and suffused with fulvous .. .. . | <i>C. a. acutirostris</i> |
| White on tail more extensive and purer in colour               | <i>C. a. tibetana</i>     |

Genus *Eremophila* **Brehm***Eremophila alpestris* (**Linnaeus**)

## KEY TO THE SUBSPECIES

## MALE:

- |  |                           |
|--|---------------------------|
| Black sides of head connected with black of breast                         | <i>E. a. albigula</i>     |
| Black sides of head separated from black of breast by a white band .. .. . | <i>E. a. tongirostris</i> |

Genus *Galerida* **Boie***Galerida cristata* (**Linnaeus**)

## KEY TO THE SUBSPECIES

- |  |                        |
|--|------------------------|
| Generally bigger; wing usually over 105mm .. | <i>G. c. magna</i>     |
| Smaller; wing usually under 102 mm .. ..     | <i>G. c. chendoo'a</i> |
| Intermediate; wing 97-106 mm .. ..           | <i>G. c. lynesi</i>    |

Genus *Alauda* **Linnaeus**

## KEY TO THE SPECIES

- |  |                    |
|--|--------------------|
| 5th primary falls short of tip of wing by more than 5 mm .. .. . | <i>A. arvensis</i> |
| 5th primary falls short of tip of wing by less than 5 mm .. .. . | <i>A. gulgula</i>  |

## Alauda arvensis Linnaeus

## KEY TO THE SUBSPECIES

- Upperparts paler, more sandy .. .. *A. a. dulcivox*  
 Upperparts darker, less sandy .. .. *A. a. cantarella*

## Alauda gulgula Franklin

## KEY TO THE SUBSPECIES

- Darker, more rufous less grey above .. .. *A. g. lhamarum*  
 Paler, less rufous more grey above .. .. *A. g. inconspicua*

*Melanocorypha bimaculata torquata*

## FAMILY HIRUNDINIDAE : Swallows (Ababil; Leishra)

*Includes three genera and nine species from Pakistan,*

## KEY TO THE GENERA

1. Tarsus and toes feathered (fig. 45) .. .. *Delichon*  
 Tarsus and toes bare, or with a tuft of feathers only  
 (fig. 57) .. .. 2
2. Upper plumage unglossed brown; tail-feathers  
 without spots .. .. *Riparia*  
 Upper plumage glossy blue-black; tail with or  
 without spots, or unglossed brown with tail-spots *Hirundo*

Genus *Riparia* Forster

## KEY TO THE SPECIES

- Adult with a tuft of feathers behind tarsus; a well-  
 defined collar across breast .. .. *R. riparia*  
 Adult with tarsus quite bare; collar across breast  
 obsolete or absent .. .. *R. paludicola*

Genus *Hirundo* Linnaeus

## KEY TO THE SPECIES

1. Upper plumage unglossed brown .. .. 2  
 Upper plumage glossy blue-black .. .. 3
2. Chin and throat streaked or spotted .. .. *H. rupestris*  
 Chin and throat neither streaked nor spotted .. .. *H. obsoleta*
3. Rump blue or brown; lower parts not streaked .. 4  
 Rump chestnut; lower parts streaked .. .. *H. daurica*

4. White spots on tail .. .. . 5  
 No white spots on tail .. .. . *H. fluvicola*
5. A complete or semicomplete pectoral band present *H. rustica*  
 No trace of pectoral band .. .. . *H. smithii*

**Hirundo daurica Linnaeus**

**KEY TO THE SUBSPECIES**

- Rump and upper tail-coverts of the same colour  
 throughout .. .. . *H. d. erythropygia*
- Rump paler posteriorly and becoming creamy white  
 on upper tail-coverts .. .. . *H. d. rufula*

**Genus Delichon Horsfield and Moore**

**Delichon urbica (Linnaeus)**

**KEY TO THE SUBSPECIES**

- Lower plumage pure white .. .. . *D. u. urbica*  
 Lower plumage smoky or greyish white .. .. . *D. u. cashmeriensis*

**FAMILY LANIIDAE : Shrikes or "Butcher Birds" (Lator)**

*Includes single genus with five species from Pakistan.*

**Genus Lanius Linnaeus**

**KEY TO THE SPECIES**

1. A white patch on primaries (fig. 20) .. .. . 2  
 No white patch on primaries .. .. . *L. collurio*
2. Tail all black and white, the colours sharply defined 3  
 Tail black or brown and rufous, the colours  
 blending .. .. . *L. schach*
3. Back grey .. .. . 4  
 Back chestnut .. .. . *L. vittatus*
4. Forehead grey .. .. . *L. excubitor*  
 Forehead black .. .. . *L. minor*

**Lanius excubitor Linnaeus**

## KEY TO THE SUBSPECIES

1. Middle pair of rectrices all black .. .. 2  
 Middle pair of tail-feathers with white bases .. *L. e. homeyeri*
2. Lesser wing-coverts (fig. 21) with or without grey tips .. .. .. .. .. *L. e. lahtora*  
 Lesser wing-coverts entirely grey .. .. 3
3. Inner webs of secondaries chiefly white .. .. *L. e. pallidirostris*  
 Inner webs of secondaries chiefly black .. .. *L. e. aucheri*

**Lanius vittatus Valenciennes**

## KEY TO THE SUBSPECIES

- Paler above and averaging larger .. .. *L. v. nargianus*  
 Darker above and smaller .. .. *L. v. vittatus*

**Lanius collurio Linnaeus**

## KEY TO THE SUBSPECIES

1. Tail black and white; back chestnut contrasting with ashy head and nape (fig. 6) .. .. *L. c. collurio*  
 Tail rufous; head, nape and back concolorous, a light brownish grey .. .. .. 2
2. A conspicuous wing-patch .. .. .. *L. c. phoenicuroides*  
 Wing-patch concealed .. .. .. *L. c. isabellinus*

## FAMILY ORIOLIDAE : Orioles (Peelak)

*Includes single genus with single species from Pakistan.*

**Genus Oriolus Linnaeus****Oriolus oriolus (Linnaeus)**

## KEY TO THE SUBSPECIES

- Black of lores not extending behind eye .. *O. o. oriolus*  
 Black of lores extending to behind the eye .. *O. o. kundoo*

## FAMILY DICRURIDAE : Drongos (Kotwal)

*Includes single genus with two species from Pakistan.*

Genus *Dicrurus* Vieillot

## KEY TO THE SPECIES

- |                                       |                       |
|---------------------------------------|-----------------------|
| Upper plumage deep glossy black .. .. | <i>D. adsimilis</i>   |
| Upper plumage grey .. ..              | <i>D. leucophaeus</i> |

## FAMILY STURNIDAE : Starlings, Mynas (Tilyar; Jungli Myna)

*Includes two genera and seven species from Pakistan.*

## KEY TO THE GENERA

- |  |                     |
|--|---------------------|
| A white wing-patch showing on the upper parts of the remiges near base .. .. | <i>Acridotheres</i> |
| No wing-patch, or patch suffused .. ..                                       | <i>Sturnus</i>      |

Genus *Sturnus* Linnaeus

## KEY TO THE SPECIES

- |   |                     |
|---|---------------------|
| 1. No crest, or crest very moderate .. ..           | 2                   |
| Prominent crest present (fig. 70) .. ..             | 3                   |
| 2. Plumage entirely dark, glossy and speckled .. .. | <i>S. vulgaris</i>  |
| Abdomen white or rufous, back grey .. ..            | <i>S. sturninus</i> |
| 3. Throat, breast and abdomen rich buff .. ..       | <i>S. pagodarum</i> |
| Throat and breast black, abdomen pink .. ..         | <i>S. roseus</i>    |

*Sturnus vulgaris* Linnaeus

## KEY TO THE SUBSPECIES

- |                                     |                           |
|-------------------------------------|---------------------------|
| 1. Wing 110-120 mm .. ..            | <i>S. v. minor</i>        |
| Wing over 110-120 mm .. ..          | 2                         |
| 2. Wing 115-125 mm .. ..            | <i>S. v. indicus</i>      |
| Wing 122-137 mm .. ..               | 3                         |
| 3. Head bronze-green .. ..          | <i>S.v. porphyronotus</i> |
| Head purple .. ..                   | 4                         |
| 4. Upper plumage green .. ..        | <i>S.v. poltaratskyi</i>  |
| Upper plumage very deep green .. .. | <i>S.v. nobilior</i>      |

Genus *Acridotheres* Vieillot

## KEY TO THE SPECIES

- |  |    |    |    |                       |
|--|----|----|----|-----------------------|
| 1. Sides of head partly bare                           | .. | .. | .. | 2                     |
| Sides of head not bare                                 | .. | .. | .. | <i>A. fuscus</i>      |
| 2. Under wing-coverts (fig.32) and axillaries (fig.33) |    |    |    |                       |
| white  | .. | .. | .. | <i>A. tristis</i>     |
| Under wing-coverts and axillaries buff                 | .. | .. | .. | <i>A. ginginianus</i> |

FAMILY CORVIDAE Crows, Magpies, Jays, etc. (Kowwa; Maha-Lat)

*Includes seven genera and fifteen species from Pakistan.*

## KEY TO THE GENERA

- |  |    |    |    |                    |
|--|----|----|----|--------------------|
| 1. Plumage predominantly black, or black with ashy nape    | .. | .. | .. | 2                  |
| Plumage not black  | .. | .. | .. | 3                  |
| 2. Bill thick (fig.81) black                               | .. | .. | .. | <i>Corvus</i>      |
| Bill slender, red or yellow                                | .. | .. | .. | <i>Pyrrhocorax</i> |
| 3. Plumage brown, spotted with white                       | .. | .. | .. | <i>Nucifraga</i>   |
| Plumage with brilliant or contrasting colours, not spotted | .. | .. | .. | 4                  |
| 4. Inner web of all primaries white                        | .. | .. | .. | <i>Pica</i>        |
| Primaries not white (except for small patches)             | .. | .. | .. | 5                  |
| 5. Rectrices not elongated                                 | .. | .. | .. | <i>Garrulus</i>    |
| Two central rectrices elongated (fig.117,119)              | .. | .. | .. | 6                  |
| 6. Plumage with shades of blue                             | .. | .. | .. | <i>Cissa</i>       |
| Plumage without blue                                       | .. | .. | .. | <i>Dendrocitta</i> |

*Cissa flavirostris cucullata*

*Pica pica bactriana*

Genus *Garrulus* Brisson

## KEY TO THE SPECIES

- |                            |    |    |    |                       |
|----------------------------|----|----|----|-----------------------|
| Tail tipped with white     | .. | .. | .. | <i>G. lanceolatus</i> |
| Tail not tipped with white | .. | .. | .. | <i>G. glandarius</i>  |

Genus *Dendrocitta* Gould

## KEY TO THE SPECIES

- |                  |    |    |    |                     |
|------------------|----|----|----|---------------------|
| Belly ochraceous | .. | .. | .. | <i>D. vagabunda</i> |
| Belly ashy       | .. | .. | .. | <i>D. formosae</i>  |

*Nucifraga caryocatactes multipunctata*

Genus *Pyrrhonorax* Tunstall

## KEY TO THE SPECIES

- Bill red .. .. . *P. pyrrhonorax*  
 Bill yellow .. .. . *P. graculus*

Genus *Corvus* Linnaeus

## KEY TO THE SPECIES

1. Plumage entirely black .. .. . 2  
     Plumage black and ashy .. .. . 5  
 2. Size large; wing over 380 mm .. .. . *C. corax*  
     Size smaller; wing under 380 mm .. .. . 3  
 3. Whole plumage glossed with purple .. .. . *C. frugilegus*  
     Plumage duller black .. .. . 4  
 4. Upper mandible more curved, ridge or culmen  
     nearly flat, not covered with bristles at base (fig.81) *C. macrorhynchos*  
     Upper mandible less curved, ridge of culmen not  
     flattened, and covered with bristles to over  
     10 mm at base (fig.98, 99) .. .. . *C. corone*  
 5. Ashy restricted to nape .. .. . *C. monedula*  
     Ashy extending down to breast .. .. . *C. splendens*

*Corvus corone* Linnaeus

## KEY TO THE SUBSPECIES

- Plumage all black .. .. . *C.c.orientalis*  
 Plumage contrasting drab-grey and black .. .. . *C.c.sharpai*

*Corvus corax* Linnaeus

## KEY TO THE SUBSPECIES

- Plumage wholly black .. .. . *C.c.subcorax*  
 Plumage brown on neck, upper back and scapulars *C. c. ruficollis*

## FAMILY BOMBYCILLIDAE

*Includes two genera and two species from Pakistan.*

## KEY TO THE SUBFAMILIES

- Wing long and pointed; tail short and square .. *Bombycillinae*  
 Wing short and pointed; tail long and slightly  
 graduated .. .. . *Hypocoliinae*

## SUBFAMILY BOMBYCILLINAE: Waxwings

*Bombycilla garrulus garrulus*

## SUBFAMILY HYPOCOLIINAE : Hypocolius

*Hypocolius ampelinus*

FAMILY CAMPEPHAGIDAE: Cuckoo-Shrikes, Minivets (Tarti Tuiya;  
Bulal-Chasm)

*Includes three genera and eight species from Pakistan.*

## KEY TO THE GENERA

1. Tail square (fig. 120) .. .. . *Tephrodornis*  
 Tail more or less graduated .. .. . 2
2. Tail strongly graduated, outer rectrices less than  
 half length of tail .. .. . *Pericrocotus*  
 Tail moderately graduated, outer rectrices more  
 than three-quarters length of tail .. .. *Coracina*

.. Genus *Coracina* Vieillot

## .. KEY TO THE SPECIES

1. Wing over 150 mm .. .. . *C. novaehollandiae*  
 Wing under 150 mm .. .. . 2
2. Wing 110-130mm .. .. . *C. melaschistos*  
 Wing under 110, generally less than 106 mm .. 3
3. Throat black, abdomen grey, not barred .. *C. melanoptera* ♂  
 Throat and abdomen white, cross-barred with brown *C. melanoptera* ♀  
*Tephrodornis pondicerianus pallidus*

Genus *Pericrocotus* Boie

## KEY TO THE SPECIES

1. Tail black and red; upper tail-coverts red .. 2  
 Tail black and yellow; upper tail-coverts yellow .. 6

2. Crown and back glossy black .. .. 3  
 Crown and back ashy or grey, never black .. 4
3. Innermost secondaries with oval red drops .. *P. flammeus* ♂  
 Innermost secondaries with no oval drops .. *P. ethologus* ♂
4. Wing over 80 mm .. .. . *P. roseus* ♂  
 Wing under 75 mm .. .. . 5
5. Lower plumage with throat grey to black; breast  
 scarlet .. .. . *P. cinnamomeus* ♂  
 Lower plumage all pale yellow .. .. *P. cinnamomeus* ♂
6. Innermost secondaries with oval yellow spots .. *P. flammeus* ♂  
 Innermost secondaries with no oval yellow spots .. 7
7. Rump and upper tail-coverts (fig.16) all deep  
 yellow .. .. . *P. ethologus* ♂  
 Rump and upper tail—coverts margined with yellow *P. roseus* ♂

#### FAMILY IRENIDAE: Ioras, Fairy Bluebirds, Leaf Birds

*Includes a single genus with two species from Pakistan.*

##### Genus *Aegithina* Vieillot

##### KEY TO THE SPECIES

- Tail black or green throughout .. .. *Ae. tiphia*  
 Tail tipped with white .. .. . *Ae. nigrolutea*

#### FAMILY PYCNONOTIDAE: Bulbuls

*Includes two genera and three species from Pakistan.*

##### KEY TO THE GENERA

- Bill equal to, usually shorter than tarsus; difference  
 between longest primary and longest secondary  
 less than length of tarsus .. .. . *Pycnonotus*  
 Bill longer than tarsus; difference between longest  
 primary and longest secondary more than length  
 of tarsus .. .. . *Hypsipetes*

##### Genus *Pycnonotus* Boie

##### KEY TO THE SPECIES

- Under tail-coverts red .. .. . *P. cafer*  
 Under tail-coverts yellow .. .. . *P. leucogenys*

## Pycnonotus leucogenys (Gray)

## KEY TO THE SUBSPECIES

- |  |                         |
|--|-------------------------|
| 1. Crest absent .. .. .  | <i>P. l. leucotis</i>   |
| Crest present .. .. .  | 2                       |
| 2. Crest moderate, brownish black; back dull olive-brown .. .. . | <i>P. l. humi</i>       |
| Crest long, brown; back greenish olive-brown .. .. .             | <i>P. l. leucogenys</i> |

## Pycnonotus cafer (Linnaeus)

## KEY TO THE SUBSPECIES

- |  |                          |
|--|--------------------------|
| Black of crown sharply defined and not extending to the hindneck .. .. . | <i>P. c. humayuni</i>    |
| Black of crown extending to hindneck (fig.8) and back .. .. .            | <i>P. c. intermedius</i> |
| <i>Hypsipetes madagascariensis psaroides</i>                             |                          |

## FAMILY MUSCICAPIDAE

*Includes forty five genera and one hundred-twenty five species from Pakistan.*

- |   |              |
|---|--------------|
| 1. Juvenal plumage spotted .. .. .                  | 2            |
| Juvenal plumage unspotted .. .. .                   | 3            |
| 2. Bill slender and fairly strong .. .. .           | Turdinae     |
| Bill broad and flat .. .. .                         | Muscicapinae |
| 3. Bill small, slender; legs short and weak .. .. . | Sylviinae    |
| Bill very variable; legs and feet strong .. .. .    | Timaliinae   |
| Bill large; legs short and strong .. .. .           | Monarchinae  |

## SUBFAMILY TIMALIINAE: Babblers (Dumri, Chilchil; Sat-bhai)

*Eight genera and sixteen species.*

## KEY TO THE GENERA

- |                                       |                     |
|---------------------------------------|---------------------|
| 1. Tail long, more than 88 mm .. .. . | 2                   |
| Tail short, less than 88 mm .. .. .   | 7                   |
| 2. Bill shorter than head .. .. .     | 3                   |
| Bill longer than head .. .. .         | <i>Pomatorhinus</i> |

- |   |                     |
|---|---------------------|
| 3. Nostrils partly concealed by bristles .. ..  | <i>Garrulax</i>     |
| Nostrils not concealed by bristles .. ..        | 4                   |
| 4. Nostrils covered by plumes (fig.101) .. ..   | 5                   |
| Nostrils covered by membrane .. ..              | <i>Heterophasia</i> |
| 5. Bill neither notched nor hooked at tip .. .. | <i>Turdoides</i>    |
| Bill notched and hooked at tip (fig. 101) .. .. | 6                   |
| 6. Tail feathers straight .. ..                 | <i>Pteruthius</i>   |
| Tail feathers graduated .. ..                   | <i>Panurus</i>      |
| 7. Tail longer than wing .. ..                  | <i>Chrysomma</i>    |
| Tail shorter than wing .. ..                    | <i>Stachyris</i>    |

**Genus Chrysomma Blyth**

KEY TO THE SPECIES

- |                            |                      |
|----------------------------|----------------------|
| Bill black .. ..           | <i>C. sinense</i>    |
| Bill yellowish brown .. .. | <i>C. altirostre</i> |

**Genus Turdoides Cretzschmar**

KEY TO THE SPECIES

- |   |                    |
|---|--------------------|
| 1. Whole crown heavily streaked with dark brown .. .. | 2                  |
| Crown unstreaked .. ..                                | <i>T. striatus</i> |
| 2. Throat white or pinkish buff .. ..                 | <i>T. caudatus</i> |
| Throat fulvous with dark shaft-streaks .. ..          | <i>T. earlei</i>   |

**Turdoides caudatus (Dumont)**

KEY TO THE SUBSPECIES

- |                          |                       |
|--------------------------|-----------------------|
| Paler and greyer .. ..   | <i>T. c. huttoni</i>  |
| Darker and browner .. .. | <i>T. c. caudatus</i> |

**Genus Garrulax (Hodgson)**

KEY TO THE SPECIES

- |   |                           |
|---|---------------------------|
| 1. Under surface of tail tipped with white or rufous .. ..  | 2                         |
| Under surface of tail not tipped with white or rufous .. .. | <i>G. erythrocephalus</i> |

- |    |  |                       |
|----|--|-----------------------|
| 2. | Throat white or buff or black .. .. .          | 3                     |
|    | Throat neither white or buff nor black .. .. . | 4                     |
| 3. | Throat white or buff .. .. .                   | <i>G. albogularis</i> |
|    | Throat black .. .. .                           | <i>G. variegatus</i>  |
| 4. | Tip of tail rufous .. .. .                     | <i>G. rufogularis</i> |
|    | Tip of tail white or greyish .. .. .           | <i>G. lineatus</i>    |

**Garrulax lineatus (Vigors)**

**KEY TO THE SUBSPECIES**

- |    |  |                          |
|----|--|--------------------------|
| 1. | Lower belly and rump olive-brown .. .. .   | 2                        |
|    | Lower belly and rump grey .. .. .  | <i>G. l. bilkevitchi</i> |
| 2. | Throat more rufous; subterminal band of outer rectrices well marked .. .. .                          | <i>G. l. lineatus</i>    |
|    | Throat greyer, the shafts on each side of it tipped with white; subterminal band reduced to a line.. | <i>G. l. gilgit</i>      |

**Genus Pteruthius Swainson**

**KEY TO THE SPECIES**

- |    |                                      |                         |
|----|--------------------------------------|-------------------------|
| 1. | Size large; wing over 70 mm .. .. .  | 2                       |
|    | Size small; wing under 70 mm .. .. . | <i>P. xanthochlorus</i> |
| 2. | Crown black .. .. .                  | <i>P. flaviscapis</i> ♂ |
|    | Crown grey .. .. .                   | <i>P. flaviscapis</i> ♀ |

*Heterophasia capistrata capistrata*

*Pomatorhinus erythrogenys erythrogenys*

*Stachyris pyrrhos*

*Panurus biarmicus russicus*

**SUBFAMILY MUSCICAPINAE : Flycatchers (Turra)**

*Three genera and eleven species.*

**KEY TO THE GENERA**

- |    |                                |                   |
|----|--------------------------------|-------------------|
| 1. | Tail longer than wing .. .. .  | <i>Rhipidura</i>  |
|    | Tail shorter than wing .. .. . | 2                 |
| 2. | Rictal bristles long .. .. .   | <i>Culicicapa</i> |
|    | Rictal bristles short .. .. .  | <i>Muscicapa</i>  |

**Genus Muscicapa Brisson**

**KEY TO THE SPECIES**

- |    |                                    |   |
|----|------------------------------------|---|
| 1. | Upper plumage mostly blue .. .. .  | 2 |
|    | Upper plumage mostly brown .. .. . | 5 |

- |     |   |    |    |    |                         |   |
|-----|---|----|----|----|-------------------------|---|
| 2.  | Some rufous colour below                            | .. | .. | .. | <i>M. sundara</i>       | ♂ |
|     | No rufous colour below                              | .. | .. | .. | 3                       |   |
| 3.  | Centre of throat white                              | .. | .. | .. | 4                       |   |
|     | Throat entirely blue                                | .. | .. | .. | <i>M. thalassina</i>    |   |
| 4.  | Upperparts slaty blue, 3rd primary shorter than 4th | .. | .. | .. | <i>M. leucomelanura</i> | ♂ |
|     | Upperparts cerulean blue; 3rd primary equal to 4th  | .. | .. | .. | <i>M. superciliaris</i> | ♂ |
| 5.  | A blue patch on side of neck                        | .. | .. | .. | <i>M. sundara</i>       | ♀ |
|     | No blue patch on side of neck                       | .. | .. | .. | 6                       |   |
| 6.  | A white patch on tail                               | .. | .. | .. | 7                       |   |
|     | No white patch on tail                              | .. | .. | .. | 8                       |   |
| 7.  | White of throat less pure, less well defined        | .. | .. | .. | <i>M. parva</i>         | + |
|     | Throat rufous                                       | .. | .. | .. | <i>M. parva</i>         | ♂ |
| 8.  | Tail bright rufous                                  | .. | .. | .. | 9                       |   |
|     | Tail brown or rufous brown                          | .. | .. | .. | 10                      |   |
| 9.  | Size small, wing under 70 mm                        | .. | .. | .. | <i>M. leucomelanura</i> | ♀ |
|     | Size medium, wing over 70 mm                        | .. | .. | .. | <i>M. ruficauda</i>     |   |
| 10. | Forehead and breast streaked                        | .. | .. | .. | <i>M. striata</i>       |   |
|     | Forehead and breast unstreaked                      | .. | .. | .. | 11                      |   |
| 11. | Size small, wing under 65 mm                        | .. | .. | .. | <i>M. superciliaris</i> | ♀ |
|     | Size medium, wing over 65 mm                        | .. | .. | .. | <i>M. sibirica</i>      | + |

### Genus *Rhipidura* Vigors and Horsfield

#### KEY TO THE SPECIES

- |   |    |    |    |                      |
|---|----|----|----|----------------------|
| Breast and belly white                          | .. | .. | .. | <i>R. aureola</i>    |
| Breast slaty; belly uniformly slaty, or buffish | .. | .. | .. | <i>R. albicollis</i> |

*Culicicapa ceylonensis calochrysea*

#### SUBFAMILY SYLVIINAE : Warblers (Phutki)

*Includes seventeen genera and forty six species.*

#### KEY TO THE GENERA

- |   |    |    |    |    |
|---|----|----|----|----|
| 1. Nostrils visible or overhung by long hairs | .. | .. | .. | 2  |
| Nostrils covered                              | .. | .. | .. | 16 |

- |     |  |                     |
|-----|--|---------------------|
| 2.  | Tail with twelve feathers .. .. .  | 3                   |
|     | Tail with ten feathers .. .. .   | 14                  |
| 3.  | Feathers of forehead rounded, shafts not elongated;<br>no supplementary bristles in front of rictal bristles .. .. .                       | 4                   |
|     | Feathers of forehead disintegrated, shafts elongated;<br>supplementary bristles in front of rictal bristles (fig. 106) .. .. .             | 11                  |
| 4.  | Rictal bristles arranged horizontally (fig. 104)   | 5                   |
|     | Rictal bristles arranged vertically (fig. 83) ..   | <i>Chaetornis</i>   |
| 5.  | First primary less than one-third of the length of<br>second (fig. 110, 114) .. .. .   | 6                   |
|     | First primary more than one-third of the length<br>of second (fig. 113) .. .. .  | 7                   |
| 6.  | Rictal bristles (fig. 104) well developed; tail feathers<br>less graduated, outermost tail feather more than<br>3/4 length of tail .. .. . | <i>Acrocephalus</i> |
|     | Rictal bristles very small; tail-feathers much graduated,<br>outermost less than 3/4 length of tail ..                                     | <i>Locustella</i>   |
| 7.  | Rictal bristles extremely short .. .. .  | <i>Bradypterus</i>  |
|     | Rictal bristles well developed .. .. .   | 8                   |
| 8.  | Bill as long as, or longer than the head .. .. .   | <i>Orthotomus</i>   |
|     | Bill shorter than the head .. .. .   | 9                   |
| 9.  | First primary less than half second (fig. 113) ..  | 10                  |
|     | First primary more than half second .. .. .  | <i>Megalurus</i>    |
| 10. | Wings pointed .. .. .  | <i>Luscinia</i>     |
|     | Wings rounded .. .. .  | <i>Cisticola</i>    |
| 11. | Supplementary bristles short or obsolete ..  | 12                  |
|     | Supplementary bristles well developed .. .. .  | 13                  |
| 12. | Bill from gape to tip longer than middle toe ..  | <i>Hippolais</i>    |
|     | Bill from gape to tip shorter than middle toe ..   | <i>Sylvia</i>       |
| 13. | Supplementary bristles numerous but not strong ..  | <i>Phylloscopus</i> |
|     | Supplementary bristles (fig. 106) numerous and<br>strong .. .. .   | <i>Seicercus</i>    |
| 14. | Tail not cross-rayed or only obsoletely so; graduated<br>slightly or not at all .. .. .  | 15                  |
|     | Tail cross-rayed; greatly graduated .. .. .  | <i>Prinia</i>       |

15. Nostrils overhung by long hairs .. .. *Scotocerca*  
 Nostrils not overhung by hairs .. .. *Cettia*
16. Nostrils covered with stiff feathers .. .. *Regulus*  
 Nostrils covered by a membrane (fig. 82) .. .. *Leptopoeile*

**Genus Cettia Bonaparte**

KEY TO THE SPECIES

- Upperparts rufous-brown .. .. *C. cetti*  
 Upperparts olive-brown .. .. *C. fortipes*

**Genus Prinia Horsfield**

KEY TO THE SPECIES

1. Upperparts streaked .. .. 2  
 Upperparts not streaked .. .. 3
2. Underparts ashy white .. .. *P. burnesii*  
 Underparts buff .. .. *P. criniger*
3. Belly lemon-yellow .. .. *P. flaviventris*  
 Belly not lemon-yellow .. .. 4
4. Crown dark grey or slaty .. .. *P. socialis*  
 Crown not dark grey .. .. 5
5. Belly white or creamy white .. .. 6  
 Belly ochraceous .. .. *P. hodgsonii*
6. Crown rufous .. .. *P. buchanani*  
 Crown sandy brown concolorous with back .. 7
7. Crown streaked .. .. *P. gracilis*  
 Crown not streaked .. .. *P. subflava*

**Prinia criniger Hodgson**

KEY TO THE SUBSPECIES

- Palest; less brown .. .. *P. c. striatula*  
 Darker; upperparts dark rufous .. .. *P. c. criniger*

**Genus Acrocephalus Naumann**

KEY TO THE SPECIES

1. Size large; wing over 75 mm .. .. 2  
 Size small; wing under 65 mm .. .. 3

2. Second primary shorter than 5th .. .. *A. stentoreus*  
 Second primary longer than 5th (fig. 115) .. *A. arundinaceus*
3. No supercilium; outer web of 3rd primary only  
 emarginate (fig. 112) .. .. *A. scirpaceus*  
 A pale supercilium; outer web of 3rd, 4th and  
 sometimes 5th primaries emarginate (fig. 110) .. 4
4. Notch on inner web of 3rd primary arising at a  
 point between length of 8th and 10th primary  
 (fig. 110); supercilium light .. .. *A. dumetorum*  
 Notch on inner web of 3rd primary arising at a  
 point equal to tips of secondaries; supercilium  
 prominent .. .. 5
5. 2nd primary between 5th and 8th (fig. 111) .. *A. agricola*  
 2nd primary between 8th and 10th .. .. *A. concinens*

**Acrocephalus agricola (Jerdon)****KEY TO THE SUBSPECIES**

- More rufous above .. .. *A.a. agricola*  
 Less rufous, more olivaceous above .. .. *A.a. capistrata*

**Genus Hippolais Baldenstein****KEY TO THE SPECIES**

- Wing over 70 mm .. .. *H. languida*  
 Wing under 70 mm .. .. *H. caligata*

**Hippolais caligata (Lichtenstein)****KEY TO THE SUBSPECIES**

- Tail usually under 50 mm .. .. *H.c. caligata*  
 Tail usually over 50 mm .. .. *H. c. rama*

**Genus Sylvia Scopoli****KEY TO THE SPECIES**

1. First primary shorter than primary-coverts .. 2  
 First primary longer than primary-coverts .. 3
2. Underparts barred .. .. *S. nisoria*  
 Underparts not barred .. .. *S. communis*
3. Wing over 74 mm .. .. *S. hortensis*  
 Wing under 73 mm .. .. 4

4. Upper plumage a striking fawn colour .. .. *S. nana*  
 Upper plumage grey or grey-brown .. .. *S. curruca*

*Sylvia curruca* (Linnaeus)

KEY TO THE SUBSPECIES

1. Upperparts dark grey .. .. *S. c. althaea*  
 Upperparts not dark grey .. .. 2  
 2. Back greyish brown .. .. 3  
 Back sandy brown .. .. *S. c. minula*  
 3. Head grey contrasting with back .. .. *S. c. blythi*  
 Head paler, more sandy brown .. .. *S. c. halimodendri*

Genus *Phylloscopus* Boie

KEY TO THE SPECIES

1. No wing-bars .. .. 2  
 Single or double wing bar .. .. 6  
 2. Upperparts brown without olive .. .. 3  
 Upperparts with olive .. .. 5  
 3. Underparts without yellow .. .. 4  
 Underparts with yellow .. .. *P. griseolus*  
 4. No trace of green or yellow in plumage .. .. *P. neglectus*  
 Trace of greenish on lesser coverts .. .. *P. collybita*  
 5. Supercilium long, reaching nape .. .. *P. tytleri*  
 Supercilium of moderate length not reaching nape .. .. *P. affinis*  
 6. Primaries with pale yellow edges and tips to tertials 7  
 No pale edges and tips to tertials .. .. 9  
 7. Head pattern of dark coronal bands and pale crown-stripe .. .. 8  
 No definite head pattern but sometimes a pale crown-stripe .. .. *P. inornatus*  
 8. Rump without pronounced band .. .. *P. subviridis*  
 Rump with a pronounced yellow band .. .. *P. proregulus*  
 9. Coronal bands dusky-olive; supercilium pale yellow or whitish .. .. 10  
 No definite coronal bands; supercilium dark yellow 12

10. Single pale yellow wing-bar .. .. . *P. occipitalis* (some)  
 Double pale yellow wing-bars .. .. . 11
11. Outer three rectrices edged white on inner web .. *P. reguloides*  
 Outer two rectrices edged white, a white apical spot  
 on third .. .. . *P. occipitalis*
12. Head darker than mantle .. .. . *P. trochiloides*  
 Head and mantle uniform .. .. . *P. magnirostris*

*Phylloscopus collybita* (Vieillot)

KEY TO THE SUBSPECIES

- Plumage with hardly any trace of greenish, rump  
 uniform with mantle .. .. . *P.c. sirdianus*
- Upperparts brownish, more greenish on mantle  
 and wings .. .. . *P.c. tristis*
- Upperparts olive, more yellowish on rump .. *P.c. collybita*

*Phylloscopus trochiloides* (Sundevall)

KEY TO THE SUBSPECIES

1. Upperparts brighter green; underparts yellow .. *P.t. nitidus*  
 Upperparts duller greenish; underparts sullied  
 yellowish white .. .. . 2
2. 2nd Primary usually longer than 8th .. .. . *P. t. viridanus*  
 2nd primary usually shorter than 8th (fig. 114) .. *P. t. ludlowi*

*Bradypterus major major*

*Luscinia melanopogon mimica*

*Cisticola juncidis cursitans*

*Scotocerca inquieta striata*

*Orthotomus sutorius guzuratus*

*Locustella naevia straminea*

*Chaetornis striatus*

*Megalurus palustris toklao*

*Seicercus xanthoschistos albosuperciliaris*

*Regulus regulus himalayensis*

*Leptopoeile sophiae sophiae*

SUBFAMILY MONARCHINAE : Monarch Flycatcher (Shah-bulbul)

Includes single genus with single species.

*Terpsiphone paradisi leucogaster*

## SUBFAMILY TURDINAE: Thrushes and Chats (Pidda; Daiyar; Shama)

Sixteen genera and fifty one species.

## KEY TO THE GENERA

- |     |  |         |                      |
|-----|--|---------|----------------------|
| 1.  | Tail in both sexes partly or wholly chestnut     | ..      | 2                    |
|     | Tail not chestnut                                | .. .. . | 6                    |
| 2.  | Tail longer than twice the length of tarsus      | ..      | 3                    |
|     | Tail about twice the length of tarsus            | .. .. . | 5                    |
| 3.  | Tail rounded (fig. 118) or square (fig. 120)     | ..      | 4                    |
|     | Tail greatly graduated (fig. 116)                | .. .. . | <i>Hodgsonius</i>    |
| 4.  | Tail nearly square (fig. 120); sexes dissimilar  | ..      | <i>Phoenicurus</i>   |
|     | Tail much rounded; sexes alike                   | .. .. . | <i>Chaimarrornis</i> |
| 5.  | Rictal bristles very long and strong             | .. .. . | <i>Rhyacornis</i>    |
|     | Rictal bristles very short and weak              | .. .. . | <i>Erithacus</i>     |
| 6.  | First primary shorter than one-third of second   | ..      | <i>Erythropygia</i>  |
|     | First primary longer than or one-third of second | ..      | 7                    |
| 7.  | Tail equal or shorter than wing                  | .. .. . | 8                    |
|     | Tail longer than wing                            | .. .. . | 15                   |
| 8.  | Bill broad at base                               | .. .. . | <i>Saxicola</i>      |
|     | Bill not broad at base                           | .. .. . | 9                    |
| 9.  | Rictal bristles well developed                   | .. .. . | <i>Monticola</i>     |
|     | Rictal bristles weak or obsolete                 | .. .. . | 10                   |
| 10. | Bill prominently curved                          | .. .. . | 11                   |
|     | Bill straight or slightly curved                 | .. .. . | 12                   |
| 11. | Bill hooked at the tip                           | .. .. . | <i>Myiophonus</i>    |
|     | Bill not hooked at the tip                       | .. .. . | <i>Saxicoloides</i>  |
| 12. | Bill straight                                    | .. .. . | 13                   |
|     | Bill slightly curved at tip                      | .. .. . | 14                   |
| 13. | Tail with a pattern of two colours               | .. .. . | <i>Oenanthe</i>      |
|     | Tail all of one colour                           | .. .. . | <i>Cercomela</i>     |
| 14. | Underwing with a well-marked white or buff patch |         | <i>Zoothera</i>      |
|     | Underwing without a white or buff patch          | ..      | <i>Turdus</i>        |
| 15. | Tail forked                                      | .. .. . | <i>Enicurus</i>      |
|     | Tail not forked                                  | .. .. . | <i>Copsychus</i>     |

Genus *Erithacus* Cuvier

## KEY TO THE SPECIES

1. Plumage plain brown; sexes alike .. .. *E. megarhynchos*
- MALES
- Plumage partly blue, red or yellow .. .. 2
2. Rump yellow .. .. *E. chrysaeus*  
No yellow on rump .. .. 3
3. Throat bright scarlet .. .. *E. pectoralis*  
No scarlet on throat .. .. 4
4. Base of tail rufous .. .. *E. svecicus*  
No rufous in tail .. .. 5
5. Supercilium white .. .. *E. brunneus*  
Supercilium blue .. .. *E. cyanurus*
- FEMALES
1. A dark collar on breast (fig. 25) .. .. *E. svecicus*  
No dark collar on breast .. .. 2
2. Tips of tail white .. .. *E. pectoralis*  
Tips of tail not white .. .. 3
3. Underparts ochre-yellow .. .. *E. chrysaeus*  
Underparts sullied white .. .. 4
4. Bluish on rump .. .. *E. cyanurus*  
No bluish on rump .. .. *E. brunneus*

*Erithacus svecicus* (Linnaeus)

## KEY TO THE SUBSPECIES

1. Plastron darker blue .. .. 2  
Plastron paler blue .. .. *E. s. pallidogularis*
2. Star smaller; bill longer (av. 17.5 mm) .. .. *E. s. abbotti*  
Star larger; bill shorter (av. 16 mm) .. .. *E. s. svecicus*

Genus *Phoenicurus* Forster

## KEY TO THE SPECIES

## MALES

1. A white patch on wing .. .. 2  
No white patch on wing .. .. 4

- |    |   |    |    |    |                            |
|----|---|----|----|----|----------------------------|
| 2. | Throat rufous   | .. | .. | .. | <i>P. erythronotus</i>     |
|    | Throat not rufous   | .. | .. | .. | 3                          |
| 3. | Cap ashy or blue  | .. | .. | .. | <i>P. caeruleocephalus</i> |
|    | Cap white, more or less tinged grey                         | .. | .. | .. | <i>P. erythrogaster</i>    |
| 4. | Tips of outer rectrices black                               | .. | .. | .. | <i>P. frontalis</i>        |
|    | Outer rectrices entirely rufous                             | .. | .. | .. | 5                          |
| 5. | A white band between grey crown and black forehead (fig. 3) | .. | .. | .. | <i>P. phoenicurus</i>      |
|    | No white on crown   | .. | .. | .. | <i>P. ochruros</i>         |

## FEMALES

- |    |  |    |    |    |                            |
|----|--|----|----|----|----------------------------|
| 1. | A white or buff patch on wing            | .. | .. | .. | 2                          |
|    | No white on wing                         | .. | .. | .. | 3                          |
| 2. | Outer rectrices rufous                   | .. | .. | .. | <i>P. erythronotus</i>     |
|    | Outer rectrices brown                    | .. | .. | .. | <i>P. caeruleocephalus</i> |
| 3. | Wing over 90 mm                          | .. | .. | .. | <i>P. erythrogaster</i>    |
|    | Wing under 90 mm                         | .. | .. | .. | 4                          |
| 4. | Tips of outer rectrices black            | .. | .. | .. | <i>P. frontalis</i>        |
|    | Outer rectrices entirely rufous          | .. | .. | .. | 5                          |
| 5. | Outer web of 6th primary emarginated     | .. | .. | .. | <i>P. ochruros</i>         |
|    | Outer web of 6th primary not emarginated | .. | .. | .. | <i>P. phoenicurus</i>      |

Genus *Enicurus* Temminck

## KEY TO THE SPECIES

- |                  |    |    |    |                     |
|------------------|----|----|----|---------------------|
| Tail under 80 mm | .. | .. | .. | <i>E. scouleri</i>  |
| Tail over 80 mm  | .. | .. | .. | <i>E. maculatus</i> |

Genus *Saxicola* Bechstein

## KEY TO THE SPECIES

- |    |   |    |    |                   |        |
|----|---|----|----|-------------------|--------|
| 1. | Plumage entirely black and white                                | .. | .. | <i>S. caprata</i> | ↑<br>○ |
|    | Plumage also having other colours, not entirely black and white | .. | .. | ..                | 2      |
| 2. | Throat black  | .. | .. | ..                | 3      |
|    | Throat otherwise, not black                                     | .. | .. | ..                | 4      |

- |    |   |                                       |
|----|---|---------------------------------------|
| 3. | Inner webs of rectrices white .. ..             | <i>S. leucura</i> ♂ <sup>↑</sup>      |
|    | Rectrices mostly black .. ..                    | <i>S. torquata</i> ♂ <sup>↑</sup>     |
| 4. | Inner webs of rectrices white .. ..             | <i>S. macrorhyncha</i> ♂ <sup>↑</sup> |
|    | Inner webs of rectrices otherwise, not white .. | 5                                     |
| 5. | Outer rectrices entirely rufous .. ..           | <i>S. ferrea</i> ♂ <sup>+</sup>       |
|    | Rectrices mostly blackish brown or black ..     | 6                                     |
| 6. | A prominent white or buff supercilium ..        | 7                                     |
|    | No supercilium .. ..                            | 8                                     |
| 7. | Ear-coverts (fig. 7) black .. ..                | <i>S. ferrea</i> ♂ <sup>↑</sup>       |
|    | Ear-coverts rufous buff .. ..                   | <i>S. macrorhyncha</i> ♂ <sup>+</sup> |
| 8. | Back plain brown .. ..                          | <i>S. caprata</i> ♂ <sup>+</sup>      |
|    | Back streaked .. ..                             | 9                                     |
| 9. | Upper tail-coverts paler rufous .. ..           | <i>S. leucura</i> ♂ <sup>+</sup>      |
|    | Upper tail-coverts darker rufous .. ..          | <i>S. torquata</i> ♂ <sup>+</sup>     |

*Saxicola torquata* (Linnaeus)

KEY TO THE SUBSPECIES

- |  |                     |
|--|---------------------|
| Paler, more white at base of tail .. ..  | <i>S. t. maura</i>  |
| Darker, less white at base of tail .. .. | <i>S. t. indica</i> |

Genus *Oenanthe* Vieillot

KEY TO THE SPECIES

- |    |   |  |
|----|---|--|
| 1. | Throat black .. ..  | 2  |
|    | Throat not black .. ..  | 9  |
| 2. | Crown black or white .. ..  | 3  |
|    | Crown neither black nor white .. ..   | 8  |
| 3. | Crown black .. ..   | 4  |
|    | Crown white .. ..   | 6  |
| 4. | Belly black .. ..   | <i>O. picata</i> phase<br><i>opistholeuca</i> ♂ <sup>↑</sup> |
|    | Belly white .. ..   | 5  |
| 5. | Larger; wing mostly over 100 mm, black glossy,<br>restricted to throat .. ..      | <i>O. alboniger</i>  |
|    | Smaller; wing mostly under 100 mm, black dull,<br>extending to upper breast .. .. | <i>O. picata</i> phase <i>picata</i> ♂ <sup>↑</sup>          |

6. Outer rectrices broadly tipped with black .. 7  
 Outer rectrices only marked with brown towards tip .. .. . *O. monacha* ♂
7. Black on outer webs of all rectrices extending farther down towards base than black of inner webs .. .. . *O. picata phase capistrata* ♂  
 Black on outer webs extending farther down on outermost rectrices only .. .. . *O. pleschanka* ♂
8. Black part of outer rectrices over 25 mm .. *O. deserti* ♂  
 Black part of outer rectrices under 25 mm .. *O. finschii* ♂
9. Ear-coverts black .. .. . 10  
 Ear-coverts otherwise not black .. .. . 11
10. First primary shorter than primary-coverts .. *O. oenanthe* ♂  
 First primary equal to or longer than primary coverts .. .. . *O. pleschanka phase vittata* ♂
11. Outer rectrices buff marked with brown near tip .. *O. monacha* ♂  
 Outer rectrices not buff .. .. . 12
12. Black part of outer rectrices over 25 mm .. 13  
 Black part of outer rectrices under 25 mm .. 15
13. Tarsus over 28 mm .. .. . *O. isabellina*  
 Tarsus under 28 mm .. .. . 14
14. Under surface of tail white on basal half only .. *O. deserti* ♂  
 White on under surface of tail nearly reaching tip of inner rectrices .. .. . *O. pleschanka* ♂
15. Throat earthy brown or sooty brown .. .. *O. picata* ♂ (all phases)  
 Throat buff or greyish buff .. .. . 16
16. Rump rufous .. .. . *O. xanthopyrmyna kingi*  
 Rump white or buffish .. .. . 17
17. Tarsus over 26 mm .. .. . *O. oenanthe* ♂  
 Tarsus under 26 mm .. .. . *O. finschii* ♂

*Oenarthe deserti* (Temminck)

KEY TO THE SUBSPECIES

- White on inner web of second primary reaching quill .. .. . *O. d. oreophila*  
 White on inner web of second primary not reaching quill .. .. . *O. d. deserti*

Genus *Monticola* Boie

KEY TO THE SPECIES

1. Some blue in plumage .. .. . 2  
 No blue in plumage .. .. . 5
2. Breast blue, concolorous with throat .. .. . *M. solitarius* †  
 Breast rufous or chestnut .. .. . 3
3. Breast chestnut .. .. . *M. rufiventris* †  
 Breast orange-rufous .. .. . 4
4. A white wing-patch .. .. . *M. cinclorhynchus* †  
 No wing-patch .. .. . *M. saxatilis* †
5. Tail largely rufous .. .. . *M. saxatilis* †  
 No rufous in tail .. .. . 6
6. Back plain olive-brown .. .. . *M. cinclorhynchus* †  
 Back grey, lightly streaked or barred .. .. . 7
7. Feathers of back with dark crescents .. .. . *M. rufiventris* †  
 Feathers of back with dark shaft-streaks only .. .. . *M. solitarius* †

*Monticola solitarius* (Linnaeus)

KEY TO THE SUBSPECIES

- Paler all over .. .. . *M. s. longirostris*  
 Darker all over .. .. . *M. s. pandoo*

*Myiophonus caeruleus temminckii*

Genus *Zoothera* Vigors

KEY TO THE SPECIES

1. Belly plain orange-rufous .. .. . *Z. citrina*  
 Belly white, spotted .. .. . 2

2. Mantle spotted .. .. . *Z. dauma*  
 Mantle plain .. .. . *Z. mollissima*

Genus *Turdus* Linnaeus

## KEY TO THE SPECIES

1. Tail largely rufous .. .. . *T. ruficollis*  
 Tail otherwise, not rufous .. .. . 2
2. Underparts uniformly coloured .. .. . 3  
 Underparts not uniformly coloured .. .. . 7
3. Whole plumage black or slaty .. .. . 4  
 Whole plumage not black or slaty .. .. . 5
4. No grey wing-patch .. .. . *T. merula*  $\uparrow$   
 A grey patch on wings .. .. . *T. boulboul*  $\uparrow$
5. Whole plumage dark brown .. .. . *T. merula*  $\circ$   
 Whole plumage not dark brown .. .. . 6
6. Whole plumage olive-brown .. .. . *T. boulboul*  $\circ$   
 Upper plumage olive-brown or grey, abdomen  
 whitish .. .. . *T. unicolor*  $\uparrow$
7. Underparts with contrasting patterns but not  
 streaked or spotted .. .. . *T. rubrocanus*  
 Underparts without contrasting patterns but  
 streaked or spotted .. .. . 8
8. Tips of outer rectrices white .. .. . *T. viscivorus*  
 No white in tail .. .. . 9
9. A conspicuous supercilium .. .. . 10  
 No supercilium .. .. . *T. unicolor*  $\circ$
10. Flanks rufous; wings olive-brown .. .. . *T. iliacus*  
 Flanks spotted with blackish; wings rufous .. .. . *T. naumanni*

*Turdus merula* Linnaeus

## KEY TO THE SUBSPECIES

- Smaller and blacker .. .. . *T. m. intermedius*  
 Larger and browner .. .. . *T. m. maximus*

**Turdus ruficollis Pallas**

## KEY TO THE SUBSPECIES

## MALES

Throat black	..	..	..	..	<i>T. r. atrogularis</i>
Throat chestnut	..	..	..	..	<i>T. r. ruficollis</i>

## FEMALES

Throat whitish streaked with black	..	..	..	..	<i>T. r. atrogularis</i>
Throat whitish with a rusty tinge; unstreaked	..	..	..	..	<i>T. r. ruficollis</i>

*Erythropgia galactotes familiaris**Copsychus saularis saularis**Rhyacornis fuliginosus fuliginosus**Hodgsonius phoenicuroides phoenicuroides**Cercomela fusca**Chaimarrornis leucocephalus**Saxicoloides fulicata cambaiensis*

## FAMILY TROGLODYTIDAE : Wrens

*Includes single genus with single species from Pakistan.***Genus Troglodytes Vieillot**

Troglodytes troglodytes (Linnaeus)

## KEY TO THE SUBSPECIES

Throat ashy grey	..	..	..	..	<i>T. t. magrathi</i>
Throat sooty brown	..	..	..	..	<i>T. t. neglectus</i>

## FAMILY CINCLIDAE : Dippers (Dungal; Galkar)

*Includes single genus with two species from Pakistan.***Genus Cinclus Borkhausen**

## KEY TO THE SPECIES

Breast white	..	..	..	..	<i>C. cinclus</i>
Breast brown	..	..	..	..	<i>C. pallasii</i>

Cinclus cinclus (Linnaeus)

## KEY TO THE SUBSPECIES

Belly white	..	..	..	..	<i>C. c. leucogaster</i>
Belly brown	..	..	..	..	<i>C. c. cashmeriensis</i>

## FAMILY PRUNELLIDAE : Accentors or "Hedge Sparrows"

*Includes single genus with six species from Pakistan.*

Genus *Prunella* Vieillot

## KEY TO THE SPECIES

- |                                      |    |    |    |                        |
|--------------------------------------|----|----|----|------------------------|
| 1. A white spot at tips of rectrices | .. | .. | .. | 2                      |
| No white spot at tips of rectrices   | .. | .. | .. | 3                      |
| 2. Breast grey                       | .. | .. | .. | <i>P. collaris</i>     |
| Breast rufous and white              | .. | .. | .. | <i>P. himalayana</i>   |
| 3. Supercilium absent                | .. | .. | .. | <i>P. rubeculoides</i> |
| Supercilium present                  | .. | .. | .. | 4                      |
| 4. Throat streaked                   | .. | .. | .. | <i>P. strophhiata</i>  |
| Throat not streaked                  | .. | .. | .. | 5                      |
| 5. Throat black                      | .. | .. | .. | <i>P. atrogularis</i>  |
| Throat buff                          | .. | .. | .. | <i>P. fulvescens</i>   |

*Prunella fulvescens* (Severtzov)

## KEY TO THE SUBSPECIES

- |                                      |    |    |                         |
|--------------------------------------|----|----|-------------------------|
| Flank-feathers without brown centres | .. | .. | <i>P. f. fulvescens</i> |
| Flank-feathers with brown centres    | .. | .. | <i>P. f. ocularis</i>   |

*Prunella atrogularis* (Brandt)

## KEY TO THE SUBSPECIES

- |   |    |                          |
|---|----|--------------------------|
| A faint whitish band between bib and breast | .. | <i>P. a. atrogularis</i> |
| No whitish band between bib and breast      | .. | <i>P. a. huttoni</i>     |

## FAMILY PARIDAE

*Includes four genera and eleven species from Pakistan.*

## KEY TO THE SUBFAMILIES

- |                           |    |    |    |              |
|---------------------------|----|----|----|--------------|
| 1. Tail shorter than wing | .. | .. | .. | 2            |
| Tail longer than wing     | .. | .. | .. | Aegithalinae |
| 2. Bill conical           | .. | .. | .. | Parinae      |
| Bill straight             | .. | .. | .. | Remizinae    |

## SUBFAMILY PARINAE : True Tits

*Sing'e genus with six species.*

Genus *Parus* Linnaeus

## KEY TO THE SPECIES

- |                                   |    |    |    |                         |
|-----------------------------------|----|----|----|-------------------------|
| 1. Crown otherwise, not black     | .. | .. | .. | <i>P. cyanus</i>        |
| Crown black                       | .. | .. | .. | 2                       |
| 2. Sides of body yellow           | .. | .. | .. | 3                       |
| Sides of body not yellow          | .. | .. | .. | 4                       |
| 3. Cheeks white                   | .. | .. | .. | <i>P. monticolus</i>    |
| Cheeks yellow                     | .. | .. | .. | <i>P. xanthogenys</i>   |
| 4. Outer rectrices entirely white | .. | .. | .. | <i>P. major</i>         |
| Outer rectrices not white         | .. | .. | .. | 5                       |
| 5. Tip of wing-coverts white      | .. | .. | .. | <i>P. melanolophus</i>  |
| Tip of wing-coverts not white     | .. | .. | .. | <i>P. rubidiventris</i> |

*Parus major* Linnaeus

## KEY TO THE SUBSPECIES

- |   |    |                            |
|---|----|----------------------------|
| Pale above, white edging to tertials broader  | .. | <i>P. m. ziaratensis</i>   |
| Darker above, smokier below   | .. | <i>P. m. decolorans</i>    |
| Greater coverts mostly blue ; outer web of 2nd<br>outer rectrix almost entirely white | .. | <i>P. m. caschmirensis</i> |

*Parus cyanus* Pallas

## KEY TO THE SUBSPECIES

- |               |    |                            |
|---------------|----|----------------------------|
| Breast white  | .. | <i>P. c. tianschanicus</i> |
| Breast yellow | .. | <i>P. c. flavipectus</i>   |

## SUBFAMILY REMIZINAE : Penduline Titmice

*Two genera and two species.*

## KEY TO THE GENERA

- |                                     |    |                     |
|-------------------------------------|----|---------------------|
| Upper plumage greenish olive-yellow | .. | <i>Cephalopyrus</i> |
| No green on upper plumage           | .. | <i>Remiz</i>        |

*Cephalopyrus flammiceps flammiceps*

*Remiz pendulinus coronatus*

## SUBFAMILY AEGITHALINAE : Longtailed Titmice

*Single genus with three species.*

Genus *Aegithalos* Hermann

## KEY TO THE SPECIES

- |   |    |    |    |    |                        |
|---|----|----|----|----|------------------------|
| 1. Throat white .. .. .   | .. | .. | .. | .. | <i>A. niveogularis</i> |
| Throat otherwise, not white .. .. .                             | .. | .. | .. | .. | 2                      |
| 2. Crown rufous, contrasting with slaty back ..                 | .. | .. | .. | .. | <i>A. concinnus</i>    |
| Crown brownish clay, grading into greyish olive of back .. .. . | .. | .. | .. | .. | <i>A. leucogenys</i>   |

## FAMILY SITTIDAE

*Includes two genera and four species from Pakistan.*

## KEY TO THE SUBFAMILIES

- |  |    |                        |
|--|----|------------------------|
| First primary less than half the length of second .. | .. | <i>Sittinae</i>        |
| First primary half the length of second ..           | .. | <i>Tichodromadinae</i> |

## SUBFAMILY SITTINAE : Nuthatches

*Single genus with three species.*

Genus *Sitta* Linnaeus

## KEY TO THE SPECIES

- |  |    |    |    |    |                      |
|--|----|----|----|----|----------------------|
| 1. Upperparts ashy, tarsus over 21 mm .. .. .                | .. | .. | .. | .. | <i>S. tephronota</i> |
| Upperparts slaty or bluish slaty; tarsus under 20 mm .. .. . | .. | .. | .. | .. | 2                    |
| 2. Crown black .. .. .                                       | .. | .. | .. | .. | <i>S. leucopsis</i>  |
| Crown more or less slaty .. .. .                             | .. | .. | .. | .. | <i>S. europaea</i>   |

## SUBFAMILY TICHODROMADINAE : Wall Creepers (Dewal gaiyuk)

*Single genus with single species.*

*Tichodroma muraria nepalensis*

## FAMILY CERTHIIDAE : Tree Creepers (Koel Dider)

*Includes single genus with two species from Pakistan.*

Genus *Certhia* Linnaeus

## KEY TO THE SPECIES

- |                                |    |    |    |    |                      |
|--------------------------------|----|----|----|----|----------------------|
| Tail distinctly barred .. .. . | .. | .. | .. | .. | <i>C. himalayana</i> |
| Tail not barred .. .. .        | .. | .. | .. | .. | <i>C. familiaris</i> |

FAMILY MOTACILLIDAE : Pipits and Wagtails (Musarichi; Rugait;  
Pilkiya)

*Includes two genera and fourteen species from Pakistan.*

KEY TO THE GENERA

- Upper plumage streaked; tail comparatively shorter *Anthus*  
Upper plumage unstreaked; tail comparatively  
longer .. .. . *Motacilla*

Genus *Anthus* Bechstein

KEY TO THE SPECIES

1. Rectrices pointed; dark shaft-line on breast-feathers  
dividing to form a triangle at tip .. .. . *A. sylvanus*  
Rectrices not pointed; no shaft-line on breast-  
feathers .. .. . 2
2. Hind claw not exceeding hind toe in length (fig. 52) 3  
Hind claw exceeding hind toe in length (fig. 51) 4
3. Pale tips of rectrices white .. .. . *A. trivialis*  
Pale tips of rectrices pale rufous .. .. . *A. similis*
4. Sides of body plain or with obsolete streaks only .. 5  
Sides of body with coarse dark streaks .. .. 7
5. General colour of underparts sandy or buff .. 6  
Underparts vinous .. .. . *A. spinoletta*
6. Breast spotted or streaked .. .. . *A. novaeseelandiae*  
Breast unstreaked .. .. . *A. campestris*
7. Axillaries yellow .. .. . *A. roseatus*  
Axillaries whitish, more or less tinged with brownish  
or yellowish .. .. . 8
8. Throat cinnamon .. .. . *A. cervinus*  
Throat buffish .. .. . *A. pratensis*

*Anthus trivialis* (Linnaeus)

KEY TO THE SUBSPECIES

- Upperparts more earthy brown, less olive; bill  
broader at base .. .. . *A. t. haringtoni*  
Upperparts more olive-brown; bill narrow at base *A. t. trivialis*

**Anthus novaeseelandiae Gmelin**

## KEY TO THE SUBSPECIES

- Darker, more heavily streaked and larger; wing usually over 88 mm, tarsus usually over 28 mm .. *A. n. richardi*  
 Paler, less heavily streaked and smaller; wing usually under 88 mm tarsus usually under 28 mm .. *A. n. waitei*

**Anthus similis Jerdon**

## KEY TO THE SUBSPECIES

- Pale and grey, markings on breast fainter .. *A. s. decapetus*  
 Darker, markings on breast more distinct .. *A. s. jerdoni*

**Anthus spinoletta (Linnaeus)**

## KEY TO THE SUBSPECIES

- Spotting on underparts blacker and more distinct .. *A. s. japonicus*  
 Spotting on underparts paler brown and less distinct .. .. .. *A. s. coutellii*

**Genus Motacilla Linnaeus**

## KEY TO THE SPECIES

1. No yellow in plumage .. .. 2  
 Some yellow in plumage .. .. 3
2. Centre of forehead black .. .. *M. maderaspatensis*  
 Forehead white .. .. *M. alba*
3. Back black or grey .. .. 4  
 Back olive .. .. *M. flava*
4. Head yellow .. .. *M. citreola*  
 Head grey .. .. *M. caspica*

**Motacilla flava Linnaeus**

## KEY TO THE SUBSPECIES

1. Head white .. .. *M. f. leucocephala*  
 Head otherwise, not white .. .. 2
2. Head black .. .. *M. f. melanogrisea*  
 Head grey .. .. 3

3. Supercilium vestigial or lacking.. .. *M. f. thumbergi*  
 Supercilium complete .. .. *M. f. beema*

*Motacilla citreola* Pallas

KEY TO THE SUBSPECIES

1. Back grey .. .. 2  
 Back black or mixed with black .. .. *M. c. calcarata*
2. Darker; a black hind-collar between yellow head  
 and upper back .. .. *M. c. citreola*  
 Paler; black hind-collar usually absent .. .. *M. c. werae*

*Motacilla alba* Linnaeus

KEY TO THE SUBSPECIES

1. Back black .. .. *M. a. alboides*  
 Back grey .. .. 2
2. Ear-coverts (fig. 7) black .. .. *M. a. personata*  
 Ear-coverts white .. .. *M. a. dukhunensis*

FAMILY DICAETIDAE : Flowerpeckers (Phul Sunghani)

*Includes single genus with single species from Pakistan.*

*Dicaeum agile agile*

FAMILY NECTARINIIDAE : Sunbirds (Shakar Khora)

*Includes single genus with single species from Pakistan.*

*Nectarinia asiatica brevirostris*

FAMILY ZOSTEROPIDAE : White-eyes (Baboona)

*Includes single genus with single species from Pakistan.*

*zosterops palpebrosa palpebrosa*

FAMILY PLOCEIDAE

*Includes five genera and thirteen species from Pakistan.*

KEY TO THE SUBFAMILIES

1. Wing without a peculiar pattern on outer webs of  
 primaries .. .. 2  
 Wing with a peculiar pattern on outer webs of  
 primaries .. .. *Passerinae*

2. First primary long, much exceeding the greater wing-coverts (fig. 23) .. .. . *Ploceinae*  
 First primary minute, never exceeding the greater wing-coverts .. .. . *Estrildinae*

SUBFAMILY PASSERINAE: House and Rock Sparrows (Churia, Gauriyya)

Two genera and eight species.

KEY TO THE GENERA

- No yellow patch on throat and no white on tail .. *Passer*  
 A yellow patch on throat and white spots on tail.. *Petronia*

Genus *Passer* Brisson

KEY TO THE SPECIES

1. Centre of throat black .. .. . 2  
 No black on throat .. .. . 7
2. Flanks streaked .. .. . *P. hispaniolensis* ↑  
 Flanks not streaked .. .. . 3
3. Crown grey .. .. . 4  
 Crown otherwise, not grey .. .. . 5
4. Black extending to breast .. .. . *P. domesticus* ↑  
 Black restricted to throat .. .. . *P. pyrrhonotus* ↑
5. A pale supercilium .. .. . *P. moabiticus* ↑  
 No supercilium .. .. . 6
6. A dark patch on ear-coverts .. .. . *P. montanus*  
 No patch on ear-coverts .. .. . *P. rutilanus* ↑
7. Underparts faintly streaked .. .. . *P. hispaniolensis* ○  
 Underparts not streaked .. .. . 8
8. Underparts more or less yellow.. .. . 9  
 No yellow on underparts .. .. . 10
9. Upperparts sandy brown, tertials and rectrices broadly edged with buff .. .. . *P. moabiticus* ○  
 Upperparts darker brown, tertials and rectrices with only thin pale edges .. .. . *P. rutilanus* ○
10. Larger; wing usually over 70 mm .. .. . *P. domesticus* ○  
 Smaller; wing usually under 70 mm .. .. . *P. pyrrhonotus* ○

## Passer domesticus (Linnaeus)

## KEY TO THE SUBSPECIES

1. Darkest and largest; chestnut richer .. .. *P. d. parkini*  
    Paler and smaller; chestnut paler .. .. 2
2. Bill averaging smaller .. .. .. *P. d. indicus*  
    Bill averaging larger .. .. .. *P. d. bactrianus*

Genus *Petronia* Kaup

## KEY TO THE SPECIES

- Rectrices with white terminal spot .. .. *P. petronia*  
 Rectrices without white .. .. .. *P. xanthocollis*

SUBFAMILY PLOCEINAE : Weaver Birds, Bayas (Bayas)

*Single genus with three species.*

Genus *Ploceus* Cuvier

## KEY TO THE SPECIES

## BREEDING MALES

- Breast yellow or fulvous, unstreaked .. .. *P. philippinus*  
 Breast blackish brown or brown with fulvous  
 fringes .. .. .. *P. benghalensis*  
 Breast fulvous streaked with black .. .. *P. manyar*

## MALES IN WINTER AND FEMALES

1. Lower plumage plain pale fulvous .. .. *P. philippinus*  
    Lower plumage not plain pale fulvous .. .. 2
2. Breast black or fringed with fulvous .. .. *P. benghalensis*  
    Breast fulvous streaked with black .. .. *P. manyar*

SUBFAMILY ESTRILDINAE : Avadavat, Munias (Lal or Lal munia, Pidda)

*Two genera and two species.*

## KEY TO THE GENERA

- Central tail-feathers narrow and pointed (fig. 121);  
 plumage brown and white .. .. .. *Lonchura*  
 Central tail-feathers broad and rounded (fig. 122);  
 plumage red and brown .. .. .. *Estrilda*

*Estrilda amandava amandava*

*Lonchura malabarica malabarica*

## FAMILY FRINGILLIDAE : Finches

*Includes eleven genera and twenty six species from Pakistan.*

## KEY TO THE SUBFAMILIES

- Bill massive; cutting edges of both mandibles not in contact everywhere (fig. 105) .. .. *Coccothraustinae*  
 Bill not massive; cutting edges of both mandibles in contact everywhere (fig. 90) .. .. *Fringillinae*

## SUBFAMILY COCCOTHAUSTINAE

*Two genera and five species.*

## KEY TO THE GENERA

- Tips of inner primaries and outermost secondaries square or sinuated; upper mandible not toothed near gape .. .. *Coccothraustes*  
 Tips of all wing-quills rounded or pointed; upper mandible toothed near gape (fig. 97) .. .. *Mycerobas*

*Coccothraustes coccothraustes humii*

Genus *Mycerobas* Cabanis

## KEY TO THE SPECIES

- |    |                           |    |    |    |   |   |
|----|---------------------------|----|----|----|---|---|
| 1. | A white patch on wing     | .. | .. | .. | 2 |   |
|    | No white patch on wing    | .. | .. | .. | 5 |   |
| 2. | Throat black              | .. | .. | .. | 3 |   |
|    | Throat not black          | .. | .. | .. | 4 |   |
| 3. | Rump yellowish olive      | .. | .. | .. |   | <i>M. carnipes</i> <sup>†</sup> <sub>○</sub>      |
|    | Rump black                | .. | .. | .. |   | <i>M. melanozanthos</i> <sup>†</sup> <sub>○</sub> |
| 4. | Throat grey               | .. | .. | .. |   | <i>M. carnipes</i> <sup>○</sup> <sub>+</sub>      |
|    | Throat yellow             | .. | .. | .. |   | <i>M. melanozanthos</i> <sup>○</sup> <sub>+</sub> |
| 5. | Throat black              | .. | .. | .. | 6 |   |
|    | Throat grey               | .. | .. | .. | 7 |   |
| 6. | Thigh feathers dark brown | .. | .. | .. |   | <i>M. icteroides</i> <sup>†</sup> <sub>○</sub>    |
|    | Thigh feathers yellow     | .. | .. | .. |   | <i>M. affinis</i> <sup>†</sup> <sub>○</sub>       |
| 7. | Belly yellowish green     | .. | .. | .. |   | <i>M. affinis</i> <sup>○</sup> <sub>+</sub>       |
|    | Belly buff                | .. | .. | .. |   | <i>M. icteroides</i> <sup>○</sup> <sub>+</sub>    |

## Mycerobas carnipes (Hodgson)

## KEY TO THE SUBSPECIES

- Darker .. .. . *M. c. carnipes*  
 Paler .. .. . *M. c. speculigerus*

## SUBFAMILY FRINGILLINAE

*Nine genera and twenty one species.*

## KEY TO THE GENERA

1. Sexes similar; face scarlet; wings marked with yellow .. .. . *Carduelis*  
 Sexes dissimilar; plumage colour variable .. 2
2. Plumage brown in both sexes .. .. . 3  
 Plumage otherwise, not brown in both sexes .. 4
3. Breast rufescent; bill lengthened and straight (fig. 90) *Fringilla*  
 Breast not rufescent; bill stout and curved .. *Leucosticte*
4. Rump white .. .. . *Pyrrhula*  
 Rump not white .. .. . 5
5. Plumage in both sexes largely green or yellowish .. *Serinus*  
 Males above crimson or pink, females brown or greenish .. .. . 6
6. No white on tail .. .. . *Carpodacus*  
 Lateral tail feathers largely marked with white .. 7
7. Plumage streaked .. .. . *Acanthis*  
 Plumage unstreaked .. .. . 8
8. Bill moderate in size and stout .. .. . *Rhodopechys*  
 Bill long and stout .. .. . *Callacanthis*

Genus *Carduelis* Brisson

## KEY TO THE SPECIES

- Forehead red .. .. . *C. carduelis*  
 Forehead yellow .. .. . *C. spinoides*

*Carduelis carduelis* (Linnaeus)

## KEY TO THE SUBSPECIES

1. Crown black .. .. . *C. c. major*  
 No black on crown .. .. . 2

2. Paler .. *C. c. subulata*  
 Darker .. *C. c. caniceps*

**Genus Acanthis Borkhausen**

**KEY TO THE SPECIES**

- Throat streaked .. *A. cannabina*  
 Throat unstreaked .. *A. flavirostris*

*Callacanthis burtoni*  
*Serinus pusillus*

**KEY TO THE GENERA**

**Genus Leucosticte Swainson**

**KEY TO THE SPECIES**

- Some pink on rump .. *L. brandti*  
 No pink on rump .. *L. nemoricola*

**Leucosticte brandti Bonaparte**

**KEY TO THE SUBSPECIES**

1. Some pink on wing-coverts .. 2  
 No pink on wing-coverts; Darker .. *L. b. haematopygia*  
 2. Paler .. *L. b. brandti*  
 Darker .. *L. b. pamirensis*

**Genus Rhodopechys Cabanis**

**KEY TO THE SPECIES**

1. Crown black .. *R. sanguinea*  
 Crown not black .. 2  
 2. Crown ashy .. *R. githaginea*  
 Crown brownish .. 3  
 3. Outer edges of primaries whitish .. *R. obsoleta*  
 Outer edges of primaries pink .. *R. mongolica*

**Genus Carpodacus Kaup**

**KEY TO THE SPECIES**

**MALES**

1. Some pink or red in plumage .. 2  
 No pink or red in plumage .. 7

2. Size large, wing over 100 mm .. 3  
 Size smaller, wing under 100 mm .. 4
3. Plumage scarlet, belly grey-brown .. .. *C. puniceus*  
 Plumage racy red, lower belly pink or whitish .. .. *C. rubicilla*
4. End of supercilium white .. .. *C. thura*  
 No white at end of supercilium .. .. 5
5. Under tail-coverts creamy white .. .. *C. erythrinus*  
 Under tail-coverts pink .. .. 6
6. Larger, wing over 80 mm .. .. *C. rhodochlamys*  
 Smaller, wing under 80 mm .. .. *C. rhodochrous*

## FEMALES

7. Size large, wing over 95 mm .. 8  
 Size smaller, wing under 95 mm .. 9
8. Lower rump yellowish olive .. .. *C. puniceus*  
 No yellow on plumage .. .. *C. rubicilla*
9. Lower rump ochraceous yellow .. .. *C. thura*  
 No yellow in plumage .. .. 10
10. Belly whitish, unstreaked .. .. *C. erythrinus*  
 Belly more or less streaked .. .. 11
11. Supercilium streaked, indistinct; underparts whitish buff .. .. *C. rhodochlamys*  
 Supercilium unstreaked, prominent; underparts fulvous buff .. .. *C. rhodochrous*
- Pyrrhula aurantiaca* .. .. Rump chestnut contrasting with back

Genus *Fringilla* Linnaeus

## KEY TO THE SPECIES

- Rump greenish .. .. *F. coelebs*  
 Rump white .. .. *F. montiringilla*

## FAMILY EMBERIZIDAE: Buntings (Gandam)

Includes two genera and fourteen species from Pakistan.

## KEY TO THE GENERA

- No crest .. .. *Emberiza*  
 A well developed crest present .. .. *Melophus*

Genus *Emberiza* Linnaeus

## KEY TO THE SPECIES

1. Tail only slightly shorter than wing .. 2  
Tail decidedly longer than wing .. .. *E. calandra*
2. A large white patch on the outer most tail-outermost feathers No distinct patch of white on tail feathers .. 3  
3
3. Sides of body streaked or differing in colour from abdomen .. .. 4  
Sides of body unstreaked and concolorous with abdomen .. .. 11
4. No trace of yellow on lower plumage .. .. 5  
Lower plumage largely yellow .. .. *E. aureola*
5. Chin (fig. 9) and throat black .. .. 6  
Chin and throat not black .. .. 7
6. Breast white .. .. *E. schoeniclus* ♂  
Breast chestnut .. .. *E. stewarti* ♂
7. Chin and throat chestnut .. .. *E. leucocephala* ♂  
Chin and throat white or pale fulvous .. .. 8
8. Ear-coverts chestnut .. .. *E. fucata*  
Ear-coverts fulvous or brown .. .. 9
9. Rump and back concolorous .. .. *E. schoeniclus* ♂  
Rump chestnut contrasting with back .. .. 10
10. Wing over 87 mm .. .. *E. leucocephala* ♂  
Wing under 87 mm .. .. *E. stewarti* ♂
11. Throat and breast bluish grey .. .. *E. cia*  
Throat and breast not bluish grey .. .. 12
12. Throat and breast rufous .. .. *E. buchanani*  
Throat and breast yellow .. .. *E. hortulana*
13. Sides of body unstreaked .. .. 14  
Sides of body streaked .. .. *E. rutilla*
14. Throat and foreneck unstreaked .. .. 15  
Throat and foreneck streaked .. .. *E. striolata*

- |     |                              |    |    |    |                           |
|-----|------------------------------|----|----|----|---------------------------|
| 15. | Crown plain ..               | .. | .. | .. | 16                        |
|     | Crown streaked with brown .. | .. | .. | .. | 17                        |
| 16. | Crown black ..               | .. | .. | .. | <i>E. melanocephala</i> ♂ |
|     | Crown golden ..              | .. | .. | .. | <i>E. bruniceps</i> ♂     |
| 17. | Wing over 90 mm ..           | .. | .. | .. | <i>E. melanocephala</i> ♂ |
|     | Wing under 90 mm ..          | .. | .. | .. | <i>E. bruniceps</i> ♂     |

Emberiza cia **Linnaeus**

KEY TO THE SUBSPECIES

- Paler, less rufous above, belly buffish rufous .. *E. c. par*  
 Darker, more rufous above, belly chestnut .. *E. c. stracheyi*  
*Melophus lathamii*

CHECK LIST OF BIRDS OF PAKISTAN  
 ORDERS, FAMILIES, GENERA, SPECIES AND SUBSPECIES

Order/Family/Genera/Species Subspecies	Common Name	Status	Page
1	2	3	4
Podicipitiformes			3
Podicipitidae			3
KEY TO THE SUBSPECIES			
<i>Podiceps cristatus cristatus</i>	Great Crested Grebe	M/Wv	3
<i>P. nigricollis nigricollis</i>	Blacknecked Grebe	M/Wv	3
<i>P. ruficollis capensis</i>	Little Grebe or Dabchick	R	3
<i>P. griseigena</i>	Rednecked Grebe	Wv/r	3
Pelecaniformes			4
Pelecanidae			4
<i>Pelecanus onocrotalus</i>	White or Rosy Pelican	M/Wv	4
<i>P. philippensis philippensis</i>	Spottedbilled or Grey Pelican	R	4
<i>P.p. crispus</i>	Dalmatian Pelican	Wv	4
Sulidae			4
<i>Sula dactylatra melanops</i>	Masked Booby		4
Phalacrocoracidae			4
<i>Phalacrocorax carbo sinensis</i>	Large Cormorant		4
<i>P. fuscicollis</i>	Indian Shag	R	4
<i>P. niger</i>	Little Cormorant	R	4
<i>Anhinga rufa melanogaster</i>	Darter or Snake bird	R	4
Ciconiiformes			6
Ardeidae			6
<i>Ardea goliath</i>	Giant Heron	V/r	7
<i>A. cinerea cinerea</i>	European Grey Heron	M/Wv	7
<i>A.c. rectirostris</i>	Eastern Grey Heron	R	7
<i>A. purpurea manilensis</i>	Eastern purple Heron	R	7
<i>Butorides striatus chloriceps</i>	Little Green Heron	R	7

	1	2	3	4
<i>Ardeola grayii grayii</i>	Indian Pond Paddy-bird	Heron or Paddy-bird	R	7
<i>Bubulcus ibis coromandus</i>	Cattle Egret		R	7
<i>Egretta alba alba</i>	Large Egret or White Heron	Great ..	W/Sr	7
<i>E.a. modesta</i>	Eastern Large Egret		R	7
<i>E. intermedia intermedia</i>	Smaller or Median Egret		R	7
<i>E. garzetta garzetta</i>	Little Egret		R	7
<i>E. gularis schistacea</i>	Indian Reef Heron		R	7
<i>Nycticorax nycticorax nycticorax</i>	Night Heron		R	7
<i>Dupetor flavicollis flavicollis</i>	Black Bittern		R	7
<i>Botaurus stellaris stellaris</i>	Bittern		M/Wv	7
<i>Ixobrychus minutus minutus</i>	Little Bittern		R	8
<i>I. cinnamomeus</i>	Chestnut Bittern		R	8
<i>I. sinensis</i>	Yellow Bittern		R	8
<b>Ciconiidae</b>				8
<i>Ibis leucocephalus</i>	Painted Stork		R	8
<i>Anastomus oscitans</i>	Openbill Stork		R	8
<i>Ciconia episcopus episcopus</i>	Whitenecked Stork		R	8
<i>C. ciconia ciconia</i>	White Stork		M/Wv	8
<i>C. nigra</i>	Black Stork		M/Wv	8
<i>Xenorhynchus asiaticus asiaticus</i>	Blacknecked Stork		R	8
<i>Leptoptilos dubius</i>	Adjutant Stork		U	8
<b>Threskiornithidae</b>				
<i>Threskiornis melanocephala</i>	White Ibis		R	9
<i>Pseudibis papillosa papillosa</i>	Indian Black Ibis		R	9
<i>Plegadis falcinellus falcinellus</i>	Glossy Ibis		R/Wv	9
<i>Platalea leucorodia major</i>	Spoonbill		R/Wv	9
<b>Phoenicopteridae</b>				9
<i>Phoenicopterus roseus</i>	Flamingo		R	9
<i>Phoeniconaias minor</i>	Lesser Flamingo		U	9
<b>Anseriformes</b>				10
<b>Anatidae</b>				10
<i>Anser albifrons albifrons</i>	White fronted Goose		M/Wv	11

1	2	3	4
<i>A. erythropus</i>	Lesser White fronted Goose	M/Wv	11
<i>A. anser rubrirostris</i>	Eastern Greylag Goose	M/Wv	11
<i>A. indicus</i>	Barheaded Goose	M/Wv	11
<i>Cygnus cygnus</i>	Whooper Swan	W/Sr	11
<i>C. olor</i>	Mute Swan	W/Sr	11
<i>C. columbianus bewickii</i>	Western Whistling Swan	W/Sr	11
<i>Dendrocygna javanica</i>	Lesser Whistling Teal or Tree Duck	R/M	11
<i>D. bicolor</i>	Large Whistling Teal	R	11
<i>Tadorna ferruginea</i>	Ruddy Shelduck	M/Wv	11
<i>T. tadorna</i>	Common Shelduck	Wv/r	11
<i>Anas angustirostris</i>	Marbled Teal	R	12
<i>A. acuta</i>	Pintail	M/Wv	12
<i>A. crecca crecca</i>	Common Teal	M/Wv	12
<i>A. formosa</i>	Baikal Clucking or 'Formosa' Teal	Wv/r	12
<i>A. poecilorhyncha poecilorhyncha</i>	Spotbill Duck	R/M	12
<i>A. platyrhynchos</i>	Mallard	M/Wv	12
<i>A. strepera strepera</i>	Gadwall	M/Wv	12
<i>A. falcata</i>	Falcated Teal	Sr	12
<i>A. penelope</i>	Wigeon	M/Wv	12
<i>A. querquedula</i>	Bluewinged Teal	M/Wv	12
<i>A. clypeata</i>	Shoveller	M/Wv	12
<i>Netta rufina</i>	Redcrested Pochard	Wv	14
<i>Aythya ferina</i>	Common Pochard	M/Wv	14
<i>A. nyroca</i>	White-eyed Pochard	M/Wv	14
<i>A. fuligula</i>	Tufted Duck	M/Wv	14
<i>Nettapus coromandelianus coromandelianus</i>	Cotton Teal	R	14
<i>Sarkidiornis melanotos melanotos</i>	Nakta or Comb Duck	R	14
<i>Clangula hyemalis</i>	Longtail Duck	W/Sr	14
<i>Bucephala clangula clangula</i>	Goldeneye Duck	Wv	14
<i>Mergus albellus</i>	Smew	Wv	14
<i>M. merganser merganser</i>	Common Merganser	Wv	14

1	2	3	4
<i>M. serrator serrator</i> .. ..	Redbreasted Merganser ..	Wv	14
<i>Oxyura leucocephala</i> .. ..	Whiteheaded Stiff-tailed Duck .. ..	Wv	14
<b>Falconiformes</b>			15
<b>Accipitridae</b>			15
<i>Elanus caeruleus vociferus</i> .. ..	Black-winged Kite .. ..	R	17
<i>Pernis ptilorhynchus ruficollis</i> .. ..	Crested Honey Buzzard .. ..	R/M	17
<i>Milvus migrans migrans</i> .. ..	Black Kite .. ..	R/M	16
<i>M. m. govinda</i> .. ..	Pariah Kite .. ..	R	17
<i>M. m. lineatus</i> .. ..	Black-eared Kite .. ..	M/Wv	17
<i>Haliastur indus indus</i> .. ..	Brahminy Kite .. ..	R	17
<i>Accipiter gentilis schvedowi</i> .. ..	Eastern Goshawk .. ..	WV	17
<i>A. badius cenchroides</i> .. ..	Central Asian Shikra .. ..	R	17
<i>A. b. dussumieri</i> .. ..	Indian Shikra .. ..	R	17
<i>A. nisus nisosimilis</i> .. ..	Asiatic Sparrow-Hawk .. ..	Wv	17
<i>A. n. melaschistos</i> .. ..	Indian Sparrow-Hawk .. ..	R	17
<i>Buteo rufinus rufinus</i> .. ..	Long-legged Buzzard .. ..	R	17
<i>Butastur teesa</i> .. ..	White-eyed Buzzard Eagle .. ..	R	17
<i>Spizaetus nipalensis nipalensis</i> .. ..	Hodgson's or Feather-toed Hawk-Eagle .. ..	R	17
<i>Hieraaetus fasciatus fasciatus</i> .. ..	Bonelli's or Slender Hawk-Eagle .. ..	R	17
<i>H. pennatus</i> .. ..	Booted Hawk-Eagle .. ..	R/Wv	17
<i>Aquila chrysaetos daphanea</i> .. ..	Himalayan Golden Eagle .. ..	R	18
<i>A. heliaca heliaca</i> .. ..	Imperial Eagle .. ..	Wv	18
<i>A. rapax vindhiana</i> .. ..	Tawny Eagle .. ..	R	18
<i>A. nipalensis nipalensis</i> .. ..	Eastern Steppe Eagle .. ..	Wv	18
<i>A. clanga</i> .. ..	Greater Spotted Eagle .. ..	R	18
<i>A. pomarina hastata</i> .. ..	Lesser Spotted Eagle .. ..	R	18
<i>ICTINAETUS malayensis penniger</i> .. ..	Black Eagle .. ..	R	17
<i>Haliaeetus albicilla</i> .. ..	Whitetailed Sea Eagle .. ..	Wv/r	18
<i>H. leucoryphus</i> .. ..	Ring-tailed Fishing Eagle .. ..	R/M	18
<i>Torgos calvus</i> .. ..	Black or King Vulture .. ..	R	17
<i>Aegyptius monachus</i> .. ..	Cinereous Vulture .. ..	R/Wv	17

1	2	3	4
<i>Gyps fulvus fulvescens</i> .. .. .	Indian Griffon Vulture ..	R	18
<i>G. himalayensis</i> .. .. .	Himalayan Griffon Vulture	R	18
<i>G. indicus jonesi</i> .. .. .	West Pakistan Long-billed Vulture ..	R	18
<i>G. bengalensis</i> .. .. .	Indian Whitebacked Vulture	R	18
<i>Neophron percnopterus percnopterus</i>	Egyptian Vulture ..	R	18
<i>Gypaetus barbatus aureus</i> .. .. .	Himalayan Bearded Vulture .. ..	R	18
<i>Circus cyaneus cyaneus</i> .. .. .	Hen Harrier .. ..	Wv/PM	19
<i>C. macrourus</i> .. .. .	Pale Harrier .. ..	Wv	19
<i>C. pygargus</i> .. .. .	Montagu's Harrier .. ..	Wv	19
<i>C. aeruginosus aeruginosus</i> .. .. .	Marsh Harrier .. ..	Wv	19
<i>Circaetus gallicus gallicus</i> .. .. .	Short-toed Eagle .. ..	R	18
<i>Spilornis cheela cheela</i> .. .. .	Crested Serpent Eagle .. ..	R	18
<i>Pandion haliaetus haliaetus</i> .. .. .	Osprey .. ..	Wv	18
<b>Falconidae</b>			
<i>Falco biarmicus cherrug</i> .. .. .	Saker or Cherrug Falcon ..	Wv	19
<i>F.b. milvipes</i> .. .. .	Shanghar Falcon .. ..	Wv/r	20
<i>F.b. jugger</i> .. .. .	Laggar Falcon .. ..	R	19
<i>F. peregrinus japonensis</i> .. .. .	Eastern Peregrine Falcon ..	Wv	20
<i>F.p. babylonicus</i> .. .. .	Redcapped or Barbary Falcon .. ..	R/Wv	20
<i>F.p. peregrinator</i> .. .. .	Shaheen Falcon .. ..	R	20
<i>F. subbuteo subbuteo</i> .. .. .	Hobby .. ..	Wv	20
<i>F.s. centralasiae</i> .. .. .	Central Asian Hobby	R/mWv	20
<i>F. columbarius insignis</i> .. .. .	North Asiatic Merlin ..	Wv/r	20
<i>F.c. christianiludovici</i> .. .. .	Pallid Merlin .. ..	WV	20
<i>F. chicquera chicquera</i> .. .. .	Redheaded Merlin .. ..	R	19
<i>F. tinnunculus tinnunculus</i> .. .. .	European Kestrel .. ..	R/Wv	19
<b>Galliformes</b> .. .. .			21
<b>Phasianidae</b>			
<i>Lerwa lerwa</i> .. .. .	Snow Partridge .. ..	R	23
<i>Ammoperdix griseogularis griseogularis</i>	Seesee Partridge .. ..	R	23
<i>Tetrao gallus himalayensis himalayensis</i>	Himalyan Snowcock .. ..	R	23

1	2	3	4
<i>Alectoris chukar koroviakovi</i>	.. Persian Chukor	.. R	23
<i>A.c. pallescens</i>	.. Northern Chukor	.. R	22
<i>A.c. chukar</i>	.. Chukor Partridge	.. R	23
<i>Francolinus francolinus henrici</i>	.. South Persian Black Partridge	.. R	23
<i>F. pondicerianus mecranensis</i>	.. Baluchistan Grey Partridge	.. R	23
<i>F. p. interpositus</i>	.. North Indian Grey Partridge	.. R	23
<i>Coturnix coturnix coturnix</i>	.. Grey Quail	.. R	23
<i>C. coromandelica</i>	.. Blackbreasted or Quail	.. Rain R/M	23
<i>Pedicula asiatica punjaubi</i>	.. Punjab Jungle Quail	.. Bush R	23
<i>Tragopan melanocephalus</i>	.. Westerned Horned Pheasant	.. R	23
<i>Lophophorus impejanus</i>	.. Impeyan or Himalayan Monal Pheasant	.. R	23
<i>Lophura leucomelana hamiltonii</i>	.. Whitecrested Kaleej Pheasant	.. R	23
<i>Gallus gallus murghi</i>	.. Indian Red Jungle fowl	R	23
<i>Pucrasia macrolopha castanea</i>	.. Chestnut-mantled Pheasant	.. Koklas R	23
<i>Catreus wallichii</i>	.. Chir Pheasant	.. R	23
<i>Pavo cristatus</i>	.. Indian Peafowl	.. R	23
<b>Gruiformes</b>			24
<b>Turnicidae</b>			24
<i>Turnix sylvatica dussumier</i>	.. Little Bustard Quail	.. Rv	24
<i>T. tanki tanki</i>	.. Indian Yellowlegged But-ton Quail	.. U	24
<i>T. suscitator taigoor</i>	.. Indian Bustard Quail	.. R	24
<b>Gruidae</b>			24
<i>Grus grus lilfordi</i>	.. Eastern Common Crane	.. Wv	24
<i>. antigone antigone</i>	.. Indian Sarus Crane	.. R	24
<i>G. leucogeranus</i>	.. Siberian or Great White Crane	Wv	24
<i>Anthropoides virgo</i>	.. Demoiselle Crane	APM	24
<b>Rallidae</b>			25
<i>Rallina eurizonoides amauroptera</i>	.. Indian or Slaty-legged Banded Crake	.. R/M	25

1	2	3	4
<i>Porzana parva</i>	.. .. Little Crake	Wv	25
<i>P. porzana</i>	.. .. Spotted Crake	Wv	25
<i>Amaurornis fuscus bakeri</i>	.. .. Northern Ruddy Crake	R	25
<i>A. phoenicurus chinensis</i>	.. .. Chinese White-breasted Waterhen	R	25
<i>Gallicrex cinerea cinerea</i>	.. .. Kora or Watercock	R	25
<i>Gallinula chloropus indica</i>	.. .. Indian Moorhen	.. R	25
<i>Porphyrio porphyrio seistanicus</i>	.. .. Purple Moorhen	.. R/M	26
<i>P. p. poliocephalus</i>	.. .. Indian Purple Moorhen	R/M	26
<i>Fulica atra atra</i>	.. .. Coot	.. R	25
<b>Otididae</b>	.. ..		26
<i>Otis tarda dybowskii</i>	.. .. Great Bustard	.. .. WV/r	26
<i>O. tetrax orientalis</i>	.. .. Eastern Little Bustard	.. Wv	26
<i>Choriotis nigriceps</i>	.. .. Great Indian Bustard	.. Wv	26
<i>Chlamydotis undulata macqueenii</i>	.. .. Houbara Bustard	.. R/Wv	26
<i>Sypheotides indica</i>	.. .. Leekh or Lesser Florican	R	26
<b>Charadriiformes</b>			27
<b>Jacaniidae</b>			27
<i>Hydrophasianus chirurgus</i>	.. .. Pheasant-tailed Jacana	.. R	27
<i>Metopidius indicus</i>	.. .. Bronzewinged Jacana	.. R	27
<b>Haematopodidae</b>			28
<i>Haematopus ostralegus ostralegus</i>	.. .. Oystercatcher or Sea-Pie	.. Wv	28
<b>Charadriidae</b>			28
<b>Charadriinae</b>	.. ..		28
<i>Vanellus leucurus</i>	.. .. Whitetailed Lapwing	.. Wv	28
<i>V. gregarius</i>	.. .. Sociable Lapwing	.. Wv	28
<i>V. vanellus</i>	.. .. Peewit, Lapwing or Green Plover	.. Wv	28
<i>V. indicus indicus</i>	.. .. Redwattled Lapwing	.. R	28
<i>V. malabaricus</i>	.. .. Yellow-wattled Lapwing	.. R	28
<i>Pluvialis squatarola</i>	.. .. Blackbellied or Grey Plover	Wv	29
<i>P. apricaria apricaria</i>	.. .. Golden Plover	.. .. WV	29
<i>P. dominica fulva</i>	.. .. Eastern Golden Plover	Wv	29

1	2	3	4
<i>Charadrius leschenaultii</i>	.. .. Large Sand Plover	.. Wv	29
<i>C. hiaticula tundrae</i>	.. .. Eastern Ringed Plover	.. Wv/r	29
<i>C. dubius curonicus</i>	.. .. European Little Ringed Plover	.. .. R/Wv	29
<i>C. d. jerdoni</i>	.. .. Indian Little Ringed Plover	R	29
<i>C. alexandrinus alexandrinus</i>	.. .. Kentish Plover	.. .. R	29
<i>C. Mongolus atrifrons</i>	.. .. Pamirs Lesser Sand Plover	Wv	29
<b>Scolopacinae</b>			29
<i>Numenius phaeopus phaeopus</i>	.. Whimbrel	.. .. Wv	30
<i>N. arquata arquata</i>	.. .. Curlew	.. .. Wv	30
<i>N. a. orientalis</i>	.. .. Eastern Curlew	.. .. Wv	30
<i>Limosa limosa limosa</i>	.. .. Blacktailed Godwit	.. Wv	30
<i>L. lapponica lapponica</i>	.. .. Bartailed Godwit	.. Wv	30
<i>Tringa erythropus</i>	.. .. Spotted or Dusky Redshank	.. .. Wv	31
<i>T. totanus totanus</i>	.. .. Common Redshank	.. Wv	31
<i>T. t. eurhinus</i>	.. .. Eastern Redshank	.. Wv	31
<i>T. stagnatilis</i>	.. .. Marsh Sandpiper or Little Greenshank	.. .. Wv	31
<i>T. nebularia</i>	.. .. Greenshank	.. .. Wv	31
<i>T. ochropus</i>	.. .. Green Sandpiper	.. Wv	31
<i>T. glareola</i>	.. .. Wood or Spotted Sandpiper	.. .. Wv	31
<i>T. terek</i>	.. .. Terek Sandpiper	.. Wv	31
<i>T. hypoleucos</i>	.. .. Common Sandpiper	.. Wv	31
<i>Arenaria interpres interpres</i>	.. Turnstone	.. .. Wv	32
<i>Capella solitaria solitaria</i>	.. .. Eastern Solitary Snipe	.. U	31
<i>C. stenura</i>	.. .. Pintail Snipe	.. .. Wv	31
<i>C. gallinago gallinago</i>	.. .. Common or Fantail Snipe	Wv	31
<i>C. minima</i>	.. .. Jack Snipe	.. .. Wv	31
<i>C. nemoricola</i>	.. .. Wood Snipe	.. .. R	31
<i>Scolopax rusticola rusticola</i>	.. Woodcock	.. .. R	32
<i>Calidris tenuirostris</i>	.. .. Eastern Knot	.. .. Wv	32
<i>C. albus</i>	.. .. Sanderling	.. .. Wv	32

1	2	3	4
<i>C. minutus</i>	Little Stint	Wv	32
<i>C. temminckii</i>	Temminck's Stint	Wv	32
<i>C. alpinus</i>	Dunlin	Wv	32
<i>C. testaceus</i>	Curlew-Sandpiper	Wv	32
<i>C. canutus canutus</i>	Knot	WV/r	32
<i>Limicola falcinellus falcinellus</i>	Broadbilled Sandpiper	Wv	32
<i>Philomachus pugnax</i>	Ruff	Wv	32
<b>Phalaropinae</b>			32
<i>Phalaropus lobatus</i>	Rednecked Phalarope	Wv	32
<b>Rostratulidae</b>			36
<i>Rostratula benghalensis benghalensis</i>	Painted Snipe	R	36
<b>Recurvirostridae</b>			32
<i>Himantopus himantopus himantopus</i>	Indian Blackwinged Stilt	R	32
<i>Recurvirostra avosetta</i>	Avocet	Wv	32
<i>Ibidorhyncha struthersii</i>	Ibisbill	R	32
<b>Dromadidae</b>			36
<i>Dromas ardeola</i>	Crab Plover	Wv	36
<b>Burhinidae</b>			33
<i>Burhinus oedicnemus saharae</i>	Persian Stone Curlew	R	33
<i>B. o. indicus</i>	Indian Stone Curlew	R	33
<i>Esacus magnirostris recurvirostris</i>	Great Stone Plover	R	33
<b>Glareolidae</b>			33
<i>Cursorius cursor cursor</i>	Creamcoloured or Desert Courser	Wv	33
<i>C. coromandelicus</i>	Indian Courser	R/M	33
<i>Glareola pratincola pratincola</i>	Collared Pratincole	R	34
<i>G. p. maldivarum</i>	Large Indian Pratincole	R	34
<i>G. lactea</i>	Small Indian Pratincole	R	33
<b>Laridae</b>			34
<i>Larus hemprichii</i>	Sooty Gull	Wv	34
<i>L. argentatus heuglini</i>	Yellowlegged Herring Gull	Wv	35
<i>L. a. mongolicus</i>	Pinklegged Herring Gull	Wv	35
<i>L. fuscus fuscus</i>	Lesser Blackbacked Gull	Wv	35

1	2	3	4
<i>L. ichthyaetus</i>	.. .. Great Blackheaded Gull	.. Wv	35
<i>L. brunnicephalus</i>	.. .. Brownheaded Gull	.. Wv	34
<i>L. ridibundus ridibundus</i>	.. .. Blackheaded Gull	.. Wv	34
<i>L. genei</i>	.. .. Slenderbilled Gull	.. R/Wv	34
<i>Chlidonias hybrida indica</i>	.. .. Indian Whiskered Tern	.. Wv/PM	36
<i>Gelochelidon nilotica nilotica</i>	.. .. Gullbilled Tern	.. R	36
<i>Hydroprogne caspia caspia</i>	.. .. Caspian Tern	.. R	36
<i>Sterna aurantia</i>	.. .. Indian River Tern	.. R	35
<i>S. hirundo hirundo</i>	.. .. European Common Tern	Wv	35
<i>S. repressa</i>	.. .. Whitecheeked Tern	.. Wv	35
<i>S. acuticauda</i>	.. .. Blackbellied Tern	.. R	35
<i>S. anaethetus fuligula</i>	.. .. Red Sea Brown-winged Tern	.. ..	35
<i>S. albifrons albifrons</i>	.. .. Little Tern or Ternlet	.. R	36
<i>S. a. saundersi</i>	.. .. Blackshafted Ternlet	.. R	36
<i>S. bergii velox</i>	.. .. Red Sea Large Crested Tern	.. R	35
<i>S. bengalensis bengalensis</i>	.. .. Indian Lesser Crested Tern	.. .. R	35
<i>S. sandvicensis sandvicensis</i>	.. .. Sandwich Tern	.. Wv	35
<i>Rynchops albicollis</i>	.. .. Indian Skimmer or Scissorbill	.. .. R/M	36
<i>Anous stolidus pileatus</i>	.. .. Noddy Tern	.. .. S	36
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<i>Pterocles alchata caudacutus</i>	.. .. Large Pintail Sandgrouse	Wv/PM	37
<i>P. exustus erlangeri</i>	.. .. Indian Sandgrouse	R	37
<i>P. senegallus</i>	.. .. Spotted Sandgrouse	.. Wv	37
<i>P. orientalis orientalis</i>	.. .. Imperial Blackbellied Sandgrouse	.. .. R/Wv	37
<i>P. coronatus atratus</i>	.. .. Coronetted Sandgrouse	.. R	37
<i>P. indicus arabicus</i>	.. .. Closebarred Sandgrouse	R	37
<i>P. i. indicus</i>	.. .. Painted Sandgrouse	.. R/M	37
<b>Columbidae</b>	.. ..		38
<i>Treron phoenicoptera phoenicoptera</i>	Bengal green Pigeon	.. R	39

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<i>C. rupestris turkestanica</i>	.. .. Turkestan Hill Pigeon ..	R	38
<i>C. livia neglecta</i>	.. .. Blue Rock Pigeon ..	R	38
<i>C. eversmanni</i>	.. .. Eastern Stock Pigeon	Wv/PM	38
<i>C. palumbus casiotis</i>	.. .. Eastern Wood Pigeon or Cushat ..	Ew	38
<i>C. hodgsonii</i>	.. .. Speckled Wood Pigeon ..	R	38
<i>Streptopelia turtur arenicola</i>	.. .. Persian Turtle-Dove ..	WV	39
<i>S. orientalis meena</i>	.. .. Western Turtle-Dove ..	R	39
<i>S. decaocto decaocto</i>	.. .. Indian Ring Dove ..	R	39
<i>S. tranquebarica tranquebarica</i>	.. .. Indian Red Turtle-Dove ..	R	38
<i>S. chinensis suratensis</i>	.. .. Indian Spotted Dove ..	R	39
<i>S. senegalensis cambayensis</i>	.. .. Indian little Brown or Senegal Dove ..	R	38
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<i>P. krameri borealis</i>	.. .. Northern Rose-ringed Parakeet ..	R	40
<i>P. cyanocephala bengalensis</i>	.. .. Northern Bossom headed Parakeet ..	R	40
<i>P. himalayana</i>	.. .. Himalayan Slatyheaded Parakeet ..	R	40
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<i>Cuculus sparverioides sparverioides</i>	... Large Hawk—Cuckoo ..	R	41
<i>C. varius varius</i>	.. .. Common Hawk—Cuckoo or Brain-fever Bird ..	R	41
<i>C. micropterus micropterus</i>	.. .. Indian Cuckoo ..	R	41
<i>C. canorus subtelephonus</i>	... Asiatic Cuckoo ..	U	42
<i>C. c. canorus</i>	... Cuckoo ..		42
<i>C. saturatus saturatus</i>	.. .. Himalayan Cuckoo ..	R	41
<i>C. poliocephalus poliocephalus</i>	... Small Cuckoo ..	R	41
<i>Cacomantis merulinus passerinus</i>	... Indian Plaintive Cuckoo ..		42

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<i>Centropus sinensis sinensis</i> ...	Common Crow Pheasant or Coucal ...	... R	42
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<i>O. s. sunia</i> ...	North Indian Scops Owl		44
<i>O. hakkamoena plumipes</i> ...	Punjab Collared Scops Owl	R	44
<i>O. b. deserticolor</i> ...	West Pakistan Collared Scops Owl ...	... R	44
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<i>B. b. hemachalana</i> ...	Himalayan Horned Eagle—Owl ...	... U	44
<i>B. b. bengalensis</i> ...	Indian Great Horned Eagle—Owl ...	... R	44
<i>B. coromandus coromandus</i> ...	Dusky Horned Owl	... R	44
<i>B. zeylonensis leschenaulti</i> ...	Brown Fish Owl	... R	44
<i>Nyctea scandiaca</i> ...	Snowy Owl	... R	44
<i>Claucidium brodiei brodiei</i> ...	Collared Pygmy Owlet	... R	44
<i>G. cuculoides cuculoides</i> ...	West Himalayan Barred Owlet ...	... R	44
<i>Ninox scutulata lugubris</i> ...	Indian Brown Hawk—Owl	R	44
<i>Athene noctua bactriana</i> ...	Hutton's Owlet ...	... R	44
<i>A. brama indica</i> ...	Northern Spotted Owlet	R	44
<i>Strix butleri</i> ...	Hume's Wood Owl	... R	45
<i>S. leptogrammica newarensis</i> ...	Himalayan Brown Wood Owl ...	... R	45
<i>S. aluco biddulphi</i> ...	Scully's Wood Owl	... R	45
<i>S. a. nivicola</i> ...	Himalayan Wood Owl ...	R	45

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<i>A. flammeus flammeus</i>	...	Shorteared Owl	PM	45
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<i>C. europaeus unwinii</i>	...	Hume's European Nightjar	v/PM	46
<i>C. mahrattensis</i>	...	Sykes's or Sind Nightjar	R	46
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<i>Apus melba melba</i>	...	Alpine Swift	Sv/PM	47
<i>A. m. nubifuga</i>	...	Indian Alpine Swift	...	47
<i>A. apus pekinensis</i>	...	Eastern Swift	bv	47
<i>A. pallidus</i>	...	Pale Brown Swift	Wv	47
<i>A. affinis galilejensis</i>	...	Palestine House Swift	R	47
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<i>Alcedo atthis pallasii</i>	..	Central Asian Small Blue Kingfisher	R/M	48
<i>A. a. bengalensis</i>	..	Indian Small Blue Kingfisher	R	48
<i>Halcyon smyrnensis smyrnensis</i>	..	Whitebreasted Kingfisher	R	48
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<i>M. superciliosus persicus</i>	..	Bluecheeked Bee-eater	bv	49
<i>M. philippinus philippinus</i>	..	Bluetailed Bee-eater	R	49
<i>M. orientalis beludschicus</i>	..	Sind Small Green Bee-eater	R	49

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<i>C. benghalensis benghalensis</i> ..	.. Northern Roller or Blue Jay ..	.. R	49
<b>Upupidae</b>			48
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<i>M. asiatica asiatica</i> ..	.. Bluethroated Barbet ..	R	50
<i>M. haemacephala indica</i> ..	.. Crimsonbreasted Barbet or Coppersmith ..	R	50
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<b>Picuminae</b>			52
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<i>P. canus sanguiniceps</i> ..	.. Indian Blacknaped Green Woodpecker ..	R	51
<i>Dinopium benghalense dilutum</i> ..	.. Sind Goldenbacked Woodpecker ..	R	52
<i>Picoides assimilis</i> ..	.. Sind Pied Woodpecker ..	R	51
<i>P. himalayensis albescens</i> ..	.. Kashmir Pied Woodpecker ..	R	51
<i>P. auriceps auriceps</i> ..	.. West Himalayan Brown-fronted Pied Woodpecker ..	R	51

	1	2	3	4
<i>P. macei macei</i>	..	.. Indian Fulvous-breasted Pied Woodpecker	.. R	51
<i>P. mahrattensis mahrattensis</i>	..	.. Yellowfronted Pied or Mahratta Woodpecker	R	51
<i>P. canicapillus mitchellii</i>	..	.. West Himalayan Grey-crowned Pygmy Woodpecker	.. R	52
<i>P. nanus nanus</i>	..	.. Northern Brown-crowned Pygmy Woodpecker	.. R	52
<b>Passeriformes</b>				53
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<i>M. erythroptera sindiana</i>	..	.. Sind Redwinged Bush Lark	.. R	55
<i>Eremopterix grisea</i>	..	.. Ashycrowned Finch-Lark	R	55
<i>E. nigriceps affinis</i>	..	.. Blackcrowned Finch-Lark	R/M	55
<i>Ammomanes deserti phoenicuroides</i>		.. Indian Desert Finch-Lark	R	55
<i>A. phoenicurus zarudnyi</i>	..	.. Persian Rufous-tailed Finch-Lark	.. U	55
<i>A. p. phoenicurus</i>	..	.. Indian Rufous-tailed Finch-Lark	.. R	55
<i>Alaemon alaudipes doriae</i>	..	.. Large Desert Lark	.. R	55
<i>Calandrella cinerea longipennis</i>	..	.. Yarkand Short-toed Lark	Wv	56
<i>C. acutirostris acutirostris</i>	..	.. Karakoram or Hume's Short-toed Lark	.. R/Wv	56
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<i>C. rayta[ adamsi</i>	..	.. Indus Sand Lark	R	56
<i>Melanocorypha bimaculata torquata</i>	..	.. Eastern Calandra Lark	.. Wv	57
<i>Eremophila alpestris albigula</i>	..	.. Pamir Horned Lark	.. R	56
<i>E. a. longirostris</i>	..	.. Longbilled Horned Lark	R	56
<i>Galerida cristata magna</i>	..	.. Baluchistan Crested Lark	.. R	56
<i>G. c. chendoo[</i>	..	.. Indian Crested Lark	.. R	56
<i>G. c. lynesi</i>	..	.. Gilgit Crested Lark	.. R	56
<i>Alauda arvensis dulcivox</i>	..	.. West Siberian Skylark	.. Wv	57
<i>A. a. cantarella</i>	..	.. Caucasian Skylark	.. Wv	57
<i>A. gulgula inconspicua</i>	..	.. Turkestan Small Skylark	R	57

1	2	3	4
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<i>R. paludicola chinensis</i> ... ..	Indian Greythroated Martin ...	... R	57
<i>Hirundo rupestris</i> ... ..	Crag Martin ...	... R	57
<i>H. obsolleta pallida</i> ... ..	Pale Crag Martin	... R	57
<i>H. rustica rustica</i> ... ..	Western Swallow	... R	58
<i>H. smithii filifera</i> ... ..	Indian Wiretailed Swallow	S/b	58
<i>H. fluvicola</i> ... ..	Indian Cliff Swallow	... U	58
<i>H. daurica rufula</i> ... ..	European Striated or Redrumped Swallow	... R/Sv	58
<i>H. d. erythropygia</i> ... ..	Indian Striated or Red- rumped Swallow	... R	58
<i>Delichon urbica urbica</i> ... ..	European House Martin	... U	58
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<i>L. e. homeyeri</i> ... ..	Turkestan Grey Shrike	... V	59
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<i>L. vittatus nargianus</i> ... ..	Baluchistan Baybacked Shrike ...	... R	59
<i>L. v. vittatus</i> ... ..	Indian Baybacked Shrike	... R	59
<i>L. schach erythronotus</i> ... ..	Rufousbacked Shrike	... R	58
<i>L. collurio collurio</i> ... ..	Redbacked Shrike	... APM	59
<i>L. c. phoenicuroides</i> ... ..	Rufous Shrike	... R/APM	59
<i>L. c. isabellinus</i> ... ..	Pale Brown Shrike	... Wv/PM	59
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<i>S. roseus</i>	... Rosy Starling or Rosy Pastor	... Wv	60
<i>S. sturninus</i>	... Daurian Myna	... S	60
<i>S. vulgaris poltaratskyi</i>	... Finsch's or Common Indian Starling	... Wv/PM	60
<i>S. v. nobilior</i>	... Hume's or Afghan Starling	Wv	60
<i>S. v. porphyronotus</i>	... Central Asian Starling	Wv	60
<i>S. v. minor</i>	... Sind Starling	... R	60
<i>S. v. indicus</i>	... Kashmir Starling	... Wv	60
<i>Acridotheres tristis tristis</i>	... Indian Myna	... R	61
<i>A. ginginianus</i>	... Bank Myna	... R	61
<i>A. fuscus fuscus</i>	... Northern Jungle Myna	... R	61
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<i>G. lanceolatus</i>	... Blackthroated Jay	... R	61
<i>Cissa flavirostris cucullata</i>	... Western Yellow-billed Blue Magpie	... R	61
<i>Pica pica bactriana</i>	... Kashmir or White-rumped Magpie	... R	61
<i>Dendrocitta vagabunda bristoli</i>	... Northwestern Tree Pie	... R	61
<i>D. formosae occidentalis</i>	... West Himalayan Tree Pie	R	61
<i>Nucifraga caryocatactes multipunctata</i>	Larger-Spotted Nut-cracker	R	61
<i>Pyrrhocorax graculus digitatus</i>	... Himalayan Yellow-billed or Alpine Chough	... R/M	62
<i>P. pyrrhocorax centralis</i>	... West Himalayan Red-billed Chough	... R	62
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<i>C. frugilegus frugilegus</i>	... Rook	... Wv/PM	62
<i>C. monedula monedula</i>	... Jackdaw	... Wv/PM	62
<i>C. macrorhynchus intermedius</i>	... Himalayan Jungle Crow	... R	62
<i>C. corone orientalis</i>	... Eastern Carrion Crow	... R/Wv	62
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<i>Coracina novaehollandiae nipalensis</i> ...	Himalayan Large Cuckoo-Shrike ...	R	63
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<i>P. l. leucogenys</i> ... ..	Whitecheeked Bulbul ...	R	65
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<i>Chrysomma sinense hypoleucum</i> ... ..	Western Yellow-eyed Babbler ... ..	... R	66
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<i>Panurus biarmicus russicus</i> ... ..	Bearded Tit-Babbler or Reedling ... ..	... AWv	67
<i>Turdoides caudatus huttoni</i> ... ..	Afghan Babbler	... R	66
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<i>G. l. lineatus</i> ... ..	Simla Streaked Laughing Thrush ... ..	... R	67
<i>G. erythrocephalus erythrocephalus</i> ... ..	Redheaded Laughing Thrush ... ..	... R	66
<i>Pteruthius flaviscapis validirostris</i> ... ..	Redwinged Shrike Babbler	R	67
<i>P. xanthochlorus occidentalis</i> ... ..	Western Green Shrike Babbler ... ..	... R	67
<i>Heterophasia capistrata capistrata</i> ... ..	Western Blackcapped Sibia	R	67
<b>Muscicapinae</b>			
<i>Muscicapa striata sarudnyi</i> ... ..	Spotted Flycatcher ... ..	M/Sv	68
<i>M. sibirica gulmergi</i> ... ..	Kashmir Sooty Flycatcher	M	68
<i>M. ruficauda</i> ... ..	Rufoustailed Flycatcher ... ..	M/Sv	68
<i>M. parva parva</i> ... ..	Western Redbreasted Flycatcher ... ..	... M/Wv	68
<i>M. superciljalis superciljalis</i> ... ..	Whitebrowed Flycatcher ... ..	Blue M/Sv	68
<i>M. leucomelanura leucomelanura</i> ... ..	Western Slaty Flycatcher ... ..	Blue M	68
<i>M. sundara whistleri</i> ... ..	Western Rufousbellied Niltava ... ..	... R	68

1	2	3	4
<i>M. thalassina thalassina</i> ...	Verditer Flycatcher ...	M/Sv	68
<i>Culicicapa ceylonensis calochrysea</i> ...	Northern Greyheaded Fly-catcher ...	R/Sv	68
<i>Rhipidura aureola aureola</i> ...	Northern Whitebrowed Fantail Flycatcher ...	R	68
<i>R. albicollis canescens</i> ...	Western Whitethroated Fantail Flycatcher ...	R	68
<b>Monarchinae</b>			73
<i>Terpsiphone paradisi leucogaster</i> ...	West Himalayan Paradise Flycatcher ...	M/Sv	73
<b>Sylviinae</b>			68
<i>Cettia fortipes pallidus</i> ...	Pale Strongfooted Warbler ...	M/Wv	70
<i>C. cetti albiventris</i> ...	Cetti's Warbler ...	M/Wv	70
<i>Bradypterus major major</i> ...	Largebilled Warbler ...	M/Wv	73
<i>Luscinola melanopogon mimica</i> ...	Moustached Sedge Warbler	R/Wv	73
<i>Cisticola juncidis cursitans</i> ...	Streaked Fantail Warbler...	R/M	73
<i>Prinia hodgsonii rufula</i> ...	Northern Ashy-grey Warbler ...	Wren ... R/M	70
<i>P. buehanani</i> ...	Rufousfronted Warbler ...	Wren-Warbler ... R	70
<i>P. gracilis lepida</i> ...	Indian Streaked Warbler ...	Wren-Warbler ... R	70
<i>P. subflava terricolor</i> ...	Northwestern Plain Warbler ...	Wren-Warbler ...	70
<i>P. flaviventris sindiana</i> ...	Sind Yellowbellied Warbler ...	Wren-Warbler ... R	70
<i>P. burnesii burnesii</i> ...	Western Longtailed Warbler ...	Grass-Warbler ... R	70
<i>P. criniger striatula</i> ...	Sind Brown Hill Warbler	R	70
<i>P. c. criniger</i> ...	Himalayan Brown Hill Warbler ...	R	70
<i>Scotocerca inquieta striata</i> ...	Streaked Scrub Warbler ...	R	73
<i>Orthotomus sutorius guzuratus</i> ...	Indian Tailor Bird		73
<i>Locustella naevia straminea</i> ...	Eastern Grasshopper Warbler ...	M/Wv	73
<i>Chaetornis striatus</i> ...	Bristled Grass Warbler ...	R	73
<i>Megalurus palustris toklao</i> ...	Striated Marsh Warbler ...	R	73
<i>Acrocephalus stentoreus brunescens</i> ...	Indian Great Reed Warbler ...	Wv/PM/R	71

1	2	3	4
<i>A. scirpaceus fuscus</i> ... ..	Asian Reed Warbler ...	R/Wv	71
<i>A. dumetorum</i> ... ..	Blyth's Reed Warbler ...	Wv/PM	71
<i>A. agricola agricola</i> ... ..	Indian Paddyfield Warbler	Wv	71
<i>A. a. capistrata</i> ... ..	Northern Paddyfield Warbler ... ..	Wv	71
<i>A. concinens haringtoni</i> ... ..	Kashmir Bluntwinged Paddyfield Warbler ...	S/bv	71
<i>A. arundinaceus zarudnyi</i> ... ..	Great Reed Warbler ...	A	71
<i>Hippolais caligata caligata</i> ... ..	Siberian Booted Tree Warbler ... ..	Wv/PM	71
<i>H. c. rama</i> ... ..	Indian Booted Tree Warbler ... ..	Wv	71
<i>H. languida</i> ... ..	Upcher's Tree Warbler ...	S/bv	71
<i>Sylvia hortensis jerdoni</i> ... ..	Eastern Orphean Warbler	S/bv	71
<i>S. communis icterops</i> .. ..	Indian Whitethroat ..	Sv	71
<i>S. nana nana</i> .. ..	Desert Warbler .. ..	S/bv	72
<i>S. curruca blythi</i> .. ..	Siberian Lesser Whitethroat	Wv	72
<i>S. c. halimodendri</i> .. ..	Kirghiz Lesser Whitethroat	Wv	72
<i>S. c. minula</i> .. ..	Small Whitethroat ..	Wv	72
<i>S. c. althaea</i> .. ..	Hume's Lesser Whitethroat	S/bv	72
<i>S. nisoria</i> .. ..	Barred Warbler ..	PM/r	71
<i>Phylloscopus collybita tristis</i> .. ..	Brown Chiffchaff ..	Wv	73
<i>P. c. collybita</i> .. ..	European Chiffchaff ..	V	73
<i>P. c. sindianus</i> .. ..	Sind Chiffchaff .. ..	S/bv	73
<i>P. neglectus</i> .. ..	Plain Leaf Warbler ..	S/bv	72
<i>P. affinis affinis</i> .. ..	Tickell's Leaf Warbler ..	S/bv	72
<i>P. tytleri</i> .. ..	Tytler's Leaf Warbler ..	S/bv	72
<i>P. griseolus</i> .. ..	Olivaceous Leaf Warbler ..	S/bv	72
<i>P. inornatus humei</i> .. ..	Hume's Yellowbrowed Leaf Warbler .. ..	S/bv	72
<i>P. subviridis</i> .. ..	Brooks's Leaf Warbler ..	S/bv	72
<i>P. proregulus simlaensis</i> .. ..	Western Pallas's Leaf Warbler .. ..	M/Wv	72
<i>P. magnirostris</i> .. ..	Largebilled Leaf Warbler ..	S/bv	73
<i>P. trochiloides viridanus</i> .. ..	Western Greenish Leaf Warbler .. ..	S/bv	73

1	2	3	4
<i>P. t. ludlowi</i> .. ..	Baltistan Greenish Warbler ..	Leaf .. S/bv	73
<i>P. t. nitidus</i> .. ..	Bright Green Leaf Warbler ..	Wv/PM	73
<i>P. occipitalis occipitalis</i> .. ..	Large Crowned Warbler ..	Leaf .. S/bv	73
<i>P. reguloides kashmiriensis</i> .. ..	Small Crowned Leaf Warbler ..	.. R	73
<i>Seicercus xanthoschistos albosuperciliaris</i>	Western Greyheaded Flycatcher-Warbler	.. R	73
<i>Regulus regulus himalayensis</i> ..	Himalayan Goldcrest ..	R	73
<i>Leptopoeile sophiae sophiae</i> ..	Turkestan Tit-Warbler ..	R	73
<b>Turdinae</b>			74
<i>Erythropygia galactotes familiaris</i> ..	Rufous Chat ..	..	75
<i>Erithacus megarhynchos hafizi</i> ..	Persian Nightingale ..	rv	75
<i>E. svecicus svecicus</i> .. ..	Northern Bluethroat ..	Wv	75
<i>E. s. pallidogularis</i> .. ..	Turkestan Bluethroat ..	Wv	75
<i>E. s. abbotti</i> .. ..	Ladakh Bluethroat ..	S/bv	75
<i>E. pectoralis pectoralis</i> .. ..	West Himalayan Rubythroat ..	.. S/bv	75
<i>E. brunneus</i> .. ..	Indian Blue Chat ..	S/bv	75
<i>E. cyanurus pallidior</i> .. ..	Kashmir Redflanked Robin ..	Bush .. M/Wv	75
<i>E. chrysaeus whistleri</i> .. ..	Western Golden Robin ..	Bush .. M/Wv	75
<i>Copsychus saularis saularis</i> .. ..	Indian Magpie-Robin ..	R	81
<i>Phoenicurus erythronotus</i> .. ..	Eversmann's Redstart ..	Wv	76
<i>P. caeruleocephalus</i> .. ..	Blueheaded Redstart ..	Wv	76
<i>P. ochruros phoenicuroides</i> .. ..	Kashmir Black Redstart ..	S/bv	76
<i>P. phoenicurus phoenicurus</i> .. ..	Whitefronted Redstart ..	PM	76
<i>P. frontalis</i> .. ..	Bluefronted Redstart ..	Wv	76
<i>P. erythrogaster grandis</i> .. ..	Guldenstadt's Redstart ..	R	76
<i>Rhyacornis fuliginosus fuliginosus</i> ..	Plumbeous Redstart ..	R	81
<i>Hodgsonius phoenicuroides phoenicuroides</i>	Hodgson's Shortwing or White Bellied Redstart ..	S/bv	81
<i>Enicurus scouleri scouleri</i> .. ..	Little Forktail ..	.. R	76
<i>E. maculatus maculatus</i> .. ..	Western Spotted Forktail ..	R	76

1	2	3	4
<i>Cercomela fusca</i> .. ..	Brown Rock Chat ..	R	81
<i>Saxicola macrorhyncha</i> .. ..	Stoliczka's Bush Chat ..	R	77
<i>S. torquata maura</i> .. ..	West Siberian Collared Bush Chat .. ..	R/Wv	77
<i>S. t. indica</i> .. ..	Indian Collared Bush Chat	S/bv	77
<i>S. leucura</i> .. ..	Whitetailed Bush Chat ..	R	77
<i>S. caprata bicolor</i> ... ..	Northern Pied Bush Chat	S/bv	77
<i>S. ferrea</i> ... ..	Dark-grey Bush Chat ...	R	77
<i>Oenanthe isabellina</i> ... ..	Isabelline Chat ... ..	R/Wv	78
<i>O. xanthopyrmyna kingi</i> ... ..	Redtailed Chat ... ..	Wv	78
<i>O. oenanthe oenanthe</i> ... ..	Wheatear ... ..	S	78
<i>O. finschii barnesi</i> ... ..	Barnes's Chat ... ..	R/Wv	78
<i>O. picata</i> ... ..	Pied Chat ... ..	R/Wv	77
<i>O. deserti oreophila</i> ... ..	Tibetan Desert Wheatear...	Sv/Wv	79
<i>O. d. deserti</i> ... ..	Central Asian Desert Wheatear ... ..	Wv	79
<i>O. monacha</i> ... ..	Hooded Chat ... ..	Wv	87
<i>O. alboniger</i> ... ..	Hume's Chat ... ..	R	77
<i>O. pleschanka pleschanka</i> ... ..	Pleschanka's Chat ... ..	S/bv	78
<i>Chaimarrornis leucocephalus</i> ... ..	Whitecapped Redstart or River Chat ... ..	M	81
<i>Saxicoloides fulvicata cambaiensis</i> .. ..	Brownbacked Indian Robin	R	81
<i>Monticola saxatilis</i> ... ..	Rock Thrush ... ..	APM	79
<i>M. cinclorhynchus</i> ... ..	Blueheaded Rock Thrush...	S/bv	79
<i>M. rufiventris</i> ... ..	Chestnutbellied Rock Thrush ... ..	R	79
<i>M. solitarius langirostris</i> ... ..	Iranian Blue Rock Thrush	Wv	79
<i>M. s. pandoo</i> ... ..	Indian Blue Rock Thrush...	S/bv	79
<i>Myiophonus caeruleus temminckii</i> ... ..	Himalayan Whistling Thrush ... ..	R	79
<i>Zoothera citrina citrina</i> ... ..	Orangeheaded Ground Thrush ... ..	M	79
<i>Z. mollissima whiteheadi</i> ... ..	Western Plainbacked Mountain Thrush ... ..	M	80
<i>Z. dauma dauma</i> ... ..	Smallbilled Mountain Thrush ... ..	M	80
<i>Turdus unicolor</i> ... ..	Tickell's Thrush ... ..	S/bv	80

1	2	3	4
<i>T. bouboul</i> ... ..	Greywinged Blackbird ...	R	80
<i>T. merula intermedius</i> ... ..	Turkestan Blackbird ...	Wv/r	80
<i>T. m. maximus</i> ... ..	Tibetan Blackbird ...	R/M	80
<i>T. rubrocanus rubrocanus</i> ... ..	Western Greyheaded Thrush ...	R	80
<i>T. naumanni eunomus</i> ... ..	Dusky Thrush ...	Wv	80
<i>T. iliacus</i> ... ..	Redwing ...	Wv	80
<i>T. viscivorus bonapartei</i> ... ..	Missel Thrush ...	R	80
<i>T. ruficollis atrogularis</i> ... ..	Blackthroated Thrush ...	R/Wv	81
<i>T. r. ruficollis</i> ... ..	Redthroated Thrush ...	Wv	81
<b>Troglodytidae</b>			81
<i>Troglodytes troglodytes neglectus</i> ... ..	Kashmir Wren ...	R	81
<i>T. t. magrathi</i> ... ..	Magrath's Wren ...	R	81
<b>Cinclidae</b>			81
<i>Cinclus cinclus cashmeriensis</i> ... ..	Whitebreasted Dipper ...	R	81
<i>C. c. leucogaster</i> ... ..	Whitebellied Dipper ...	S	81
<i>C. pallasii tenuirostris</i> ... ..	West Himalayan Brown Dipper ...	R	81
<b>Prunellidae</b>			82
<i>Prunella collaris rufilata</i> ... ..	Turkestan Alpine Accentor ...	R	82
<i>P. rubeculoides</i> ... ..	Robin Accentor... ..	R	82
<i>P. himalayana</i> ... ..	Altai Accentor ...	Wv	82
<i>P. strophciata jerdoni</i> ... ..	Western Rufousbreasted Accentor ...	R	82
<i>P. fulvescens fulvescens</i> ... ..	Turkestan Brown Accentor		82
<i>P. f. ocularis</i> ... ..	Radde's Accentor ...	A	82
<i>P. atrogularis huttoni</i> ... ..	Turkestan Blackthroated Accentor ...	Wv	82
<i>P. a. atrogularis</i> ... ..	Ural Blackthroated Accentor ...	Wv/r	82
<b>Paridae</b>			82
<b>Parinae</b>			83
<i>Parus major ziaratensis</i> ... ..	Baluchistan Grey Tit ...	R	83
<i>P. m. decolorans</i> ... ..	Afghanistan Grey Tit ...	R	83

1	2	3	4
<i>P. m. caschmirensis</i> .. ..	Kashmir Grey Tit	.. R	83
<i>P. monticolus monticolus</i> .. ..	Greenbacked Tit	.. R	83
<i>P. cyanus flavipectus</i> .. ..	Yellowbreasted Blue Tit	S	83
<i>P. c. tianschanicus</i> .. ..	Tien Shan Blue Tit	.. V	83
<i>P. melanolophus</i> .. ..	Crested Black Tit	.. R	83
<i>P. rubidiventris rufonuchalis</i> .. ..	Simla Black Tit	.. R	83
<i>P. xanthogenys xanthogenys</i> .. ..	Northern Yellow-cheeked Tit	.. .. R	83
<b>Remizinae</b>			83
<i>Cephalopyrus flammiceps flammiceps</i> .. ..	Western Firecapped Tit	.. Sv	83
<i>Remiz pendulinus coronatus</i> .. ..	Penduline Tit	.. .. Wv	83
<b>Aegithalinae</b>			84
<i>Aegithalos concinnus iredalei</i> .. ..	Western Redheaded Tit	.. R	84
<i>A. leucogenys</i> .. ..	Whitecheeked Tit	.. R	84
<i>A. niveogularis</i> .. ..	Whitethroated Tit	.. R	84
<b>Sittidae</b>			84
<b>Sittinae</b>			84
<i>Sitta europaea cashmirensis</i> .. ..	Kashmir Nuthatch	.. R	84
<i>S. leucopsis leucopsis</i> .. ..	Western White-cheeked Nuthatch	.. .. R	84
<i>S. tephronota tephronota</i> .. ..	Eastern Rock Nuthatch	.. R	84
<b>Tichodromadinae</b>			84
<i>Tichodroma muraria nepalensis</i> .. ..	Wall Creeper	.. .. R	84
<b>Certhiidae</b>			84
<i>Certhia familiaris hodgsoni</i> .. ..	Kashmir Tree Creeper	.. R	84
<i>C. himalayana limes</i> .. ..	West Himalayan Tree Creeper	.. .. M	84
<b>Motacillidae</b>			85
<i>Anthus trivialis trivialis</i> .. ..	European Tree Pipit	.. Wv	85
<i>A. t. haringtoni</i> .. ..	Witherby's Tree Pipit	.. S/bv	85
<i>A. pratensis</i> .. ..	Meadow Pipit	.. .. Wv/r	85
<i>A. novaeseelandiae richardi</i> .. ..	Richard's Pipit	.. .. EWv	86
<i>A. n. waiti</i> .. ..	Northwestern Paddyfield Pipit	.. .. R	86

1	2	3	4
<i>A. campestris campestris</i> .. ..	Tawny Pipit .. ..	Wv	85
<i>A. cervinus</i> .. ..	Redthroated Pipit .. ..	PM/r	85
<i>A. roseatus</i> .. ..	Vinaceous breasted Pipit .. ..	S/bv	85
<i>A. similis decaptus</i> .. ..	Persian Rock Pipit .. ..	S/bv	86
<i>A. s. jerdoni</i> .. ..	Brown Rock Pipit .. ..	S/bv/R	86
<i>A. spinoletta coutellii</i> .. ..	Central Asian Water Pipit	Wv	86
<i>A. s. japonicus</i> .. ..	Japanese Water Pipit .. ..	Wv	86
<i>A. sylvanus</i> .. ..	Upland Pipit .. ..	R	85
<i>Motacilla flava thumbergi</i> .. ..	Greyheaded Yellow Wagtail .. ..	Wv	87
<i>M. f. beema</i> .. ..	Blueheaded Yellow Wagtail .. ..	Wv	87
<i>M. f. melanogrisea</i> .. ..	Turkestan Blackheaded Wagtail .. ..	Wv	86
<i>M. f. leucocephala</i> .. ..	Whiteheaded Yellow Wagtail .. ..	PM/Wv	86
<i>M. citreola citreola</i> .. ..	Northern Yellowheaded Wagtail .. ..	Wv	87
<i>M. c. werae</i> .. ..	Western Yellowheaded Wagtail .. ..	Wv	87
<i>M. c. calcarata</i> .. ..	Blackbacked Yellowheaded Wagtail .. ..	S/bv	87
<i>M. caspica caspica</i> .. ..	Grey Wagtail .. ..	S/bv	86
<i>M. alba dukhunensis</i> .. ..	Indian White Wagtail .. ..	Wv	87
<i>M. a. personata</i> .. ..	Masked Wagtail .. ..	S/bv/M	87
<i>M. a. alboides</i> .. ..	Hodgson's Pied Wagtail .. ..	S/bv	87
<i>M. maderaspatensis</i> .. ..	Large Pied Wagtail .. ..	R	86
<b>Dicaeidae</b>			87
<i>Dicaeum agile agile</i> .. ..	Indian Thickbilled Flowerpecker .. ..	R	87
<b>Nectariniidae</b>			87
<i>Nectarinia asiatica brevirostris</i> .. ..	Sind Purple Sunbird .. ..	M	87
<b>Zosteropidae</b>			87
<i>Zosterops palpebrosa palpebrosa</i> .. ..	Indian White-eye .. ..	R	87
<b>Ploceidae</b>			87
<b>Passerinae</b>			88
<i>Passer domesticus indicus</i> .. ..	Indian House Sparrow .. ..	R	88

1	2	3	4
<i>P. d. parkini</i> .. ..	Kashmir House Sparrow	R/M	89
<i>P. d. bactrianus</i> .. ..	Turkestan House Sparrow	Wv	89
<i>P. hispaniolensis transcaspicus</i> ..	Spanish Sparrow ..	Wv/PM	88
<i>P. montanus dilutus</i> .. ..	Afghan Tree Sparrow ..	R	88
<i>P. pyrrhonotus</i> .. ..	Sind Jungle Sparrow ..	R	88
<i>P. rutilans cinnamomeus</i> .. ..	Himalayan Cinnamon Tree Sparrow .. ..	R	88
<i>P. moabiticus yatii</i> .. ..	Afghan Scrub Sparrow ..	Wv	88
<i>Petronia xanthocollis transfuga</i> ..	Sind Yellow throated Sparrow .. ..	R	89
<i>P. petronia intermedia</i> .. ..	Rock Sparrow .. ..	Wv	89
<b>Ploceinae</b>			89
<i>Ploceus philippinus philippinus</i> ..	Indian Baya .. ..	R	89
<i>P. benghalensis</i> .. ..	Blackthroated Weaver Bird	R	89
<i>P. manyar flaviceps</i> .. ..	Indian Streaked Weaver Bird .. ..	R	89
<b>Estrildinae</b>			89
<i>Estrilda amandava amandava</i> ..	Red Munia or Avadavat ..	R	89
<i>Lonchura malabarica malabarica</i> ..	Whitethroated Munia ..	R	89
<b>Fringillidae</b>			90
<b>Coccothraustinae</b>			90
<i>Coccothraustes coccothraustes humii</i> ..	Hawfinch .. ..	Wv	90
<i>Mycerobas icterioides</i> .. ..	Black and Yellow Grosbeak .. ..	R	90
<i>M. affinis</i> .. ..	Allied Grosbeak ..	R	90
<i>M. carnipes speculigerus</i> .. ..	Persian Whitewinged Grosbeak .. ..	R	91
<i>M. c. carnipes</i> .. ..	Himalayan Whitewinged Grosbeak .. ..	R	91
<i>M. melanozanthos</i> .. ..	Spotted Grosbeak ..	R	90
<b>Fringillinae</b>			91
<i>Carduelis carduelis major</i> .. ..	Siberian Goldfinch ..	Wv/r	91
<i>C. c. subulata</i> .. ..	Central Asian Goldfinch ..	Wv/r	92
<i>C. c. caniceps</i> .. ..	Greyheaded Goldfinch ..	R	92
<i>C. spinoides spinoides</i> .. ..	Himalayan Greenfinch ..	S/bv	91

1	2	3	4
<i>Acanthis cannabina bella</i> .. ..	Eastern Linnet .. ..	Wv	92
<i>A. flavirostris montanella</i> .. ..	Stoliczka's Twite .. ..	R	92
<i>Callacanthis burtoni</i> .. ..	Redbrowed Finch .. ..	R	92
<i>Serinus pusillus</i> .. ..	Goldfronted Finch .. ..	R	92
<i>Leucosticte nemoricola altaica</i> .. ..	Western Plaincoloured Mountain Finch .. ..	R	92
<i>L. brandti brandti</i> .. ..	Brandt's Mountain Finch .. ..	S	92
<i>L. b. pamirensis</i> .. ..	Pamirs Mountain Finch .. ..	Wv	92
<i>L. b. haematopygia</i> .. ..	Himalayan Mountain Finch .. ..	R	92
<i>Rhodopechys githaginea crassirostris</i> .. ..	Trumpeter Bullfinch .. ..	R	92
<i>R. mongolica</i> .. ..	Mongolian Desert Finch .. ..	Wv	92
<i>R. obsoleta</i> .. ..	Lichtenstein's Desert Finch .. ..	R	92
<i>R. sanguinea sanguinea</i> .. ..	Crimsonwinged Desert Finch .. ..	U	92
<i>Carpodacus erythrurus ferghanensis</i> .. ..	Turkestan Rosefinch .. ..	S/bv	93
<i>C. rhodochrous</i> .. ..	Pinkbrowed Rosefinch .. ..	R	93
<i>C. rhodochlams grandis</i> .. ..	Redmantled Rosefinch .. ..	R	93
<i>C. thura blythi</i> .. ..	Kashmir Whitebrowed Rosefinch .. ..	R	93
<i>C. rubicillasevertzovi</i> .. ..	Great Rosefinch .. ..	R	93
<i>C. puniceus humii</i> .. ..	Western Redbreasted Rosefinch .. ..	R	93
<i>Pyrrhula aurantiaca</i> .. ..	Orange Bullfinch .. ..	R	93
<i>Fringilla coelebs coelebs</i> .. ..	Chaffinch .. ..	Wv/r	93
<i>F. montifringilla</i> .. ..	Brambling .. ..	Wv/PM	93
<b>Emberizidae</b>			93
<i>Emberiza calandra</i> .. ..	Corn Bunting .. ..	WV	94
<i>E. leucocephala leucocephala</i> .. ..	Pine Bunting .. ..	Wv	94
<i>E. melanocephala</i> .. ..	Blackheaded Bunting .. ..	Wv	95
<i>E. bruniceps</i> .. ..	Redheaded Bunting .. ..	R/Wv	95
<i>E. rutila</i> .. ..	Chestnut Bunting .. ..	Wv/r	94
<i>E. stewarti</i> .. ..	Whitecapped Bunting .. ..	S/bv	94
<i>E. hortulana</i> .. ..	Ortolan Bunting .. ..	V	94

1	2	3	4
<i>E. buchanani buchanani</i> .. .. .	Greynecked Bunting ..	r/S/bv	94
<i>E. cia par</i> .. .. .	Transcaspian Rock Bunting	S/bv	95
<i>E. c. stracheyi</i> .. .. .	Himalayan Rock Bunting..	R	95
<i>E. fucata arcuata</i> .. .. .	Indian Greyheaded Bunting ..	R	94
<i>E. striolata striolata</i> .. .. .	Striolated Bunting ..	R	94
<i>E. schoeniclus pallidior</i> .. .. .	Central Asian Reed Bunting ..	Wv	94
<i>E. aureola aureola</i> .. .. .	Yellowbreasted Bunting ..	Wv/r	94
<i>Melophus lathamii</i> .. .. .	Crested Bunting ..	R	95

## EXPLANATION OF ABBREVIATIONS


M/Wv	—	Migratory, Winter visitor
R	—	Resident
Wv/r	—	Rare winter visitor
V/r	—	Rare vagrant
PM/r	—	Rare passage migrant
S/bv	—	Summer (breeding) visitor
S/bv/R	—	Summer (breeding) visitor and partly resident
S/bv/M	—	Summer (breeding) visitor and partial migrant
M	—	Partial migrant
W/Sr	—	Rare winter straggler
U	—	Uncertain
R/Wv	—	Partly resident, partly winter visitor
R/M	—	Partly migratory
WV	—	Winter vagrant
Wv/PM	—	Winter visitor, passage migrant
R/mWv	—	Partly resident, mainly winter visitor
Rv	—	Rains visitor
AM	—	Autumn migrant
WV/r	—	Rare winter vagrant
R	—	Said to be resident
r	—	Rare
S	—	Straggler
Ew	—	Erratic wanderer
WS/Sv	—	Winter straggler, summer visitor
Sv/PM	—	Summer visitor and passage migrant
AWv	—	Accidental winter visitor
rv	—	Rare visitor
APM	—	Autumn passage migrant
A	—	Accidental
EWv	—	Erratic winter visitor
V	—	Vagrant
M/Sv	—	Migrant, summer visitor
R/Sv	—	Resident or summer visitor
EWV	—	Erratic winter vagrant
PV	—	Passage vagrant
bv	—	Breeding visitor

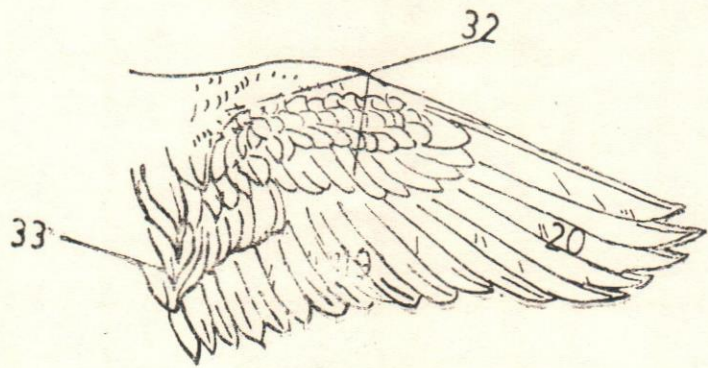
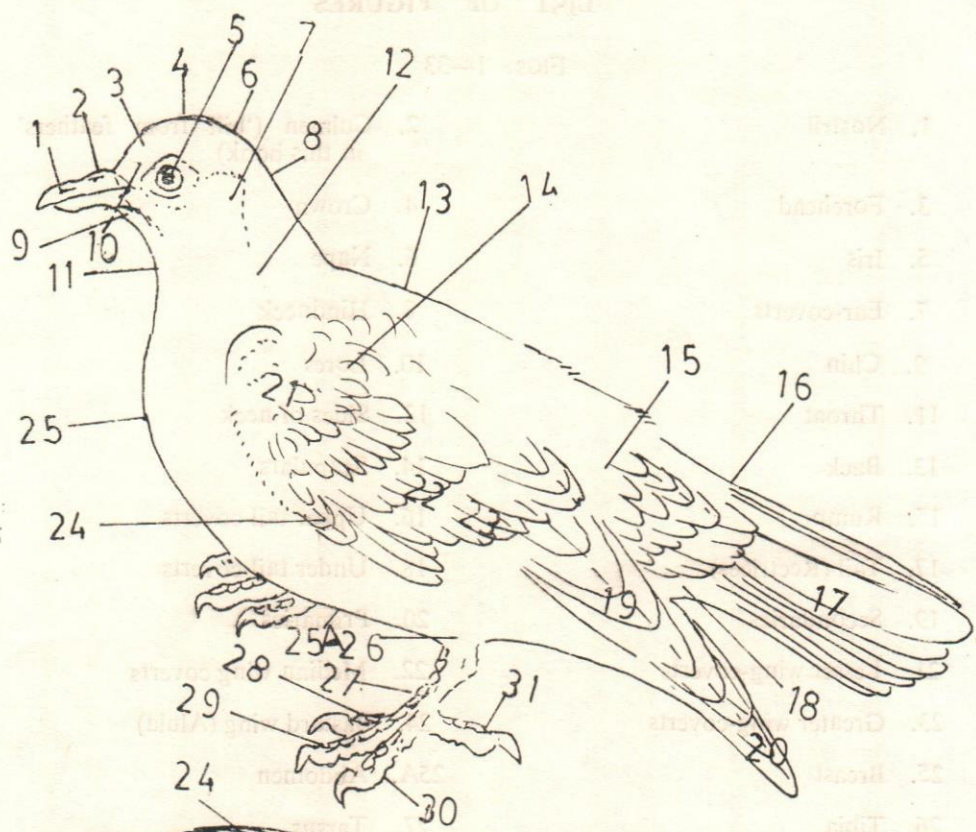
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## LIST OF FIGURES

FIGS. 1—33

- |                          |  |
|--------------------------|--|
| 1. Nostril               | 2. Culmen ('bill from feathers'<br>in this book) |
| 3. Forehead              | 4. Crown   |
| 5. Iris                  | 6. Nape  |
| 7. Ear-coverts           | 8. Hindneck                                      |
| 9. Chin                  | 10. Lores  |
| 11. Throat               | 12. Sides of neck                                |
| 13. Back                 | 14. Scapulars                                    |
| 15. Rump                 | 16. Upper tail-coverts                           |
| 17. Tail (Rectrices)     | 18. Under tail-coverts                           |
| 19. Secondaries          | 20. Primaries                                    |
| 21. Lesser wing-coverts  | 22. Median wing coverts                          |
| 23. Greater wing-coverts | 24. Bastard wing (Alula)                         |
| 25. Breast               | 25A. Abdomen                                     |
| 26. Tibia                | 27. Tarsus                                       |
| 28. Inner toe            | 29. Middle toe                                   |
| 30. Outer toe            | 31. Hind toe (Hallux)                            |
| 32. Under wing-coverts   | 33. Axillaries                                   |
- 



34. Toes of Gull, showing completely webbed front toes, three directed forward and small hind toe above the level of front toes.
35. Toes of Crow, showing unwebbed toes.
36. Toes of Cormorant, showing four forward directed front toes.
37. Toes of Egret, showing partly webbed front toes, web uniting middle and outer toes.
38. Toes of Grebe, showing front toes with separate lateral lobes.
39. Toes of Mallard, showing front toes with interdigital web upto the tip of digits and hind toe narrowly lobed.
40. Toes of Sparrow-Hawk, showing hind toe at the level of front toes.
41. Toes of Courser, showing absence of hind toe.
42. Toes of Woodpecker, showing zygodactylous toes. (Two toes in front and two behind).
43. Toes of Blue Jay, showing syndactylous toes. (Two toes III & IV partly united).
44. Toes of Swift, showing pamprodactylous toes. (All the four toes in front).
45. Leg of House Martin, showing tarsus and toes feathered.
46. Leg of Short-toed Eagle, showing tarsus with small illdefined hexagonal scales.
47. Leg of Fowl, showing tibiotarsal spur.
48. Toes of Desert Lark, showing blunt claws.
49. Toes of Jacana, showing web uniting front toes at the base only.
50. Toes of Crow-Pheasant, showing lengthened and straight claw.
51. Toes of Richard's Pipit, showing hind claw exceeding hind toe.
52. Toes of Tree Pipit, showing hind claw not exceeding hind toe.
53. Toes of Tree Creeper, showing curved claws.
54. Leg of Buzzard Eagle, showing tarsus with hexagonal scales.
55. Toes of Barn Owl, showing middle claw pectinate.
56. Toes of Common Pochard, showing hind toe broadly lobed.
57. Leg of Sand Martin, showing tarsus with a tuft of feather.
58. Leg of longlegged Buzzard, showing tarsus scutellated behind.

## FIGS. 59—84

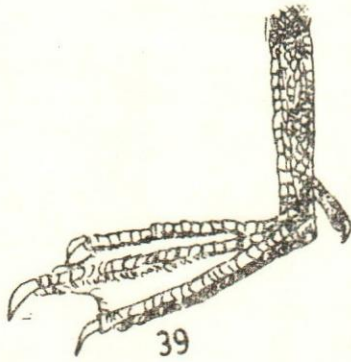
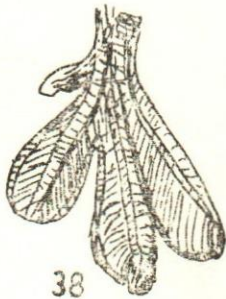
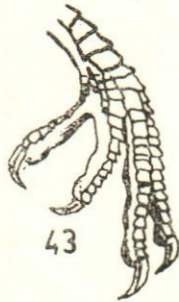
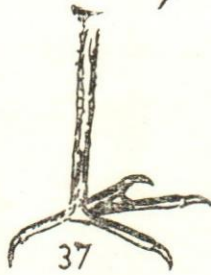
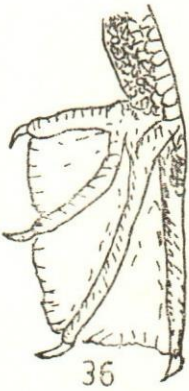
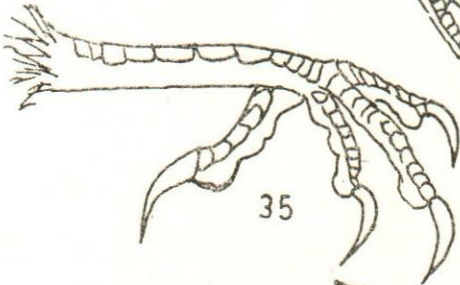
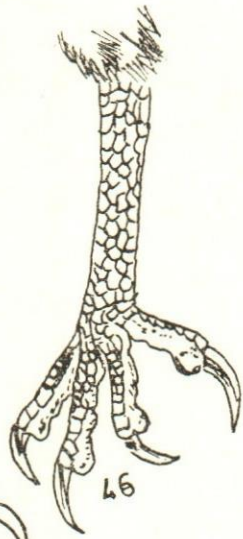
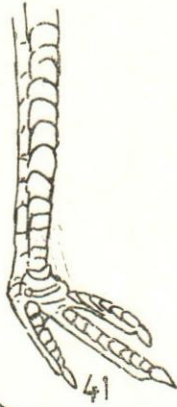
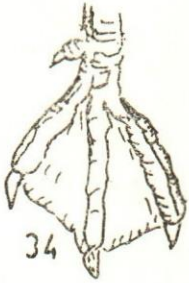
59. Tarsus of Swan, showing reticulated tarsus.
60. Tarsus of Duck, showing partially scutellated tarsus.
61. Toes of Coot, showing toes with fringe into lobes.
62. Head of Falcated Teal, showing nuchal crest.
63. Bill of Laggar Falcon, showing toothed upper mandible and rounded nostrils.
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76. Bill of Pied Woodpecker, showing nostrils concealed by feathers.
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78. Head of Fowl, showing crown with erect comb.
79. Head of Purple Moorhen, showing frontal shield.
80. Bill of Goose, showing bill convex and narrowed.
81. Bill of Jungle Crow, showing thick bill, upper mandible more curved, ridge of culmen flat, not covered with bristles at base and nostrils completely concealed by bristles.
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83. Head of Grass Warbler, showing rictal bristles, arranged vertically.
84. Bill of Shikra, showing horizontal and oval nostrils.

## FIGS. 85—107

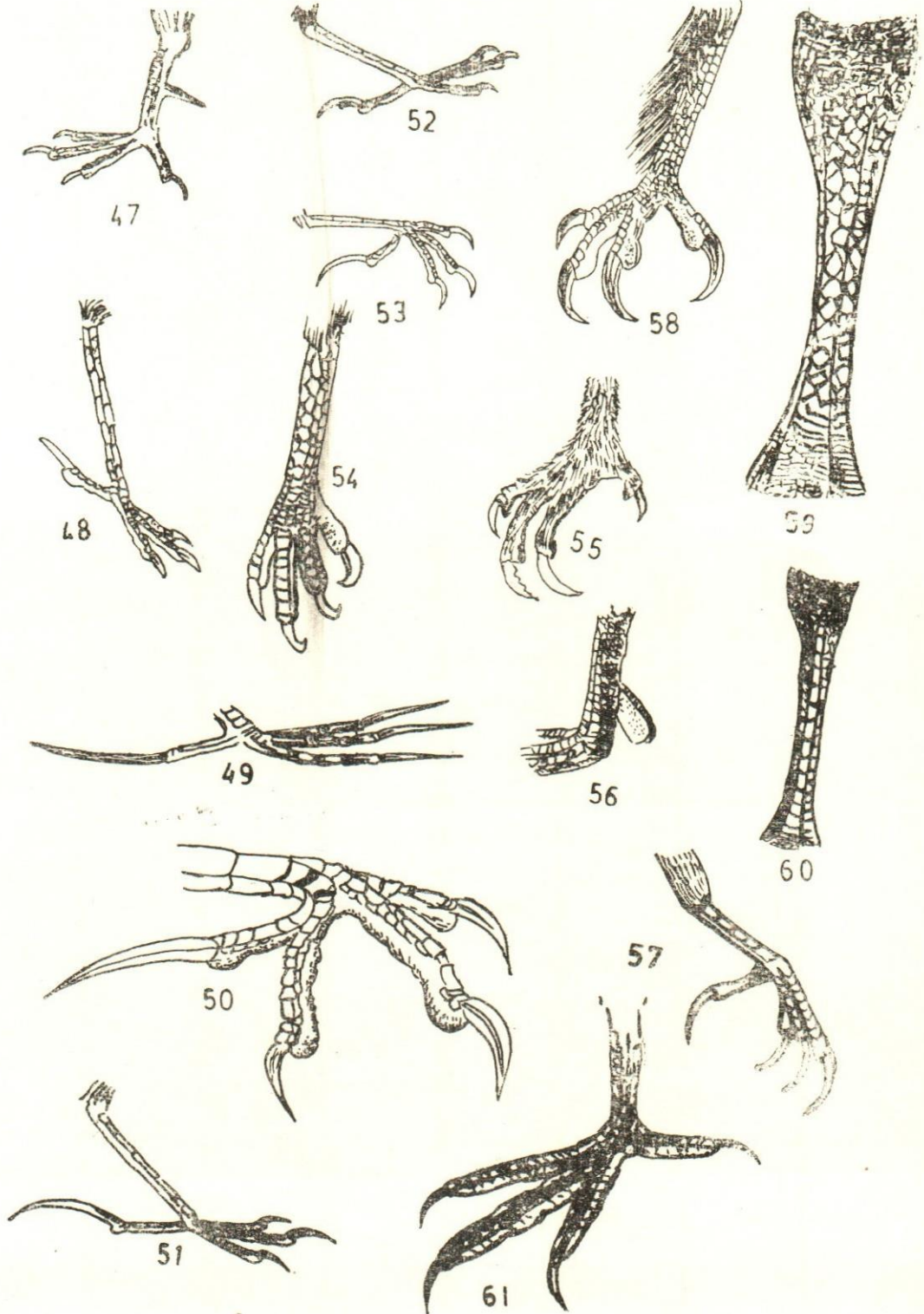
85. Bill of Blackwinged Kite, showing upper mandible deeply hooked at tip and aquiline bill.
86. Bill of Wryneck, showing nostrils covered partially by a membrane.
87. Bill of Wood Pigeon, showing basal portion of upper mandible covered with a cere or soft skin.
88. Bill of Smew, showing saw-like teeth on edges of both mandibles.
89. Head of Horned Lark, showing a tuft of narrow feathers on each side of crown and nostrils concealed by plumelets.
90. Bill of Brambling, showing conical and straight bill, and cutting edges of both mandibles in contact everywhere.
91. Bill of Pied Crested Cuckoo, showing upper mandible slightly curved, not hooked and crest.
92. Bill of Bluewinged Teal, showing flat and broad bill.
93. Bill of openbill Stork, showing gape between both mandibles.
94. Bill of Bearded Vulture, showing nostrils concealed by long bristles and a tuft of bristles on chin.
95. Head of Collared Scops Owl, showing ear tufts.
96. Bill of Grey Hornbill, showing bill with a dorsal casque.
97. Bill of Spottedwinged Grosbeak, showing upper mandible toothed near gape.
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104. Bill of Great Reed Warbler, showing rectal bristles arranged horizontally.
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107. Bill of Rock Sparrow, showing nostrils near culmen.

## FIGS. 108—123

108. Wing of Pale Harrier, showing outer webs of 2nd 3rd and 4th primaries notched.
109. Wing of Hen Harrier, showing outer webs of 2nd to 5th primaries notched.
110. Wing of Blyth's Reed Warbler, showing first primary less than one third of the length of second outer web of 3rd and 4th primaries emarginate and notch on inner web of 3rd primary arising at a point between length of 8th primary.
111. Wing of Paddyfield Warbler, showing length of 2nd primary between 5th and 8th.
112. Wing of Asian Reed Warbler, showing outer web of 3rd primary only emarginate.
113. Wing of Moustached Sedge Warbler, showing first primary more than one-third of the second, or less than half the length of second.
114. Wing of Green Leaf Warbler, showing first primary less than one-third of second and second primary shorter than 8th.
115. Wing of Great Reed Warbler, showing second primary longer than fifth.
116. Tail of Rufous Chat, showing graduated tail.
117. Tail of Redrumped Swallow, showing central tail feathers elongated.
118. Tail of Asian Grasshopper Warbler showing rounded tail.
119. Tail of Bluecheeked Bee-eater, showing central tail feathers or rectrices elongated.
120. Tail of Blueheaded Redstart, showing square tail.
121. Tail of Whitebacked Munia, showing central tail feathers narrow and pointed.
122. Tail of Green Munia, showing central tail-feathers broad and rounded.
123. Tail of Drongo or King Crow, showing forked tail.









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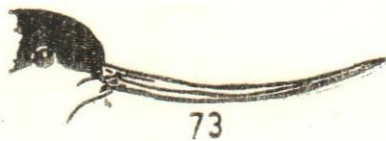
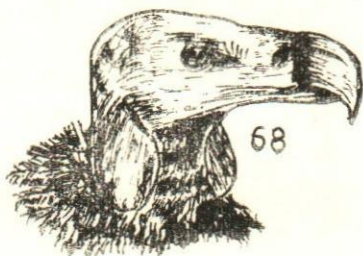
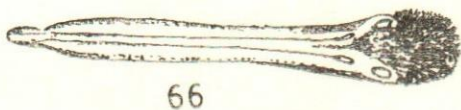
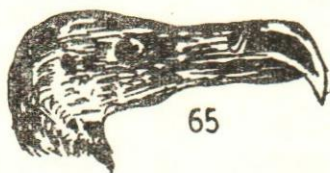
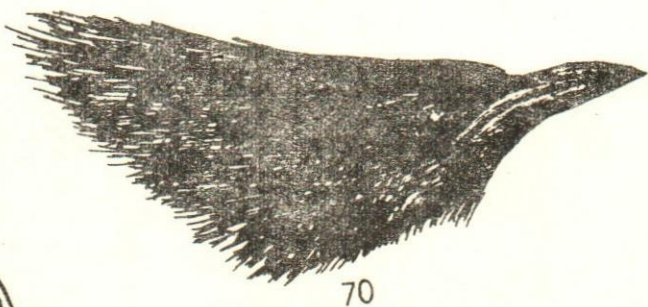
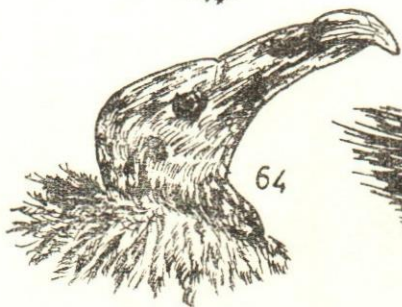
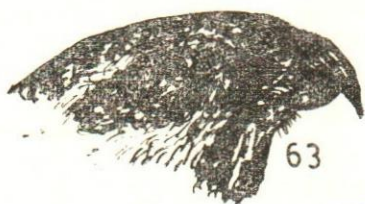
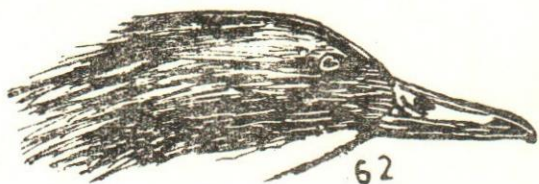
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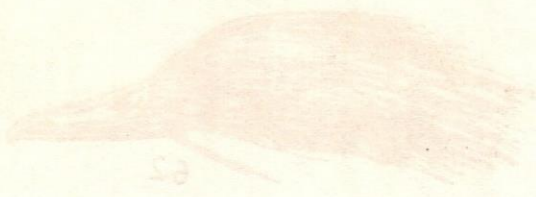


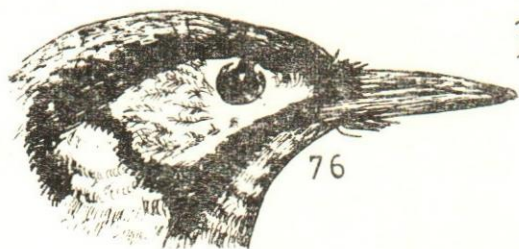
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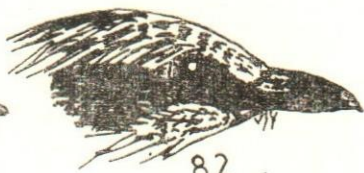
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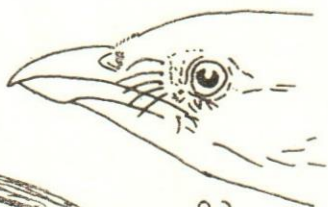
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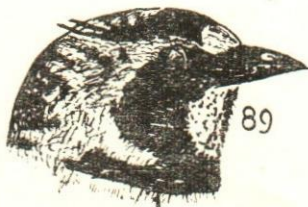
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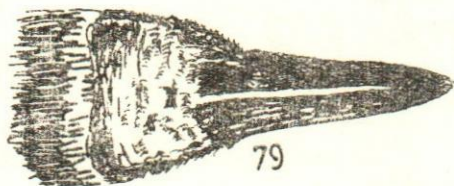
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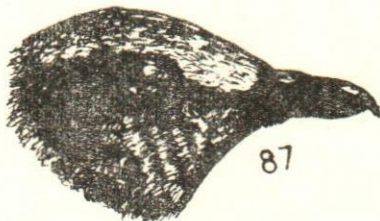
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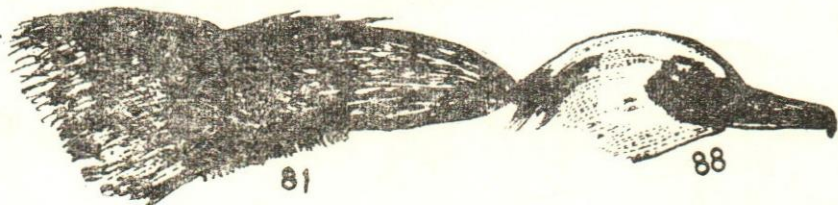
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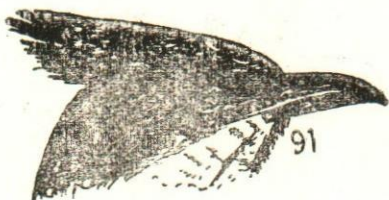
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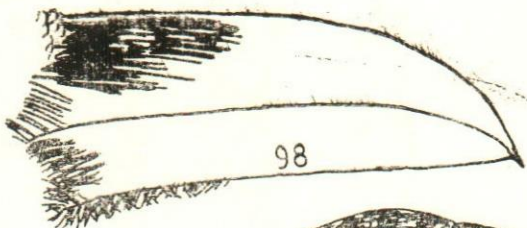
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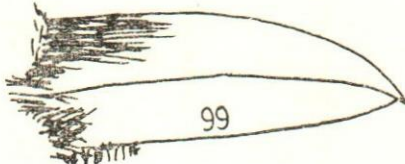
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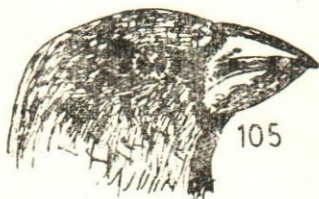
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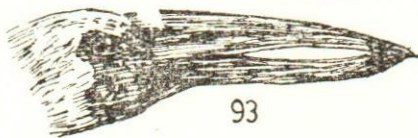
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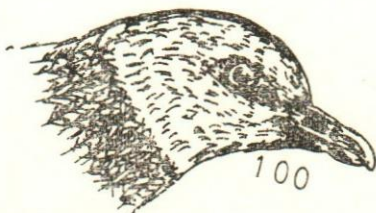
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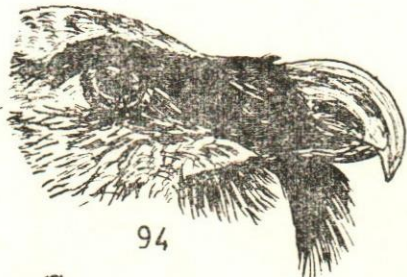
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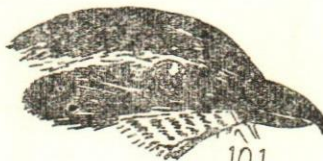
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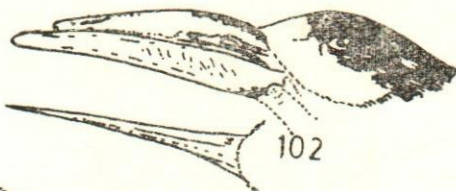
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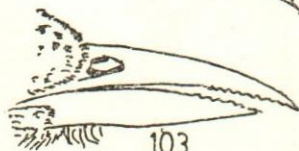
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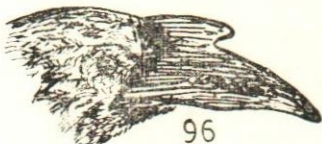
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