

## NOTES ON TWO COLLECTIONS OF BIRDS FROM SEISTAN

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In the years 1903-05 a small collection of birds numbering 106 specimens was made by Mr. J W N. Cumming and other members of the Seistan Arbitration Commission and has been described by him in *Journ. Bombay Nat. Hist. Soc.* XVI, pp. 686-699 (1905). Another, consisting of only 31 specimens, was obtained by Dr. N. Annandale and Mr. S. W. Kemp on their recent visit to Seistan. Both these collections belong to the Indian Museum. As it was throughout advisable that the specimens should be named after comparison with the magnificent material available in the British Museum, especially with that in the Hume collection, the Director of the Zoological Survey of India kindly sent me the birds to work out

The results show that the collection of 137 specimens contain examples of 79 species all of which belong to the Indian avifauna with the exception of *Sylvia mystacea* and *Passer moabiticus yatii*.

The geographical affinities are Indo-Palaeartic, the races of resident birds nearly all belonging to the Palaeartic rather than to the Indian forms; for instance *Corvus cornix sharpii*, *Corvus frugilegus tschusii*, *Coracias garrula semenowi*, *Falco aesalon insignis*. On the other hand a few sub-species, apparently resident, are typically tropical Indian, such as *Gallinula chleropus parvifrons*.

As many recent alterations in names have been made since Blanford's time, owing to discoveries by ornithologists of earlier names having priority, etc., it has been thought advisable to add in brackets the number of the bird according to Oates and Blanford's Avifauna. This will it is hoped facilitate recognition by those field workers who might otherwise be puzzled.

The field-notes in brackets over the initials *N. A.* have been added by Dr. Annandale.

[The birds of Seistan, as might be expected from the peculiar conformation of the country, are, with few noteworthy exceptions, either water-birds or desert-birds. As our work in Seistan was chiefly connected with water and occupied only a few weeks in the middle of winter, such observations as we made on bird-life were necessarily meagre and concerned only the birds of the Hamun-i-Helmand, for a brief account of which the Geographical Introduction to this volume may be consulted. Thirty-four of the seventy-nine races and species enumerated by Mr. Baker may be classed as water-birds. What struck us most in a general way about these birds was their enormous numbers and the apparent paucity of food for them. Nevertheless, both ducks and the wading-birds

were exceptionally fat. We watched large flocks of the Black-tailed Godwit and other species continually grubbing in the mud where we ourselves found no living thing. An examination of their stomach-contents proved that they were feeding on the seeds of water-plants, which were doubtless lying ready to sprout when the flood-season began.

Water-birds, especially the Coot and the Gray Lag Goose (of which no specimens were preserved) play an important part in the economy of the Saiyad or Hunters, a peculiar almost outcaste tribe, who live on the shores of the Hamun in primitive reed-huts and navigate its reed-beds in skiff-like rafts (*tutin*) of bulrush leaves.

In winter the most abundant and conspicuous birds in Seistan peculiar neither to the desert nor to the lake is the Rook. Enormous flocks, so large that we frequently mistook them for clouds in the distance, fly about the country at this season and settle on the ground in open spaces, often among tamarisk bushes round small pools in the desert. What they get to eat is a mystery. We were told that these flocks arrived about October and were popularly believed to eat up the "Hamun fly," a blood-sucking fly (? *Tabanus* or *Haematopota*) that spreads surra among camels and horses. It is quite possible that the birds do devour these insects, but it is also probable that their arrival coincides with the close of the flies' season of aerial life. *N.A.*]

### 1. *Corvus cornix sharpii* Oates. (6).

1905. *Corvus cornix*, Cumming, *op. cit.*, p. 686.

♂. No. 24685; Rudbar, R. Helmand, Feb. 03.

♀ ,, 25492; Lab-i-Baring, *ca.* 1600 ft., 15.12.18.

### 2. *Corvus frugilegus tschusii* Hartert. (5).

1905. *Corvus frugilegus*, Cumming, *op. cit.*, p. 686.

♀ No. 24707; Nad-i-Ali on the Helmand, 13.3.05.

♀ ,, 24881; Kuhak, 20.3.05.

♂ ,, 25469; Lab-i-Baring, *ca.* 1600 ft., 15.12.18.

♂ ,, 25470; ,, ,, 15.12.18.

Of these Rooks the first two specimens have nearly completed their facial moult but still have all the nareal bristles present; No. 3 has the face quite bare whilst the fourth is a young bird with the face fully feathered. [See notes at end of introduction. *N.A.*]

### 3. *Argya caudata huttoni* (Blyth). (105).

1905. *Argya caudata*, Cumming, *op. cit.*, p. 686.

♂ No. 24880; Kuhak, 26.4.05.

This is a typical *huttoni* in appearance but is a very small bird with a wing of only 83 mm. The striae on the breast are almost obsolete.

4. **Tichodroma muraria** (Linn.). (348).

1905. *Tichodroma muraria*, Cumming, *op. cit.*, p. 686.  
 ♀ No. 24877; Peshawaran, 20.12.06.

5. **Sylvia mystacea** (Ménétr.).

1905. *Sylvia jerdoni*, Cumming, *op. cit.*, p. 687.  
 ♂ No. 24883; Kuhak, 21.3.05.

6. **Agrobates galactodes familiaris** (Ménétr.). (359)

1905. *Aedon familiaris*, Cumming, *op. cit.*, p. 686.  
 ♀ No. 24875; Kuhak, 22.4.05.

7. **Prinia gracilis lepida**, Blyth. (462).

1905. *Prinia lepida*, Cumming, *op. cit.*, p. 687.  
 ♂ No. 24879; Kuhak, 2.10.04.

8. **Lanius cristatus isabellinus**, Ehrenb. (479).

1905. *Lanius phoenicuroides*, Cumming (in part), *op. cit.*, p. 687.  
 ♀ No. 24709; Kaod on the Asinki Canal, 28.3.03.

9. **Lanius cristatus phoenicuroides** (Hemp. and Ehrenb.). (480).

1905. *Lanius phoenicuroides*, Cumming (in part), *op. cit.*, p. 687.  
 ♂ No. 24878, Kuhak, 22.4.05.

The former of these shrikes is presumably only a migrant but the latter is resident and breeds, for General R. Betham took many of its eggs and nests when stationed at Quetta.

10. **Sturnus vulgaris poltaratskii**, Finsch. (532).

1905. *Sturnus menzbieri*, Cumming (in part), *op. cit.* p. 687.  
 O. No. 24686; Hamun, Seistan, Jan. 04.  
 O. ,, 25489; Lab-i-Baring, ca. 1600 ft., 12.12.18.

11. **Sturnus vulgaris nobilior**, Hume. (533).

1905. *Sturnus menzbieri*, Cumming (in part), *op. cit.*, p. 687.  
 ♂ No. 25472; Lab-i-Baring, ca. 1600 ft., 11.12.18.

Hartert has recently written a long article on the races of *Sturnus vulgaris* (*Novitates Zoologicae* XXV, p. 327) but gives no key and in some cases does not even say how they can be discriminated. The deep colour of No. 25472, its almost black white-edged under wing-coverts and deep red wings satisfy me that this specimen must be referred to Hume's *nobilior*. The other two birds are certainly both *poltaratskii* with which *menzbieri* is now generally placed as a synonym.

[Both No. 25472 and No. 25489 were shot at the edge of the Hamun near Lab-i-Baring in December. Small flocks of starlings are not uncommon in the fields at this season, at which ploughing is just commencing in Seistan. N. A.]

12. *Oenanthe deserti atrogularis* (Blyth). (626).

1905. *Saxicola deserti*, Cumming, *op. cit.*, p. 688.  
 ♂ No. 24712; Khwaja Ahmed, 3.4.03.  
 ♂ „ 24868; Khwaja Ahmed, Jan. 05.  
 O. „ 25481; Lab-i-Baring, 7.12.18.  
 ♂ „ 25485; Lab-i-Baring, 8.12.18.

13. *Oenanthe alboniger* (Hume). (617).

1905. *Saxicola albinigra*, Cumming, *op. cit.*, p. 687.  
 ♂ No. 24710; Kaod on the Asinki Canal, no date.  
 ♀ „ 25476; Lab-i-Baring, 7.12.18.

[Very common with the last in the Seistan desert in December. N. A.]

14. *Oenanthe picata* (Blyth). (618).

1905. *Saxicola capistrata*, Cumming, *op. cit.*, p. 687.  
 ♂ No. 24711; Kaod on the Asinki Canal, 26.3.03.

This specimen belongs to the white-headed form which has generally been separated as *Oenanthe capistrata*.

15. *Oenanthe isabellina* (Cretzschem). (625).

1905. *Saxicola isabellina*, Cumming, *op. cit.*, p. 688.  
 ♀ No. 24866; Kuhak, 31.3.04.  
 ♂ „ 24867; Kuhak, 3.4.04.

16. *Phoenicurus erythronotus* (Eversm.). (642).

- O. No. 25480; In garden at Nasratabad, 18.12.18.

This bird although not sexed is obviously an adult female; the wing is rather small, only 72 mm.

17. *Monticola solitaria pandoo* (Sykes). (693).

- ♂. No. 24713; Khwaja Ahmed, 7.4.03.

This specimen is marked "male" but is undoubtedly an old female.

18. *Passer montanus dilutus*, Rehm. (779).

1905. *Passer montanus*, Cumming, *op. cit.*, p. 688.  
 ♂. No. 24869; Kuhak, 20.4.05.

19. *Passer moabiticus yatii*, Sharpe.

♀ No. 24714; Nad-i-Ali on the Helmand, 13.3.03.

This specimen is not in adult plumage and has very little yellow on the lower plumage but is almost certainly of this race of the Palestine Sparrow.

20. *Motacilla alba personata*, Gould. (829).

1905. *Motacilla personata*, Cumming, *op. cit.*, p. 688.

♂ No. 24870; Kuhak, 28.4.05.

♂ „ 25477; Lab-i-Baring, 13.12.18.

♂ „ 25482; „ 13.12.18.

Of the three specimens the first is in full summer plumage, the two others in winter plumage. [Very common in the desert, and at the edge of the Hamun in December. *N. A.*]

21. *Alaemon alaudipes pallida* (Blyth). (854).

1905. *Alaemon desertorum*, Cumming, *op. cit.*, p. 688.

♂ No. 24871; Kuhak, 21.9.04.

Though marked "male" this is probably a female and even for that sex is an unusually small one, wing 126, bill from front 25 mm. This is considerably below normal measurements which are (vide Hartert) ♂, wing 138-141 mm., ♀, 128-130 mm. Larger series of *pallida*, Blyth and *desertorum* (Stone) might possibly prove that they are divisible but at present most ornithologists lump them together.

22. *Galerida cristata* ? *magna*, Hume. (874).

1905. *Galerita cristata*, Cumming, *op. cit.*, p. 689.

♂ No. 24874; Kuhak, 20.4.05.

♂ „ 25478; Lab-i-Baring, 13.12.18.

These birds are very small both having a wing of 106 mm., whilst Hartert gives the minimum for this sub-species as 110 mm; on the other hand he gives the maximum for *chendoola*, the common Indian form, as 105 mm. As a matter of fact throughout the intervening country between the Northern and Southern areas the birds are intermediate both in size and general appearance.

23. *Ammomanes deserti iranica* (Hartert). (878).

1905. *Ammomanes phoenicuroides*, Cumming, *op. cit.*, p. 639

♂ No. 24873; Khwaja Ahmed, 24. 4. 05.

Quite a typical specimen.

24. *Ammomanes phoenicura zarudnyi*, Hartert.

O. No. 25484; Lab-i-Baring, 14.12.18.

I have compared this specimen with others in the Tring Museum as I was rather doubtful of some of those in the British Museum where the forms of *phoenicura* have not yet been thoroughly worked out.

25. *Coracias garrula semenowi*, Loudon and Tschusi (1024).

1905. *Coracias garrula*, Cumming, *op. cit.*, p. 689.

O. No. 24684; Khwaja Ahmed, May 1903.

♂ „ 24861; „ 24.4.05.

26. *Merops persicus persicus*, Pall. (1028).

1905. *Merops persicus*, Cumming, *op. cit.*, p. 689.

♂. No. 24862; Kuhak, 22.4.05.

27. *Caprimulgus mahrattensis*, Sykes. (1089).

1905. *Caprimulgus mahrattensis*, Cumming, *op. cit.*, p. 690.

♀ No. 24688; Helmand, no date.

♀ „ 24689; „ „

28. *Bubo bubo bengalensis* (Frank.). (1168).

1905. *Bubo bengalensis*, Cumming, *op. cit.*, p. 690.

♀ Juv. No. 24864, Shahrastan, 6.5.05.

This appears to be *bengalensis*, which has already been obtained in Afghanistan. The wings measure respectively, right, 380 and left, 370 mm., whereas *turcomanus* (Eversm.) has a wing varying between 425 and 500 mm. From the date on which killed, and also from its juvenile appearance, it is evidently a bird locally bred and it raises an interesting doubt as to the specific or sub-specific value of some of the differences hitherto held to be sub-specific only between some of the nearest allies of *Bubo bubo*. We cannot have two geographical races breeding in the same area and if *turcomanus* and *bengalensis* do breed in the same, then they are good species and not sub-species only.

29. *Athene noctua bactriana*, Blyth. (1180).

1905. *Athene bactriana*, Cumming, *op. cit.*, p. 691.

♂. No. 24863; Kuhak, 21.10.04.

30. *Buteo ferox* (Gmel.). (1239).

O. No. 24722; "Caught in Seistan," Feb. 1904.

An adult but beautifully pale bird in very fine plumage, apparently a male.

31. *Circus macrurus* (Gmel.). (1233).

o. No. 24716; Band-i-Seistan, Feb. 03.

o. ,, 24865; Shahrastan, no date.

Although these specimens have not been sexed the first is certainly a ♂ and the second almost equally certainly an adult female.

32. *Circus aeruginosus* (Linn.). (1237).

o. No. 24717; Takht-i-Shah, March 04.

o. ,, 24719; Nadali, March 03.

o. ,, 24720; ? no date.

♀ ,, 25494; Lab-i-Baring, 10.12.18.

[The commonest bird of prey over the reed-beds of the Hamun. We saw one capture a small water-vole or shrew among the reeds. N.A.]

33. *Falco aesalon insignis* (Clark). (1263).

o. No. 24724; Takht-i-Shah, March 04.

The wing measures 190 mm.

34. *Tinnunculus tinnunculus saturatus*, Blyth. (1265).

o. No. 24726; ? no date.

The wing of this specimen measures 236 mm.

35. *Columba livia intermedia*, Strick. (1292).

1905. *Columba intermedia*, Cumming, *op. cit.*, p. 691.

♀ No. 24850; Kuhak, 22.4.05.

o. ,, 25463; Lab-i-Baring, no sex; December.

Both these specimens are very typical *livia intermedia* with the lower back quite grey, not white. These geographical races of *Columba livia* are generally very inconstant, partly due, no doubt, to crosses with domesticated birds but also due to the very wide range of individual variation which occurs. Major C. R. S. Pitman informs me that even well North in Mesopotamia he found birds breeding together some of which were the true white rumped *livia*, whilst others were as dark as the darkest Indian *intermedia*.

36. *Columba eversmanni*, Bonap. (1295).

1905. *Columba eversmanni*, Cumming, *op. cit.*, p. 691.

♀ No. 24851; ? 28.4.05.

This is a resident Pigeon in Afghanistan and Persia.

37. *Streptopelia turtur decaorta*, Friv. (1310).

1905. *Turtur risorius*, Cumming, *op. cit.*, p. 691.

♂ No. 24858; Khwaja Ahmed, 7.5.05.

38. **Pterocles arenarius caudacuta**, Pall. (1316).1905. *Pterocles arenarius*, Cumming, *op. cit.*, p. 691.

♂. No. 25488, in desert S. of Lutak, 21.12.18.

This specimen is not sexed but is a female adult.

39. **Francolinus francolinus henricii**, Bonap. (1372).1905. *Francolinus vulgaris*, Cumming, *op. cit.*, p. 692.

♀ Juv. No. 24847; Kuhak, Aug. 04.

Hartert in 1917 reviewed the races of *Francolinus francolinus* in *Novitates Zoologicae* and there points out that the small pale bird from Sind to Afghanistan must bear Bonapartes' name *henricii*. The present specimen is very typical, a small, decidedly pale bird.

40. **Coturnix coturnix** (Linn.). (1355).1905. *Coturnix communis*, Cumming, *op. cit.*, p. 692.

♀ No. 24848; Kuhak, 22.9.04.

41. **Zaponia parva parva**, Bechst. (1392).1905. *Porzana parva*, Cumming, *op. cit.*, p. 693.

♀ No. 24859; Kuhak, 6.9.04.

The wings are very imperfect, one moulting, and from the other several quills missing. They measure approximately 81 mm. In spite of its comparatively small size I have no doubt that it can be correctly assigned to this race. The colour generally is decidedly light and the bill is longer than in any specimen of *pusilla* in the British Museum Collection.

42. **Porzana porzana** (Lin.). (1394).

No. 24696; ? no date or sex.

43. **Gallinula chloropus parvifrons** (Blyth). (1402).

No. 24727; Band-i-Seistan, no date or sex.

This specimen is somewhat intermediate between typical *chloropus* of Europe and *parvifrons* of India, but is on the whole nearer the latter and should come under that name.

44. **Fulica atra atra**, Linn. (1405).1905. *Fulica atra*, Cumming, *op. cit.*, p. 693.

♀ No. 25468; Lab-i-Baring, 9.12.18.

♂. „ 25471; „ 9.12.18.

These two specimens, both fully adult, were obtained at Lab-i-Baring, Seistan, E. Persia, at an elevation of some 1600 feet. I cannot separate these in any way from typical *atra*.



[Coot live in enormous flocks among the reed-beds of the Hamun. Large numbers are caught for food in nets stretched across channels in the reed-beds into which the flocks are driven by men on *tutin* or rafts. The nets are stretched on sticks stuck into the mud, their lower edge being in the water and their upper edge about 2 feet above the surface. N. A.]

45. ***Cursorius gallicus*** (Gmelin). (1423).

1905. *Cursorius gallicus*, Cumming, *op. cit.*, p. 694.

No. 24681; Khwaja Ahmed, April 1903, not sexed.

„ 24682; „ „ „ 1903, „

„ 24683; Nadali, Helmand, March 1903, „

46. ***Chettusia leucura*** (Licht.). (1438).

1905. *Chettusia leucura*, Cumming, *op. cit.*, p. 694.

♀ No. 24677; ? no date.

♀ „ 24678; Shahgul on Rud-i-Pariun, 23.3.1903.

♀ „ 24679; Nadali, Helmand, March 03.

♂ „ 24849; Nasratabad, 6.5.05.

The White-tailed Plover is an exceedingly common bird in suitable parts of Persia and has been found breeding in great numbers during the Mesopotamian campaign, the nests being placed, as a rule, in small patches of raised land in the marshes. The eggs number three or four, most often the latter.

47. ***Aegialitis dubia jerdoni***, Legge. (1447).

1905. *Aegialitis dubia*, Cumming, *op. cit.*, p. 694.

♂ No. 24854; Kuhak, 1.4.04.

♀ „ 24855; „ 9.5.05.

These specimens, which are both in full breeding plumage, belong, as we should expect in birds obviously breeding, to the Indian race of Little Ringed Plover. The wings measure about 110 mm., the yellow base to the bill is very distinct, especially in one bird, and the black on the forehead is very narrow. (See Hartert and Jackson, *Ibis* 1915, pp. 531-3.)

48. ***Himantopus himantopus*** (Linn.). (1451).

1905. *Himantopus candidus*, Cumming, *op. cit.*, p. 694.

♀ . No. 24836; Kuhak, 3.9.04.

♀ „ 24837; Khwaja Ahmed, 24.4.05.

♂ „ 24838; Kuhak, 3.3.04.

Of the two females only the second is fully adult.

49. ***Limosa limosa*** (Linn.). (1456).

1905. *Limosa belgica*, Cumming, *op. cit.*, p. 695.

♂ No. 24852; Nasratabad, 6.5.05.

♂ „ 25491; Lab-i-Baring, 12.12.18.

♂ „ 25493; „ 12.12.18.

The specimen killed in May is in an interesting stage of plumage, the breast being partly red and the plumage above also in rather more than half summer plumage. The two birds killed in winter are, of course, in winter plumage.

[Feeding in large flocks at the edge of the Hamun in December. N. A.]

50. *Totanus glareola* (Linn.). (1461).

1905. *Totanus glareola*, Cumming, *op. cit.*, p. 695.

♂. No. 24730; ? no sex or date.

♀ ,, 24856; Khwaja Ahmed, 5.5.05.

♀ ,, 24857, Nasratabad, 7.5.05.

51. *Totanus totanus eurhinus*, Oberholser. (1455).

♂. No. 24731; Seistan, Jan. 04, no sex.

♂. ,, 24732; ,, 7.1.04. ,,

♂. ,, 24733; ,, no date or sex.

The Eastern form breeding from the Himalayas to Eastern Siberia has been separated as a geographical race under the name of *eurhinus* by Oberholser (*Proc. U. S. Nat. Mus.* XXII, p. 208; 1900) on the grounds of its greater size. He gives the average size for his new sub-species as follows: wing 163 mm., culmen 46.6 mm., and tarsus 47.2 mm.

The three specimens noted above have the wings 157-165 mm., bills 43 to 45 mm., and tarsi 52 to 55 mm. They must all therefore be accredited to the Eastern rather than to the Western form. Specimens of both birds and eggs obtained in Tibet fully bear out Oberholser's diagnosis of *eurhinus*.

52. *Machetes pugnax*, Linn. (1468).

♂. No. 24734; Shaharistan, Seistan, 1.3.03, not sexed.

The wing measures 167 mm., large for a female and small for a male, but probably the latter not yet adult.

53. *Tringa alpina alpina* (Linn.). (1478).

♂ No. 25474; Lab-i-Baring, 8.12.18.

♀ ,, 25475; ,, 7.12.18.

♂ ,, 25479; ,, 13.12.18.

♂ ,, 25483; ,, 13.12.18.

The wings of these four specimens vary from 108 to 115 mm. so that they must belong to the smaller Western sub-species rather than to the larger Eastern one.

54. *Grus grus* (Linn.). (1407).

♂. No. 24728; Khwaja Ali, Feb. 03.

This specimen is that of a not quite adult bird with the crown of the head still fairly well covered with feathers as in the young bird.

55. *Larus ichthyaëtus*, Pall. (1489).1905. *Larus ichthyaëtus*, Cumming, *op. cit.*, p. 695.

O. No. 24691; Seistan, March 1904.

In full breeding plumage.

56. *Larus ridibundus*, Linn. (1490).

O. No. 24736; Seistan, Jany. 1904.

O. ,, 25464; Lab-i-Baring, 11.12.18.

57. *Larus gelastes*, Licht. (1493).1905. *Larus gelastes*, Cumming, *op. cit.*, p. 695.

♀ No. 24841; Kuhak, 26.4.05.

♀. ,, 24853; ,, 26.4.05.

58. *Larus argentatus cachinnans*, Pall. (1495).

O. No. 24738; Landi Barech, Feb. 03.

59. *Hydroprogne caspia* (Pall.). (1498).1905. *Hydroprogne caspia*, Cumming, *op. cit.*, p. 696.

♀ No. 24842; Kuhak, 26.4.05.

60. *Sterna nilotica*, Gmelin. (1499).1905. *Sterna anglica*, Cumming, *op. cit.*, p. 696.

♀ No. 24839; Kuhak, 22.4.05.

61. *Sterna hirundo* (Neum.). (1506).1905. *Sterna fluviatilis*, Cumming *op. cit.*, p. 696.

♀ No. 24860; Kuhak, 28.4.05.

The wing of this bird measures 265 mm.

62. *Sterna minuta gouldi*, Hume. (1510).1905. *Sterna minuta*, Cumming, *op. cit.*, p. 696.

♀ No. 24843; Khwaja Ahmed, 5.5.05.

♂. ,, 24844; Nasaratabad, 7.5.05.

♂. ,, 24845; ,, 6.5.05.

The wings of the two males measure 163 and 175 mm. respectively and that of the female 170 mm.

All these specimens appear to be the same as the Indian *S. m. gouldi* rather than true *S. m. minuta*. They are identical in shade of grey on the upper parts and in colour of outer primaries with specimens from N.W India.

63. *Pelecanus onocrotalus onocrotalus*, Linn. (1521).1905. *Pelecanus onocrotalus*, Cumming, *op. cit.*, p. 696.

O. No. 24739; ? no sex or date.

A very typical specimen of this species with a bill fully 17 inches, or 435 mm., in length from forehead to tip of culmen.

64. **Phalacrocorax carbo subcormoranus** (Brehm). (1526).

1905. *Phalacrocorax carbo*, Cumming, *op. cit.*, p. 696.

o. No. 24740; Seistan, Feb. 04.

This is the form which Hartert has recently shewn (*Novitates Zoologicae*, XXIII, p. 294; 1916) must bear Brehm's name of *subcormoranus*.

[Cormorants are captured or shot in large numbers by the Saiyad. The down from the breasts is sometimes mixed with the soft wool out of which the felt hats worn by Persians are made. N. A.]

65. **Ardea cinera**, Linn. (1555).

1905. *Ardea cinerea*, Cumming, *op. cit.*, p. 696.

o. No. 24741; Khwaja Ali, Feb. 03; no sex.

o. ,, 24882; Farrah Rud, Dec. 04.

These are both adult birds.

66. **Botaurus stellaris**, Linn. (1574).

1905. *Botaurus stellaris*, Cumming, *op. cit.*, p. 696.

o. No. 24846; Farrah Rud, Dec. 04. No sex.

o. ,, 24744; ? Dec. 04. No sex.

These are both adult birds with wings of 335 and 342 mm. respectively, but otherwise call for no remark.

67. **Ixobrychus minutus** (Linn.). (1570).

1905. *Ardetta minuta*, Cumming, *op. cit.*, p. 696.

o. No. 24687; Khwaja Ali, Seistan, April 03.

An adult bird and evidently a male though it has not been sexed. The generic name *Ixobrychus*, Billberg of 1828 antedates that of *Ardetta*, Gray of 1842, which must therefore be discarded.

68. **Phoenicopterus minor**, Geoff. (1575).

1905. *Phoenicopterus minor*, Cumming, *op. cit.*, p. 697.

o. No. 24840; Kuhak, June 1904.

A young bird, but exceptionally large with a wing of 13-6 inches (345 mm).

69. **Cygnus cygnus** (Linn.). (1578a).

1905. *Cygnus musicus*, Cumming, *op. cit.*, p. 697.

o. No. 24884; Hamun-i-Sabous, Seistan, Dec. 04.

This is a very large specimen with a wing of 602 mm. (23.75 inches); bill 111 mm. (4.4 inches). Although not sexed it is undoubtedly a male.

70. *Tadorna tadorna* (Linn.). (1587).

1905. *Tadorna cornuta*, Cumming, *op. cit.*, p. 697.

♂ No. 25466; Lab-i-Baring, 14.12.18.

♂ „ 24818; Seistan, 3.10.04.

♂. „ 24819; Kuhak, Sept. 04.

♂. „ 24820; Seistan, 3.10.04.

Juv. „ 24821; Kuhak, Aug. 04.

„ „ 24822; Seistan, no date.

The first bird is an adult in full plumage, the next three are ducklings of about a month old, or rather less, and the last two are still younger.

71. *Querquedula crecca* (Linn.). (1597).

1905. *Nettion crecca*, Cumming, *op. cit.*, p. 697.

♂. No. 24830; Kuhak, 3.10.14.

♂ „ 25473; Lab-i-Baring, 11.12.18.

♂ „ 25490; „ 8.12.18.

Of these three birds the first is in eclipse plumage, the second in full breeding plumage, whilst the third appears to be a female and not a male. [One of the commonest ducks among the reed-beds of the Hamun. *N. A.*]

72. *Dafila acuta acuta* (Linn.). (1600).

1905. *Dafila acuta*, Cumming, *op. cit.*, p. 698.

♂. No. 25487; Lab-i-Baring, 8.12.18.

In full, but not very bright, breeding plumage. [Another very common species in the reed-beds. *N. A.*]

73. *Spatula clypeata* (Linn.). (1602).

1905. *Spatula clypeata*, Cumming, *op. cit.*, p. 698.

♂ 24832; Hamun-i-Sabari, 29.12.04.

This drake is still in eclipse plumage.

74. *Marmaronetta angustirostris* (Ménétr.). (1603).

1905. *Marmaronetta angustirostris*, Cumming, *op. cit.*, p. 698.

O. No. 24823; Kuhak, juv., 6.7.04.

O. „ 24824; „ „ 6.7.04.

♂ „ 24825; „ adult, 22.4.05.

O. „ 24826; „ juv., 6.7.04.

O. „ 24827; „ „ 6.7.04.

Apparently the four ducklings, though all young birds recently hatched when obtained, are in two stages of growth, the first two being some days older than the other two. This little duck breeds freely from as far South as the Mackran coast and Sind throughout South, Central and Eastern Persia wherever the country is suitable.

The two youngest birds of those above enumerated have the wing quills only just beginning to sprout.

75. *Netta rufina* (Pall.). (1604).

1905. *Netta rufina*, Cumming, *op. cit.*, p. 698.  
 ♀ No. 24833; Farrah Rud, Dec. 04.

76. *Nyroca ferina* (Linn.). (1605).

1905. *Nyroca ferina*, Cumming, *op. cit.*, p. 698.  
 ♂ No. 25465; Lab-i-Baring, 10.12.18.  
 ♂ „ 25467; „ 10.12.18.

77. *Glaucionetta clangula*, Linn. (1610).

1905. *Clangula glaucion*, Cumming, *op. cit.*, p. 699.  
 ♂ No. 24829; Hamun, Seistan, Dec. 04.

In full breeding plumage.

Stejneger has shown that we cannot use the generic name *Glaucion* for the Golden-eye and has substituted *Glaucionetta* in its place (*Proc. U.S. Nat. Mus.* VIII, p. 409; 1885).

78. *Podiceps cristatus* (Linn.). (1615).

1905. *Podiceps cristatus*, Cumming, *op. cit.*, p. 699.  
 ♀ No. 24692; ? no date, adult.  
 ♀ „ 24694; ? no date, juv.  
 ♀ „ 24693; ? no date, adult.

79. *Podiceps fluviatilis albipennis* (Sharpe). (1617).

1905. *Podiceps albipennis*, Cumming, *op. cit.*, p. 699.  
 ♂ No. 24835; Seistan, juv., no date.  
 ♀ „ 25486; Lab-i-Baring, 11.12.18., adult.

[Very common among the reed-beds of the Hamun. N A.]