

ON A COLLECTION OF BIRDS FROM THE HOSHANGABAD DISTRICT (CENTRAL PROVINCES, INDIA).

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I. INTRODUCTION.

In February-March 1941, a party of the Zoological Survey of India under Dr. B. N. Chopra, and consisting, in addition, of the writer, Mr. K. N. Das and a taxidermist, made a brief zoological survey of the Hoshangabad District in the Central Provinces. Dr. B. Prashad, the Director, was also with the party for a few days. Some 88 bird skins were collected and field-notes taken. The following is a report on this collection. Two skins, one of a warbler, *Phylloscopus*, and the other of a dove, *Streptopelia*, which could not be satisfactorily identified, are not included.

The Hoshangabad District.—This district, which is one of the western districts of the Central Provinces, lies between latitudes 21° 53' and 22° 59' N. and longitudes 76° 47' and 78° 44' E. It stretches along the left bank of the Narbada, between the Vindhya Mts. and the Satpura Range of which the Mahadeo Hills may be regarded as a part; it includes a portion of the Satpura Range within its borders. It is a narrow strip of country about 120 miles broad from east to west and roughly 25 miles wide from north to south, and covers an area of 3,676 square miles.

The southern half of the district is occupied by the Satpura Range (highest point about 4,500 feet above sea level) with its moderately dense forests. The northern half consists of open plains which are irrigated by the Narbada and grow largely wheat.

The average temperature varies from about 52° to 108°F. in the plains, while the hills are colder. The average annual rainfall is about 47 inches, being mainly received during five monsoon months, June to October. In the Mahadeo Hills, *e.g.*, Pachmarhi, the rainfall is heavier, averaging 77 inches annually. [For further details and map of the district, see Hora and Nair¹.]

The collection was made partly in the Mahadeo Hills (Pachmarhi Plateau) and partly in the plains. Ecologically, the two areas are different, and many species found at Pachmarhi are either rare or absent in the plains. Both the areas are treated here together for sake of the convenience.

¹ Hora, S. L. and Nair, K. K., *Rec. Ind. Mus.* XLIII, pp. 361-373 (1941).

The itinerary.—The following is the itinerary of the tour :—

1. MAHADEO HILLS.

Pachmarhi.—Feb. 8th to 17th. The Pachmarhi Plateau is 3,500 ft., the surrounding hills about 1,000 ft. higher. We collected on the Pachmarhi Plateau and in the surrounding hills and jungles, especially in the vicinity of hill streams.

Singanama.—Feb. 18th to 20th. This is a village on the Pachmarhi-Pipariya Road, about 14 miles from Pachmarhi and lying at the foot of the hills. We collected in the forest near R. Denwa. The area is excellent, and very rich in bird life.

2. PLAINS.

Sandia on R. Narbada.—Feb. 21st. This is a village on the bank of the Narbada, about 12 miles from Pipariya (*infra*). We collected on the river bank.

Pipariya.—Feb. 22nd to 23rd. We collected in the fields in the neighbourhood and also around the town.

Itarsi.—Feb. 24th to 26th. We collected on the meadows and along the stream not far from the town.

Handia on R. Narbada.—Feb. 27th. This is a village on the bank of the Narbada, about 13 miles from Harda (*infra*). We collected on the river bank.

Harda.—Feb. 28th to Mar. 5th. We collected around the town, especially along the railway line.

Ornithology of the District.—Besides Osmaston's¹ (1922 ; 1936) comprehensive lists of the birds of the Pachmarhi Plateau, there is no noteworthy published account of the birds of the Hoshangabad District. Ali and Whistler² (1939 ; 1940) have recently published an account of the birds of the western half of Central India lying just north of the Hoshangabad District, and the present report, though incomplete, may be regarded as complimentary to that account.

Measurements and sex.—Measurements were taken as follows :—*Wing* : Chord from the bend of the wing to the tip of the longest primary, with the quills flattened out. *Tail* : From the insertion of the central rectrices in the uropygium to the tip. *Tarsus* : From the tarso-metatarsal joint to the metatarso-digital joint. *Bill* : From the junction of the bill with the skull to the tip—this is as a rule longer than the “exposed culmen”

The sex was determined in each case by an examination of the gonads. When this was not done, the sex is indicated within brackets.

Local names.—These were ascertained for a few birds at Pachmarhi by carefully questioning the local bird-catchers, and are given under the species concerned. The names are in the local Hindi.

¹ Osmaston, B. B., *Journ. Bombay Nat. Hist. Soc.* XXVIII, pp. 453-459 (1922); and Birds, in *Guide to Pachmarhi*, pp. 62-71 (1936).

² Ali, S. and Whistler, H., *Journ. Bombay Nat. Hist. Soc.* XLI, pp. 82-106 (1939); *Journ. Bombay Nat. Hist. Soc.* XLI, pp. 470-488 (1940).

II. WEIGHTS.

The weights of Indian birds, though recorded in older writings, are seldom recorded in recent reports of collections. The following are the weights of some of the birds in the present collection. The birds were weighed within about 5 hours of being shot. Loss of blood and some feathers constitute a source of error. Nevertheless, it is hoped that the data will provide interesting information which is generally lacking for Indian birds. The systematic value of these weights is, however, not clear. Generally, the weights are in grammes, but those of some of the larger birds are in pounds.

Ord. PASSERES.

Fam. CORVIDAE.

Dendrocitta vagabunda vagabunda (Lath.)—1 ♀ (near breeding) : 106.6 gms.

Fam. PARIDAE.

Parus major mahrattarum Hart.—1 ♂ (non-breeding) : 11.7 gms.

Machlolophus xanthogenys aplonotus (Bly.)—2 ♂♂ (non-breeding) : 14.1-15.2 gms.

Fam. SITTIDAE.

Sitta castanea castanea Less.—1 ♂ : 12.0 gms.

Fam. TIMALIIDAE.

Turdoides somervillei (subsp. ?)—1 ♀ : 70.8 gms.

Argya caudata caudata (Dumont)—2 ♂♂ (near breeding) : 40.4-40.5 gms.

Chloropsis jerdoni (Bly.)—1 ♂ (non-breeding) : 24.5 gms.

Fam. PYCNONOTIDAE.

Molpastes cafer pallidus Stuart Baker—1 ♀ (non-breeding) : 30.0 gms.

Fam. TURDIDAE.

Saxicola caprata ?bicolor Sykes—1 (♂) : 13.3 gms.

1 (♀) : 12.5 gms.

Saxicola torquata indica (Bly.)—1 ♂ (non-breeding) : 13.0 gms.

Phoenicurus ochruros rufiventris (Vieil.)—1 (♂) : 16.8 gms.

Copsychus saularis saularis (Linn.)—1 ♀ (non-breeding) : 32.1 gms.

Monticola solitaria pandoo (Sykes)—2 ♂♂ (non-breeding) : 43.4-46.7 gms.

1 ♀ (non-breeding) : 42.5 gms.

Myophonus coeruleus horsfieldii Vig.—1 (sex?) : 120.5 gms.

Fam. MUSCICAPIDAE.

Culicicapa ceylonensis ceylonensis (Swain.)—1 (sex?) : 7.2 gms.

Leucocirca aureola aureola (Less.)—1 ♀ : 10.0 gms.

Fam. LANIIDAE.

Lanius schach erythronotus (Vig.)—3 ♂♂ (non-breeding) : 34.8-37.2 gms.

Fam. CAMPEPHAGIDAE.

Pericrocotus peregrinus peregrinus (Linn.)—2 ad. ♂♂ (non-breeding) : 8.2-8.6 gms.

1 imm. ♂ : 8.5 gms.

Graucalus macei macei Less.—2 ♂♂ (non-breeding) : 85.0-89.0 gms.

1 ♀ (non-breeding) : 80.0 gms.

Fam. DICRURIDAE.

Dicrurus macrocercus peninsularis Ticeh.—1 ad. ♀ : 44.1 gms.

1 imm. ♂ : 46.0 gms.

Dicrurus caerulescens caerulescens (Linn.)—1 ♂ : 37.4 gms.

Fam. FRINGILLIDAE.

Carpodacus erythrurus roseatus (Bly.)—1 ♂ (non-breeding) : 20.5 gms.

Gymnoris xanthocollis xanthocollis (Burt.)—3 ♂♂ (non-breeding) : 17.0-18.7 gms.
1 (sex?) : 19.1 gms.

Fam. MOTACILLIDAE.

Motacilla maderaspatensis J. F. Gm.—1 (sex?) : 35.7 gms.

Motacilla cinerea caspica (S. G. Gm.)—1 (sex?) : 17.0 gms.

Anthus hodgsoni hodgsoni (Richm.)—1 ♀ : 19.8 gms.

Fam. ALAUDIDAE.

Ammomanes phoenicura phoenicura (Frank.)—2 ♂♂ (near breeding) : 25.7-27.4 gms.
1 ♀ (near breeding) : 25.7 gms.

Fam. NECTARINIDAE.

Leptocoma asiatica asiatica (Lath.)—1 ♂ (near breeding) : 8.0 gms.

Ord. CORACIIFORMES.

Fam. PICIDAE.

Dryobates maharattensis (subsp. ?)—1 (sex?) : 34.2 gms.

Fam. CAPITONIDAE.

Thereiceryx zeylanicus (subsp. ?)—1 ♂ (near breeding) : 115.5 gms.

Fam. PSITTACIDAE.

Psittacula cyanocephala cyanocephala (Linn.)—1 (♂) : 64.0 gms.
1 ♀ : (near breeding ?) : 71.4 gms.

Fam. CORACIIDAE.

Coracias benghalensis benghalensis Linn.—1 ♂ (non-breeding) : 121.5 gms.

Fam. MEROPIDAE.

Merops orientalis orientalis Lath.—2 ♂♂ (non-breeding) : 15.5-17.4 gms.
1 ♀ (non-breeding) : 16.3 gms.

Fam. ALCEDINIDAE.

Ceryle rudis leucomelanura Reichen.—1 ♂ (breeding) : 76.6 gms.
1 ♀ (breeding) : 90.0 gms.

Alcedo atthis taprobana Kleinsch.—1 ♂ (near breeding) : 22.7 gms.

Halcyon smyrnensis ?smyrnensis (Linn.)—1 ♂ (non-breeding) : 74.0 gms.

Fam. UPUPIDAE.

Upupa epos ceylonensis Reichenb.—2 ♂♂ (breeding) : 52.7-55.2 gms.

Fam. ASIONIDAE.

Athene brama indica (Frank.)—1 ♂ (near breeding) : 111.0 gms.

Glaucidium radiatum radiatum (Tick.)—2 ♂♂ (near breeding ?) : 96.5-111.7 gms.
1 ♀ (near breeding ?) : 112.0 gms.

Ord. ACCIPETRES.

Fam. AEGYPIIDAE.

Pseudogyps bengalensis (J. F. Gm.)—1 ♂ (non-breeding) : 10½ lbs.

Neophron percnopterus ginginianus (Lath.)—1 (sex?) : 3 lbs.

Ord. COLUMBAE.

Fam. COLUMBIDAE.

Streptopelia orientalis meena (Sykes)—1 ♂ (non-breeding) : 190.7 gms.*Streptopelia chinensis suratensis* (J. F. Gm.)—1 ♀ : 120.4 gms.*Streptopelia senegalensis cambayensis* (J. F. Gm.)—1 ♂ (non-breeding) : 81.0 gms.*Streptopelia decaocto decaocto* (Frivald.)—1 ♂ (non-breeding) : 82.7 gms.

Ord. CHARADRIIFORMES.

Fam. CHARADRIIDAE.

Lobivanellus indicus indicus (Bodd.)—1 ♀ (near breeding) : 117.0 gms.

Fam. SCOLOPACIDAE.

Tringa hypoleucos Linn.—1 ♂ : 43.3 gms.

III. SYSTEMATIC ACCOUNT.

Order PASSERES.

Family CORVIDAE.

Dendrocitta vagabunda vagabunda (Latham).

(The Indian Tree-Pie.)

Specimen obtained—

Pachmarhi.—1 ♀, 10.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♀	..	155	255	32	30

Colour of bare parts.—Iris dark brown. Bill ashy black. Legs, feet and claws horny black.*Field notes*.—Very common on trees at Pachmarhi, going about either singly or in twos and threes. Not seen elsewhere.

The ovary of the ♀ (Feb. 10th) was enlarged and measured 11×7 mm.; the largest egg follicle measured 2×2 mm., suggesting breeding in the near future.

Osmaston (1922, p. 453) says it is very common on the Pachmarhi Plateau and breeds in April-May.

Ali and Whistler (1939, p. 85) recorded it as common in western Central India.

Family PARIDAE.

Parus major mahrattarum Hartert.

(The Southern Grey Tit.)

Specimen obtained—

Around Pachmarhi.—1 ♂, 17.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♂		63	54	28	

Colour of bare parts.—Iris dark chocolate. Bill black. Legs, feet and claws slaty. Pads dirty pale grey.

Field notes.—A few seen singly at Pachmarhi.

The testes of the ♂ (Feb. 17th) were in the non-breeding condition and measured 1×1 mm.

Osmaston (1922, p. 453) says it is fairly common at Pachmarhi and is resident; the breeding season is not given.

In western Central India, Ali and Whistler (1939, p. 85) found it common; family parties were noted in August and September.

***Machlolophus xanthogenys aplonotus* (Blyth).**

(The Southern Yellow-cheeked Tit.)

Specimens obtained—

Pachmarhi.—1♂, 12.2.41; 1♂, 2nd week Feb. 1941.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	..	69-72	54-59	18-20	13 (1 ♂)

Field notes.—Not uncommon at Pachmarhi.

The testes of the two males, were in the non-breeding condition and measured 1×1 mm.

Osmaston (1922, p. 453) says it is fairly common in Pachmarhi and breeds in April-May.

In western Central India, Ali and Whistler (1939, p. 86) found it at several places including Chanderi in the Gwalior State which is the most northerly place where *aplnotus* has hitherto been recorded. Courting couples were noted at the end of March and family parties with young in August and September.

Family SITTIDAE.

***Sitta castanea castanea* Lesson.**

(The Chestnut-bellied Nuthatch.)

Specimen obtained—

Pachmarhi.—1♂, 10.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	72	39	18	19.5

Colour of bare parts.—Upper bill horny black, darker at tip; lower bill pale ashy at base, dark horny at tip. Legs, feet and claws horny. Pads pale yellow.

Field notes.—One seen at Pachmarhi.

Osmaston (1922, p. 454) says it is common at Pachmarhi and breeds in April-May.

Ali and Whistler (1939, p. 86) found it occurring in pairs or family parties of 3 or 4 in the Indore and Dhar States in western Central India.

NOTE.—On Feb. 12th on the Pachmarhi-Pipariya road about two miles from Pachmarhi I noticed a pair of *Sitta frontalis* sitting on a nest on a tree and evidently feeding the young ones. Unfortunately I could not secure the specimens, but I am certain they were not *S. c. castanea*. However, the fact that Osmaston (1922, p. 454) does not include *S. frontalis* in his Pachmarhi list makes me somewhat uncertain of my identification.

Family TIMALIIDAE.

Turdoides somervillei (subsp.?).

(The Jungle Babbler.)

Specimen obtained—

Pachmarhi.—1♀, 10.2.41.

Elsewhere noted at : Harda.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	107	112	37	25.5

Colour of bare parts.—Iris very pale straw-yellow with a central very thin dark brown ring. (Osmaston, 1936, p. 17, gives the iris as white.) Bill pale straw-yellow with a faint fleshy tinge ; tip pale horny. Legs, feet and pads, as bill. Claws fleshy horny.

Local name.—"Gayangā."

Field notes.—Extremely common at Pachmarhi, usually abounding near habitations and in thin jungle and keeping to bushes and low trees ; occurs in small or big (up to 30 or 40) parties ; feeds on the ground. Fairly common at Harda.

Osmaston (1922, p. 453) too found it common on the Pachmarhi Plateau.

In western Central India, Ali and Whistler (1939, p. 86) found *T. s. orientalis* common in the forests.

Argya caudata caudata (Dumont).

(The Common Babbler.)

Specimens obtained—

Itarsi.—2♂♂, 25.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	79-80	109-112	29-30	19-20

Colour of bare parts.—Iris brown. Bill earthy brown, tip smoky. Legs, feet and pads dull pink. Claws pale smoky.

Field notes.—Fairly common at Itarsi. Seen in groups of 4 or 5 on bushes and low trees.

The testes of two males (Feb. 25th) were enlarged and measured 6×4 and 7×5 mm., suggesting breeding.

This babbler evidently does not occur on the Pachmarhi Plateau where I did not see it ; nor does Osmaston (1922) record it.

Ali and Whistler (1939, p. 87) found it common in western Central India where birds with mature gonads were found in March, April, August and September, from which these authors suggest that it apparently breeds throughout the year.

Chloropsis jerdoni (Blyth).

(Jerdon's Chloropsis.)

Specimen obtained—

Around Pachmarhi.—1♂, 14.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	89	81	21.5	23

Colour of bare parts.—Iris dark brown. Bill waxy dark brown. Legs, feet and claws slaty. Pads dirty fleshy white.

Field notes.—A few seen singly in forest around Pachmarhi. The testes of the ♂ (Feb. 14th) measured 1.5×1.5 mm.

Osmaston (1922, p. 454) says it is common in Pachmarhi where it is specially noticeable from May to June.

In western Central India, Ali and Whistler (1939, p. 88) found it at several places; they noted that the April specimens had testes enlarged up to 5×4 mm., while August ones were undergoing the post-nuptial moult.

Family PYCNONOTIDAE.

Molpastes cafer pallidus Stuart Baker.

(The Central Indian Red-vented Bulbul.)

Specimen obtained—

Singanama.—1♀, 19.2.41.

Elsewhere noted at : Pachmarhi.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♀	..	91.5	84	22	18

Colour of bare parts.—Iris dark brown. Bill black. Legs, feet and claws horny black. Pads dirty white.

Field notes.—Common in the scrub jungle north-west of Pachmarhi, but rare in the station itself. Common at Singanama.

The ovary of the ♀ (Feb. 19th) measured 4×3 mm.

Osmaston (1922, p. 454) says it is very common in Pachmarhi but rare in the surrounding jungles, which is contrary to my observations made in the middle of February, 1941. He further says it breeds in gardens, etc. from May to August.

In western Central India, Ali and Whistler (1939, p. 88) recorded it as common.

Family TURDIDAE.

***Saxicola caprata ?bicolor* Sykes.**

(The Northern Indian Stone-chat.)

Specimens obtained—

Around Pachmarhi.—1(♂), 12.2.41 ; 1(♀), 14.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	66	49	21	11
1 ♀ ..	70	49	22	15

Colour of bare parts.—♂ : Bill black. Legs and feet horny. Claws horny black. Pads dirty horny brown. ♀ : Iris dark brown. Bill dark brownish black. Legs, feet and claws horny black. Pads dusky.

Field notes.—A few seen singly at Pachmarhi.

Osmaston (1922, p. 456) says it is common on the Pachmarhi Plateau.

In western Central India, Ali and Whistler (1939, p. 89) recorded it as uncommon.

***Saxicola torquata indica* (Blyth).**

(The Indian Bush-chat.)

Specimens obtained—

Singanama.—1♂, 18.2.41.

Itarsi.—1(♂), 24.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	66-67	52-54	20-22	13-14

Colour of bare parts.—Iris brown. Bill black. Legs, feet and claws black. Pads smoky.

Field notes.—A few seen singly at Singanama and Itarsi on low trees and bushes ; uncommon.

The testes of the Singanama male (Feb. 18th) were in the non-breeding condition and measured 1×1 mm.

Osmaston (1922, p. 456) says it is a winter visitor to Pachmarhi.

In western Central India, Ali and Whistler (1939, p. 89) recorded it as fairly common—earliest date 17th September, latest 17th April.

***Phoenicurus ochruros rufiventris* (Vieillot).**

(The Eastern Indian Redstart.)

Specimen obtained—

Singanama.—1(♂), 18.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	88	65	25.5	17

Colour of bare parts.—Iris dark chocolate brown. Bill horny brown. Legs, feet and claws horny brown. Pads dirty white.

Field notes.—One or two seen at Singanama.

Osmaston (1922, p. 456) says it is a common winter visitor to Pachmarhi.

In western Central India, Ali and Whistler (1939, p. 89) noted it at several places—last date of departure April 16th, by which most had departed; earliest date of arrival September 10th, becoming appreciably commoner by September 19th.

Systematic note.—I have followed Whistler and Kinnear¹ in determining the subspecies. The black feathers show a few dark grey edgings, but, with the large wing, the specimen would appear to be *rufiventris*.

Copsychus saularis saularis (Linnaeus).

(The Indian Magpie-Robin.)

Specimen obtained—

Pachmarhi.—1♀, 14.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	90	78	28	22

Colour of bare parts.—Bill horny black. Legs and feet horny. Claws black. Pads waxy pale yellow.

Local name.—"Kāli sooi chiriā."

Field notes.—Fairly common at Pachmarhi.

The ovary of the ♀ was in the non-breeding condition and measured about 4×4 mm.

Osmaston (1922, p. 456) says it is very common in and around Pachmarhi.

In western Central India, Ali and Whistler (1939, p. 89) found it common in song towards the end of February and in March, and moulting the rectrices in September.

Monticola solitaria pandoo (Sykes).

(The Indian Blue Rock-Thrush.)

Specimens obtained—

Pachmarhi.—1♂, 16.2.41.

Harda.—1♂, 1.3.41; 1♀, 3.3.41.

NOTE.—The ♀ here recorded is sooty brown with a faint bluish tinge.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	125-127	93-95	28-30	25.5-28
1 ♀	117	84	29	28

¹ Whistler, H. and Kinnear, N. B., *Journ. Bombay Nat. Hist. Soc.* XXXVI, p. 70 (1932).

Colour of bare parts.—♂ : Iris dark brown. Bill dark horny brown. Legs, feet and claws black. Pads dirty white. ♀ : Iris dark brown. Bill dark smoky brown. Legs, feet and claws dark smoky brown. Pads dirty white.

Field notes.—Uncommon at Pachmarhi and Harda.

The testes of the Pachmarhi (Feb. 16th) and Harda (Mar. 1st) specimens were in the non-breeding condition, measuring about 2×1 mm. The ovary of the Harda ♀ (Mar. 3rd) was also in the non-breeding condition and measured 6×4 mm.

Osmaston (1922, p. 456) says it is occasionally seen in winter at Pachmarhi.

In western Central India, Ali and Whistler (1939, p. 90) found it not uncommon—latest date April 4th, earliest September 11th.

***Myophonus coeruleus horsfieldii* Vigors.**

(The Malabar Whistling Thrush.)

Specimen obtained—

Around Pachmarhi.—1 (sex ?), 13.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 (sex?)	152	(110)	43	30

Colour of bare parts.—Iris dirty olive green (not brown). Bill black. Legs, feet and claws horny black. Pads dirty white.

Local name.—"Bhangrāj."

Field notes.—Three or four solitary specimens were seen near streams and shady gorges around Pachmarhi. The call consists of a most melodious drawn-out whistle uttered as the bird shoots along the gorges. Not seen elsewhere.

Osmaston (1922) says it is common at Pachmarhi and breeds from 15th June.

Ali and Whistler (1939) did not come across it in western Central India.

Family MUSCICAPIDAE.

***Culicicapa ceylonensis ceylonensis* (Swainson).**

(The Grey-headed Flycatcher.)

Specimen obtained—

Forest around Pachmarhi.—1 (sex?), 16.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 (sex?)	62	59	14	13

Field notes.—Fairly common in the forests around Pachmarhi.

Osmaston (1922, p. 455) says it is common at Pachmarhi in ravines and by streams, and breeds in June-July.

In western Central India, Ali and Whistler (1939, p. 92) recorded "*C. c. pallidor*" which they found uncommon.

As I have shown earlier ¹, I am unable to separate *pallidor* Ticehurst from the typical *ceylonensis*.

***Leucocirca aureola aureola* (Lesson).**

(The White-browed Fantail-Flycatcher.)

Specimen obtained—

Pachmarhi.—1♀, 14.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	80	89	18	14

Colour of bare parts.—Iris dark chocolate brown. Bill black. Legs, feet and claws horny black. Pads dirty white.

Field notes.—Saw a flock of about 10 on the golf links at Pachmarhi.

Osmaston (1922, p. 453) says it is fairly common at Pachmarhi in the cold weather but does not breed there.

In western Central India, Ali and Whistler (1939, p. 92) found it common.

Family LANIIDAE.

***Lanius schach perythronotus* (Vigors).**

(The Rufous-backed Shrike.)

Specimens obtained—

Singanama.—1♂, 18.2.41.

Pipariya.—2♂♂, 23.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
3 ♂♂	86.5-90	109-116	30	17-21.5

Colour of bare parts.—Iris dark brown or chocolate brown. Bill black—in one ♂ the lower bill pale fleshy horny. Legs, feet and claws dull horny grey to black. Pads dirty white.

Field notes.—Two or three seen at Singanama near cultivated fields. Fairly common at Pipariya where several were seen sitting singly on hedges near cultivated fields.

The testes of the three males (Feb. 18th-23rd) were small and measured 2×1 mm.

Osmaston (1922, p. 455) says it is not common on the Pachmarhi Plateau but is seen there occasionally in winter.

¹ Roonwal, M. L., *Rec. Ind. Mus.* XLI, p. 292 (1939).

North of the Hoshangabad District, Ali and Whistler (1939, p. 93) found it in western Central India, where some were seen carrying nest material on August 25th.

Systematic note.—I have followed Whistler and Kinnear¹ who have cleared up the question of the races of this shrike. In the skins from the Hoshangabad District the rufous extends to all the scapulars. I consider these skins *erythronotus*. The wings are much smaller (86.5-90 mm.) than the measurements given by Whistler and Kinnear.

Family CAMPEPHAGIDAE.

Pericrocotus peregrinus peregrinus (Linnaeus).

(The Small Minivet.)

Specimens obtained—

Around Pachmarhi.—1♂, 9.2.41 ; 1♂ (first winter), 11.2.41 ; 1♂, 12.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ad. ♂♂	69-70	78.5-80.5	17-18	12.5-14.5
1 imm. ♂	68	78	16.5	

Colour of bare parts.—Adult ♂ : Iris dark brown. Bill black. Legs, feet and claws horny black. Pads pale horny. First winter ♂ : Upper bill horny black ; lower bill dull fleshy plumbeous at base and darker at tip. Rest as in adult ♂.

Field notes.—Common at Pachmarhi. The testes of one of the males (Feb. 12th) were small, measuring 1×1 mm.

Osmaston (1922, p. 455) says it is very common on the Pachmarhi Plateau and breeds in April and May.

In western Central India, Ali and Whistler (1939, p. 94) found it common ; family parties were noted in August-September.

Systematic note.—Following the able exposition of the races by Whistler and Kinnear², I have rejected the confusing account of this minivet by Stuart Baker³, the name *cinnamomeus* has not been accepted.

Graucalus macei macei Lesson.

(The Large Indian Cuckoo-Shrike.)

Specimens obtained—

Pachmarhi.—1♂, 13.2.41.

Singanama.—1♂, 20.2.41 ; 1♀, 20.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	167-175	132-138	25-26	28-29
1 ♀	160	133	27	28

¹ Whistler, H. and Kinnear, N. B., *Journ. Bombay Nat. Hist. Soc.* XXXVI, p. 336 (1933).

² Whistler, H. and Kinnear, N. B., *Journ. Bombay Nat. Hist. Soc.* XXXVI, p. 342 (1933).

³ Stuart Baker, E. C., *Faun. Brit. Ind., Birds* (2nd ed.) II, p. 329 (1924).

Colour of bare parts.—Iris dark brown in male, dark rufous brown in female. Bill, legs, feet and claws black. Pads dirty white.

Field notes.—Only one seen at Pachmarhi on the top of a tree. At Singanama also seen on tops of trees. Evidently rare.

The gonads of the three specimens (Feb. 13th and 20th) were in the non-breeding condition, and measured thus : testes about 2×2 mm. ; ovary 4×3 mm.

Osmaston (1922) says it is common at Pachmarhi and breeds in April.

Ali and Whistler (1939, p. 94) recorded it from several places in western Central India.

Family DICRURIDAE.

Dicrurus macrocercus peninsularis Ticehurst.

(The Black Drongo.)

Specimens obtained—

Pipariya.—1♀ (first winter), 23.2.41.

Harda.—1♀, 3.3.41 ; 1♂ (first winter), 3.3.41.

Elsewhere noted at : Itarsi.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ad. ♀	140	154	21	23
1 imm. ♀	134	138	22	24
1 imm. ♂	135	134	24	23

Colour of bare parts.—Adult ♀ : Iris chocolate brown. Bill glossy black. Legs, feet and claws black. Pads smoky.

Field notes.—Common at Pipariya and Harda where they were met with usually singly and sitting on telegraph wires. At Itarsi they were seen in association with grazing cattle, often hopping on to their backs.

Systematic note.—I have followed Ticehurst's¹ revision of *D. macrocercus*. Birds from western Central India and from southern Central Provinces are also said to be *peninsularis*.

Osmaston (1922, p. 454) says it was only once seen at Pachmarhi.

In western Central India, just north of the Hoshangabad District, Ali and Whistler (1939, p. 95) recorded *D. m. peninsularis* as common.

Dicrurus caerulescens caerulescens (Linnaeus).

(The White-bellied Drongo.)

Specimen obtained—

Around Pachmarhi.—1♂, 10.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	131	129	20	23

¹ Ticehurst, C. B., *Journ. Bombay Nat. Hist. Soc.* XXXVI, pp. 927-929 (1933).

Colour of bare parts.—Bill, legs, feet and claws horny black.

Field notes.—Only one or two seen at Pachmarhi.

Osmaston (1922, p. 454) says it is the common King Crow of the Pachmarhi Plateau and breeds in March-April.

In western Central India, Ali and Whistler (1939, p. 95) found it common ; they recorded it as breeding in April.

Family ORIOLIDAE.

Oriolus xanthornus maderaspatanus Franklin.

(The Central Indian Black-headed Oriole.)

Specimen obtained—

Pachmarhi.—1 (sex?), 15.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 (sex?)	142	95		29

Field notes.—Fairly common at Pachmarhi ; seen singly on tall trees. Not noted elsewhere.

Osmaston (1922, p. 455) says it is common on the Pachmarhi Plateau and breeds in May.

In western Central India, Ali and Whistler (1939, p. 99) found it rare, having noted it only at Guna in the Gwalior State.

Systematic note.—I have followed Whistler and Kinnear's ¹ exposition of the races of this bird. The Pachmarhi specimen is *maderaspatanus*.

Family FRINGILLIDAE.

Carpodacus erythrinus roseatus (Blyth).

(The Common Indian Rose-Finch.)

Specimen obtained—

Around Pachmarhi.—1 ♂, 15.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	84	61	19	14

Colour of bare parts.—Iris dark brown. Upper bill horny ; lower bill silvery grey. Legs and feet dark horny brown. Claws horny. Pads dirty white.

Field notes.—A pair seen on a tree about 2 miles from Pachmarhi.

The testes of the ♂ (Feb. 15th) were small and measured 1×1 mm.

Osmaston (1922) does not include this Rose-Finch in his list of Pachmarhi birds.

¹ Whistler, H. and Kinnear, N. B., *Journ. Bombay Nat. Hist. Soc.* XXXVI, p. 584 (1933).

Ali and Whistler (1939, p. 101) recorded *C. e. erythrinus* as being a common winter visitor (Sept. 15th to April 7th) to western Central India, just north of the Hoshangabad District; they did not find *C. e. roseatus*.

***Gymnoris xanthocollis xanthocollis* (Burton).**

(The Yellow-throated Sparrow.)

Specimens obtained—

Around Pachmarhi.—2 ♂♂, 14.2.41; 1 (sex ?), 14.2.41.

Singanama.—1 ♂, 19.2.41.

Pipariya.—1 ♀, 22.2.41; 1 (sex ?), 22.2.41.

Elsewhere noted at : Itarsi.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
3 ♂♂	79-86	55-61	16.5-19	14-15
1 ♀	78	56	18	13
2 (sex ?)	80.5-85	51-56	17-18	13.5-14.

Colour of bare parts.—♂ : Iris olive brown to chocolate brown. Bill waxy dark brown. Legs, feet and claws dull slaty. ♀ : Not noted.

Field notes.—Extremely common at Pachmarhi, especially near the cultivated fields where they congregate in the mornings in flocks of 30 or more, making a chirping din characteristic of sparrows. Also common at Singanama near cultivated fields, and at Pipariya. At Itarsi they were seen picking grain on meadows in large flocks of over 100 birds.

The gonads of the four birds examined at Pachmarhi and Pipariya were all in the quiescent state. The testes measured about 1×1 to 2×1 mm.; the ovary (Pipariya, Feb. 22nd), 4×4 mm.

Osmaston (1922, p. 456) says it is extremely common at Pachmarhi.

In western Central India, Ali and Whistler (1939, p. 101) found it common in the dry season but absent in August and early September, appearing again in late September; they considered it a "decidedly local migrant"

Family MOTACILLIDAE.

***Motacilla maderaspatensis* J. F. Gmelin.**

(The Large Pied Wagtail.)

Specimens obtained—

Itarsi.—1 (sex ?), 24.2.41.

Bank of R. Narbada at Handia.—1 ♂, 27.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	96	107	28	19
1 (sex ?)	101	109	29	21

Colour of bare parts.—Iris dark brown. Bill black. Legs, feet and claws horny black. Pads smoky white.

Field notes.—A few seen near a stream at Itarsi, and on the banks of the Narbada at Handia.

The testes of the Handia ♂ (Feb. 27th) were enlarged and measured 4×4 mm., suggesting breeding in March.

Osmaston (1922) does not include this bird in his Pachmarhi list.

In western Central India, Ali and Whistler (1939, p. 103) found it fairly common and evidently breeding in April.

Motacilla cinerea caspica (S. G. Gmelin).

(The Eastern Grey Wagtail.)

Specimen obtained—

Pachmarhi (at “ Small Waterfall ”).—1 (sex ?), 16.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 (sex ?)	..	83	96	20	17.5

Field notes.—Only one seen at the “ Small Waterfall ” near Pachmarhi.

Osmaston (1922, p. 456) says it is a common winter visitor to the Pachmarhi Plateau, arriving about 1st September.

In western Central India, Ali and Whistler (1939, p. 103) found it at several Places in winter (earliest date Sept. 5th, latest Apr. 8th); some were in the breeding dress.

Anthus hodgsoni hodgsoni (Richmond).

(The Indian Tree-Pipit.)

Specimen obtained—

Around Pachmarhi.—1 ♀, 12.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
1 ♀	..	..	87.5	62	22	14

Field notes.—One seen at Pachmarhi.

Osmaston (1922, p. 456) says it is very common at Pachmarhi in winter, leaving that place in April.

Ali and Whistler (1939, p. 104) did not come across it in western Central India.

Family ALAUDIDAE.

Ammomanes phoenicura phoenicura (Franklin).

(The Indian Rufous-tailed Finch-lark.)

Specimens obtained—

Singanama.—1 ♂, 20.2.41.

Bank of R. Narbada at Sandia.—1 ♂, 21.2.41 ; 1 ♀, 21.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	104-109	67-79	24	17
1 ♀	100	67	23	14

Colour of bare parts.—Iris dark brown. Upper bill horny ; lower bill pale horny with dark tip. Legs and feet pale rufous. Claws pale horny.

Field notes.—A pair seen in a stubble field at Singanama. Common singly or in twos and threes on the banks of the Narbada at Sandia, probably coming from the adjoining fields to drink. This habit of frequenting banks of rivers does not appear to have been recorded before.

The gonads of the three specimens (Feb. 20th, 21st) were in the breeding condition. The testes measured about 5×4 mm. ; the ovary about 8×8 mm., with the largest egg-follicles about 1×1 mm.

I did not see it at Pachmarhi, nor does Osmaston (1922) record it from there.

In western Central India, Ali and Whistler (1939, p. 106) found it fairly common in open cultivated country but make no mention of having seen it on river banks ; specimens taken on 16th February had maturing gonads ; they were found in flocks of 50 or more in September.

Family NECTARINIIDAE.

Leptocoma asiatica asiatica (Latham).

(The Indian Purple Sunbird.)

Specimen obtained—

Around Pachmarhi.—1 ♂ (metallic plumage), 10.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	56	37	15	21

Colour of bare parts.—Iris dark brown. Bill, legs, feet and claws black.

Field notes.—Only one or two seen in the jungle around Pachmarhi.

The testes of the ♂ (Feb. 10th) were moderately enlarged and measured 1.5×1.5 mm.

Osmaston (1922, p. 456) says it is common in Pachmarhi and breeds during April to June.

In western Central India, Ali and Whistler (1939, p. 106) found it common ; they record it as breeding in March-April.

Order CORACIIFORMES.

Family PICIDAE.

Dryobates mahrattensis (subsp. ?).

(The Yellow-fronted Pied Woodpecker.)

Specimen obtained—

Singanama.—1 (sex ?), 19.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 (sex ?)	104	69	20	25

Colour of bare parts.—Iris dark red. Bill waxy grey, darker at tip. Legs and feet waxy grey. Claws horny.

Field notes.—Only one seen at Singanama, tapping persistently on the bark of a tree.

Osmaston (1922, p. 456) says it is not uncommon on the Pachmarhi Plateau.

In western Central India, Ali and Whistler (1940, p. 470) found it common ; a nest with parents feeding the half-grown chicks was found on April 16th.

Family CAPITONIDAE.

Thereiceryx zeylanicus (subsp. ?).

(The Green Barbet.)

Specimen obtained—

Pachmarhi.—1 ♂, 15.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂ ..	120	80	28	31.5

Colour of bare parts.—Iris brown. Bill pink. Legs and feet fleshy yellow. Claws horny. Bare skin around the eyes yellowish.

Local name.—"Gummā "

Field notes.—Only one seen at Pachmarhi ; evidently rare at this time.

The testes of the ♂ (Feb. 15th) were fairly enlarged and measured 5×3 mm.

Osmaston (1922, p. 456) says it is very common at Pachmarhi, and breeds in April-May.

In western Central India, Ali and Whistler (1940, p. 471) found it only at two places in the Bhopal and Gwalior States ; the Bhopal skins were *T. z. caniceps* (Frankl.), while the one from further north, i.e., Gwalior, was intermediate between the subspecies *caniceps* and *kangrae*,

Family PSITTACIDAE.

Psittacula cyanocephala cyanocephala (Linnaeus).

(The Western Blossam-headed Paroquet.)

Specimens obtained—

Pachmarhi.—1 ♂, 15.2.41 ; 1 ♀, 15.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	..	139	(197)	15.5	19
1 ♀	..	..	142	187	14	22.5

Colour of bare parts.—♂ : Iris straw yellow. Upper bill pale orange ; lower bill black. Legs, feet and claws mottled horny. Pads dirty white. ♀ : Iris very pale yellow. Upper bill yellow ; lower bill horny. Rest as in ♂.

Field notes.—Common at Pachmarhi in flocks of 8 or 10.

The ovary of the ♀ measured 6×4 mm. and was evidently in the semi-quiescent stage.

Osmaston (1922, p. 457) says it is common in and around Pachmarhi.

In western Central India, just north of the Hoshangabad District, Ali and Whistler (1940, p. 472) found *P. c. bengalensis* ; these were common and were breeding or about to breed in January.

Family CORACIIDAE.

Coracias benghalensis benghalensis Linnaeus.

(The Indian Roller or Blue Jay.)

Specimen obtained—

Pachmarhi.—1 ♂, 14.2.41.

Elsewhere noted at : Pipariya ; Itarsi.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	..	186	129	20.5	41

Colour of bare parts.—Iris dark brown. Naked orbital skin pinkish ochreous (not yellow). Bill horny black. Legs and feet dirty yellow. Claws black.

Local name.—" Leelkant "

Field notes.—Fairly common at Pachmarhi, moving about singly. Common at Pipariya and Itarsi where they were often noticed sitting singly on telegraph wires and trees.

The testes of the ♂ (Feb. 14th) were in the non-breeding condition, and measured about 3×2 mm.

Osmaston (1922, p. 457) says it is common on the Pachmarhi Plateau and breeds in April-May.

In western Central India, Ali and Whistler (1940, p. 472) found it sparingly.

Family MEROPIDAE.

Merops orientalis orientalis Latham.

(The Common Indian Bee-eater.)

Specimens obtained—

Around Pachmarhi.—1 ♂, 14.2.41 ; 1 ♀, 14.2.41.

Singanama.—1 ♂, 20.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	..	..	90-97	115-129	9.5-11.5	33.5-35
1 ♀			94	120	12	34

Colour of bare parts.—Iris : Crimson with an outer white ring in ♂; bright crimson in ♀. Bill black. Legs and feet fleshy horny. Claws horny. Pads dirty white.

Local name.—"Hari sooi chiriā"

Field notes.—Common at Pachmarhi ; found singly or in small flocks of 10 or 15 on trees. Very common at Singanama.

The gonads of the specimens collected were small. The testes of two Pachmarhi and Singanama males (Feb. 14th-20th) measured 1×1 mm. ; the ovary of a Pachmarhi ♀ (Feb. 14th) measured 4×3 mm.

Osmaston (1922, p. 457) curiously, and I think due to oversight, does not include the Common Indian Bee-eater in his earlier Pachmarhi list, although I found it common enough. In a subsequent Pachmarhi list (1936, p. 66), however, he says it is very common.

In western Central India, Ali and Whistler (1940, p. 473) found it "not uncommon, but curiously sparse and local" In the last week of March they met with individuals with granular ovaries and also individuals digging nests.

Family ALCEDINIDAE.

Ceryle rudis leucomelanura Reichenbach.

(The North Indian Pied Kingfisher.)

Specimens obtained—

Harda.—1 ♂, 1.3.41 ; 1 ♀, 1.3.41 ; 1 ♀, 4.3.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	..	142	80	12	66
2 ♀♀		..	140-143	75-88	12	61-62

Colour of bare parts.—Iris very dark brown. Bill horny black. Legs, feet and claws smoky horny to black. Pads smoky white.

Field notes.—Common at Harda on banks of streams. Not noted elsewhere.

The three specimens shot at Harda (Mar. 1st-4th) were evidently breeding, as the gonads were greatly enlarged. The testes measured 8×5 mm. The ovaries measured 8×7 to 16×9 mm. and showed fairly large egg-follicles.

Osmaston (1922, p. 457) says it is occasionally seen around the lake at Pachmarhi.

In western Central India, Ali and Whistler (1940, p. 473) recorded a bird with ripe testes on Jan. 15th, and a nest on Feb. 4th; the ovaries of a ♀ on Sept. 7th were granular.

***Alcedo atthis taprobana* Kleinschmidt.**

(The Common Ceylon Kingfisher.)

Specimen obtained—

Harda.—1 ♂, 2.3.41.

Measurements (mm.)—

	Wing.	Bill.
1 ♂	69	44

Colour of bare parts.—Iris dark brown. Bill black. Legs, feet and pads reddish orange. Claws horny orange at base, horny at tip.

Testes of the ♂ shot on Mar. 2nd were moderately large, measuring 2.5×2 mm., evidently indicating breeding in the near future.

Field notes.—Seen occasionally at Harda near streams, but not common.

Osmaston (1922, p. 457) says it is not uncommon in and around Pachmarhi, and is a resident bird; the breeding season, however, is not stated.

In western Central India, Ali and Whistler (1940, p. 473) recorded mostly *A. a. bengalensis*, but also one specimen of *A. a. taprobana*.

***Halcyon smyrnensis* ?*smyrnensis* (Linnaeus).**

(The North Indian White-breasted Kingfisher.)

Specimens obtained—

Singanama.—1 ♂, 22.2.41.

Harda.—1 ♂, 3.3.41.

Elsewhere noted at: Pachmarhi.

Measurements (mm.)—

	Wing.	Tail.	arsus.	Bill.
2 ♂♂	122-123	94-95	16	62-64

Colour of bare parts.—Iris dark chocolate brown. Bill deep red. Legs and feet deep red to deep reddish orange, with smoky tinge in front. Foot pads reddish orange. Claws smoky horny.

Field notes.—One specimen seen at Pachmarhi on Feb. 14th; evidently rare at this time of the year. Fairly common at Singanama near streams. Not common at Harda where only a few were seen near streams.

The testes of both the males (Feb. 22nd and Mar. 3rd) were in the non-breeding condition, measuring about 2×1 mm.

Osmaston (1922, p. 457) says it is common on the Pachmarhi Plateau and breeds in April-May.

Systematic note.—Whistler and Kinnear¹ have shown that there is an indication of a larger North Indian race (*smymensis*) and a smaller South Indian race (*fusca*) of this kingfisher. By their size, the Hoshangabad District specimens would seem to belong to the typical race.

Family BUCEROTIDAE.

***Tockus birostris* (Scopoli).**

(The Common Grey Hornbill.)

Specimens obtained—

Pachmarhi.—1 ♀, 10.2.41.

Singanama.—1 ♂, 19.2.41.

Elsewhere noted at : Pipariya.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	216	297	50	116
1 ♀	205	288	(46)	90

Colour of bare parts.—♂ : Iris deep red-orange. Casque and base of bill black ; rest of bill waxy white. Legs, feet and claws horny. Pads dirty white. Bare area around eye black. ♀ : Iris with an outer ring of white merging into an inner brown ring. Rest as in ♂.

Field notes.—At Pachmarhi this bird was encountered on Feb. 10th in the forest close to the Chemical Warfare School, flying either singly or in groups of 8 or 10 on the tops of tall trees. Also seen a single specimen on Feb. 14th two miles north of Pachmarhi on the road to Pipariya. Common at Singanama, visiting the *Ficus* ("bar") trees close to the Rest House in the mornings between about 7 and 9 A.M., usually in pairs ; also common in the forests at Singanama towards R. Denwa. A few also seen at Pipariya on Feb. 22nd.

The call is a sharp, slightly hoarse and drawn out *Peen-n-n-n*, *Peen-n-n-n*, each lasting for about 5 seconds, with longer intervals between two successive *Peen-n-n-n*'s. It strongly recalls the call of the Common Pariah Kite.

The testes of the ♂ shot at Singanama on Feb. 19th were in the non-breeding condition and measured 4×3 mm.

Osmaston (1922, p. 457) says it is very common on the Pachmarhi Plateau, especially in the spring.

In western Central India, Ali and Whistler (1940, p. 473) found it common.

¹ Whistler, H. and Kinnear, N. B., *Journ., Bombay, Nat. Hist. Soc.* XXXVII, pp. 761, 762 (1935).

Family UPUPIDAE.

Upupa epos ceylonensis Reichenbach.

(The Ceylon Hoopoe.)

Specimens obtained—

Pachmarhi.—1 ♂, 12.2.41 ; 1 ♂, 13.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	..	..	135-139	98-105	21-23	56-57

Colour of bare parts.—Iris dark brown.*Local name.*—"Khatōlā"*Field notes.*—Tolerably common at Pachmarhi, moving about singly. Not seen elsewhere.The testes (12th-13th Feb.) were large and measured 3×2 to 5×4 mm., indicating breeding.

Osmaston (1922, p. 457) says it is common on the Pachmarhi Plateau and breeds in April.

In western Central India, Ali and Whistler (1940, p. 474) came across specimens of both *U. e. epops* and *U. e. ceylonensis*; some of these were evidently breeding in February and April.

Family ASIONIDAE.

Athene brama indica (Franklin).

(The Northern Spotted Owlet.)

Specimen obtained—

Pipariya.—1 ♂, 23.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	..	147	79	32	21

Colour of bare parts.—Iris lemon yellow. Bill greyish yellow. Feet and pads light buff. Claws horny.*Field notes.*—Only one seen during the day on the top of a tamarind tree.The testes (Feb. 23rd) were moderately enlarged and measured 4×3 mm., suggesting breeding in the near future.

Osmaston (1922, p. 458) says it occurs at Pachmarhi but is not common.

In western Central India, Ali and Whistler (1940, p. 475) found a bird with granular ovaries at Chanderi in the Gwalior State on April 8th.

Glaucidium radiatum radiatum (Tickell).

(The Jungle Owlet.)

Specimens obtained—

Forest around Pachmarhi.—1 ♂, 9.2.41.

Singanama.—1 ♂, 18.2.41 ; 1 ♀, 19.2.41.

Measurements (mm.)—

			Wing.	Tail.	Tarsus.	Bill.
2 ♂♂	..	..	130-132	78-80	27-28	19
1 ♀	..	..	136	84	(26)	

Colour of bare parts.—Iris bright yellow in ♂, lemon yellow in ♀. Bill ashy yellow. Feet and pads ashy ochreous. Claws horny with black tips.

Field notes.—One seen in the jungle near Pachmarhi, and two at Singanama. The testes of the ♂ (Feb. 18th) measured 3×2 mm.; the ovaries of the ♀ (Feb. 19th) measured 7×5 mm.

Osmaston (1922, p. 458) says the bird is common in the Pachmarhi forests and breeds in April-May.

Ali and Whistler (1940, p. 475) did not come across it in western Central India.

Order ACCIPETRES.

Family AEGYPTIDAE.

Pseudogyps bengalensis (J. F. Gmelin).

(The Indian White-backed Vulture.)

Specimen obtained—

Pachmarhi.—1 ♂, 12.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	(580)	214	(98)	62

Field notes.—Fairly common at Pachmarhi, being often seen in groups of 10 or 12 near carcasses on rocks. Often seen in company with the Neophron.

The testes of the ♂ (Feb. 12th) were in the quiescent stage, and measured 2.5×2 mm.

Osmaston (1922, p. 458) says it occurs on the Pachmarhi Plateau but does not breed there.

In western Central India, Ali and Whistler (1940, p. 476) found it common everywhere.

Neophron percnopterus ginginianus (Latham).

(The Neophron or Smaller White Scavenger Vulture.)

Specimen obtained—

Singanama.—1 (sex ?) (first winter ?), 19.2.41.

Elsewhere noted at: Pachmarhi; Itarsi.

NOTE.—The Singanama bird was acquiring the white adult plumage, but the brown patches were still evident in several places.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 (sex ?)	465	234	83	62.5

Colour of bare parts.—Iris white, with inner purple ring. (Stuart Baker, 1928, p. 23, does not give the colour of the iris; for the typical race he gives the colour as yellow or dark brown.) Bill fleshy grey (in immature bird). Bare skin on head and chin yellow. Legs and feet pinkish white. Claws dark horny.

Field notes.—Several specimens, both pure white (adults) and brown ones (immature first winter birds) were noted in small numbers at Pachmarhi on Feb. 12th and subsequently in company with the Indian White-backed Vulture, *Pseudogyps bengalensis*. All adults were yellow-beaked and, therefore, *ginginianus*. A solitary bird noted at Singanama (specimen collected). Also noted in fair numbers at Itarsi on Feb. 24th.

Osmaston (1922, p. 458) says it is common at Pachmarhi where it breeds on the cliffs; the breeding season, however, is not stated.

In western Central India, Ali and Whistler (1940, p. 476) noted two nests with brooding birds at Surwaya in the Gwalior State on the 22nd March.

Family FALCONIDAE.

Milvus migrans govinda Sykes.

(The Common Pariah Kite.)

Specimen obtained—

Pachmarhi.—1 ♀, 11.2.41.

Elsewhere noted at: All the places visited in the District.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	487	320	59	39.5

Colour of bare parts.—Bill horny. Legs and feet waxy grey-white. Pads dirty waxy-white. Claws horny.

Field notes.—Common at all the places visited in the Hoshangabad District.

Osmaston (1922, p. 458) also found it common at Pachmarhi. No indication of the breeding season in the District is available.

In western Central India, Ali and Whistler (1940, p. 477) found it common, especially in and about towns.

Order COLUMBAE

Family COLUMBIDAE.

***Streptopelia orientalis meena* (Sykes).**

(The North Indian Rufous Turtle-Dove.)

Specimen obtained—

Singanama.—1 ♂, 18.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	200	136	25	23

Colour of bare parts.—Bill fleshy horny. Legs and feet dark horny. Claws waxy horny. Pads pinkish white. Naked orbital skin grey beneath eye, dark pink elsewhere.

Field notes.—Only one or two seen at Singanama ; evidently rare.

The testes of the ♂ were small and measured 3×2 mm.

Osmaston (1922, p. 459) says it occurs in Pachmarhi throughout the year but is most common in winter.

Ali and Whistler (1940, p. 477) recorded a few specimens from the Gwalior and Bhopal States in western Central India.

Systematic note.—This bird is the *meena* Sykes of Whistler and Kinnear¹, i.e., the bird which breeds in the N. W Himalayas ; it is not the *meena* Sykes of Stuart Baker². (Also see Roonwal³, 1941, p. 328.)

***Streptopelia chinensis suratensis* (J. F. Gmelin).**

(The Indian Spotted Dove.)

Specimen obtained—

Around Pachmarhi.—1 ♀, 11.2.41.

Elsewhere noted at : Singanama.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	143	141	22	22

Local name.—"Pharki"—probably a general name for all doves.

Field notes.—Very common at Pachmarhi in thin forest on rocks and plains ; usually found singly. Extremely common at Singanama. None seen at Itarsi where it appeared to be absent, although other doves were seen.

¹ Whistler, H. and Kinnear, N. B., *Journ., Bombay, Nat. Hist. Soc.* XXXVIII, pp. 677-679 (1936).

² Stuart Baker E. C., *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 240 (1928).

³ Roonwal, M. L. *Rec. Ind. Mus.* XLIII, pp. 328-332 (1941).

Osmaston (1922, p. 459) says it is common in and around Pachmarhi.

In western Central India, Ali and Whistler (1940, p. 477) found it common ; a nest with eggs was met with on September 19th.

***Streptopelia senegalensis cambayensis* (J. F. Gmelin).**

(The Indian Laughing Dove or Little Brown Dove.)

Specimen obtained—

Itarsi.—1 ♂, 24.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	122	115	19	18

Colour of bare parts.—Naked orbital skin grey. Bill and cere horny black. Legs and feet purple. Claws horny black. Pads dirty grey-brown.

Field notes.—Common at Itarsi in meadows and thin forest. Not noted elsewhere.

The testes of the ♂ (Feb. 24th) were small and measured 3×2 mm.

Osmaston (1922) does not list it as a Pachmarhi bird.

Ali and Whistler (1940, p. 478) found it common in western Central India.

***Streptopelia decaocto decaocto* (Frivaldszky).**

(The Indian Ring-Dove.)

Specimen obtained—

Itarsi.—1 ♂, 24.2.41.

Elsewhere noted at : Harda.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♂		179	146	24	22

Colour of bare parts.—Naked orbital skin grey. Bill and cere horny black. Legs and feet purple. Claws horny black. Pads dirty pale brown.

Field notes.—Common at Itarsi where it was met with on trees in open grassland. A few seen at Harda.

The testes of the Itarsi ♂ (Feb. 24th) were small, and measured 2×2 mm.

Osmaston (1922) does not record it as a Pachmarhi bird.

In western Central India, Ali and Whistler (1940, p. 478) found it common, and obtained nests with eggs on September 18th.

Order GALLINAE.

Family PHASIANIDAE.

Galloperdix lunulata (Valenciennes).

(The Painted Spur-Fowl.)

Specimen obtained—

Forest around Pachmarhi.—1 ♂ (labelled ♀ in the field, evidently by mistake ; has ♂ plumage), 10.2.41.

NOTE.—The specimen was purchased at Pachmarhi from a local *shikari* who said he got it from the jungles near Pachmarhi.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
1 ♂	..	159	132	38	23

Field notes.—The specimen is in moulting and new feathers are seen developing on the rump ; the tail shows only 8 feathers. Both the tarsi have two spurs each.

Osmaston (1922, p. 459) says it is common at Pachmarhi on rocky slopes.

In western Central India, Ali and Whistler (1940, p. 478) found it at several places ; specimens taken in March and April had maturing gonads.

Order CHARADRIIFORMES.

Family CHARADRIIDAE.

Lobivanellus indicus indicus (Boddaert).

(The Indian Red-Wattled Lapwing.)

Specimens obtained—

Itarsi.—1 ♀, 27.2.41.

Bank of R. Narbada at Handia.—1 ♀, 27.2.41.

Measurements (mm.)—

		Wing.	Tail.	Tarsus.	Bill.
2 ♀♀	..	210-227	111-131	73-74	36-37

Colour of bare parts.—Iris red with a narrow pink outer ring. Bill with tip smoky, rest deep pink. Wattle near eye deep pink. Tibia, tarsus and feet dirty yellow. Claws smoky. Pads pale smoky.

Field notes.—Common at Itarsi near streams where they were seen in association with grazing cows. Exhibited a semi-gregarious tendency. Also very common on the banks of the Narbada at Handia.

The ovary of the Itarsi specimen (Feb. 25th) was enlarged, measuring 12×9 mm. ; some of the egg-follicles measured 1.5×1.5 mm. The Handia specimen (Feb. 27th) had a smaller ovary, 5×5 mm.

In western Central India, Ali and Whistler (1940, p. 484) found it common.

Family SCOLOPACIDAE.

Tringa hypoleucos Linnaeus.

(The Common Sandpiper.)

Specimen obtained—

Bank of R. Narbada at Sandia.—1 ♂, 21.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂	107	62	23	30

Colour of bare parts.—Iris dark brown. Upper bill fleshy smoky, darker at tip ; lower bill fleshy, smoky at tip.

Field notes.—A few seen on the bank of the Narbada at Sandia.

In western Central India, Ali and Whistler (1940, p. 485) found it common, the last date being April 19th.

Order HERODIONES.

Family PLEGADIDAE.

Thereskiornis melanocephala (Latham).

(The White Ibis.)

Specimen obtained—

R. Narbada at Handia.—1 ♂ (juv.), 27.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♂ (juv.)	322	123	92	141

Colour of bare parts.—Iris brown.

Field notes.—A few, perhaps 8 or 10, seen on the Narbada at Handia in small parties of 2 to 4.

The testes of the juv. ♂ (Feb. 27th) measured 6×4 mm.

In western Central India, Ali and Whistler (1940, p. 486) found it in small parties in the Bhopal State and the Gwalior State.

Family ARDEIDAE.

Egretta garzetta garzetta (Linnaeus).

(The Little Egret.)

Specimen obtained—

R. Narbada at Handia.—1 ♀ (breeding plumage), 27.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	260	99	92	82

Colour of bare parts.—Iris brown.

Field notes.—Fairly common on the Narbada at Handia, going about singly or in pairs.

The ovary of the ♀ was fairly enlarged and measured 11×6 mm., suggesting breeding in the near future.

In western Central India, Ali and Whistler (1940, p. 487) noted it in the Bhopal State and the Gwalior State.

***Ardeola grayii* (Sykes).**

(The Indian Pond Heron or Paddy Bird.)

Specimen obtained—

R. Narbada at Handia.—1 ♀ (non-breeding plumage), 27.2.41.

Measurements (mm.)—

	Wing.	Tail.	Tarsus.	Bill.
1 ♀	202	77	59	71

Colour of bare parts.—Iris yellow-brown.

Field notes.—Fairly common on the Narbada at Handia. The ovaries were small and measured 4×3 mm.

Osmaston (1922, p. 459) says it is fairly common by the lake at Pachmarhi.

In western Central India, Ali and Whistler (1940, p. 487) found nesting birds in Sangi Tank near Mandleshwar in the Indore State on September 5th.