#### NOTES ON THE BIRDS OF THE SIKKIM HIMALAYAS.

By

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PART VI.

(With 2 plates.)

(Continued from page 379 of this Volume.)

#### 344. Elwes's Horned Lark. Otocorys alpestris elwesi.

Recorded for Sikkim at nearly 18,000' at which elevation Blanford met with this Lark. (Kongra Lama Pass between 15-16,000'. Donkia Pass, 18,000'.)

#### 345. The Long-billed Calandra Lark Melanocorypha maxima. Gould.

Recorded for the higher parts of Sikkim. Observed up to 15,200' in Tibet. (Walton.)

#### 346. The Tibet Skylark. Alauda arvensis leiopus Hume.

I have not been fortunate to meet with any species of Skylark in these hills, though I have a distinct impression of a crested Lark without any pronounced form and colour characters, seen in the winter of early March 1920 at 8,800' in Lachung; this records might also in the circumstances refer to Galerida sp? as it was not secured. Mr. N. B. Kinnear regards Alauda inopinata Bianchi as a purely Tibetan species; until specimens actually turn up from the Sikkim Himalayas for identification and comparison the status of any species of Alauda must remain very obscure. A. inopinata was obtained at Khamba Dzong at 15,000' in June and July by the Mount Everest Expedition.

#### 347. The Small Kashmir Skylark. Alauda gulgula guttata.

Evidently obtained by Mandelli in June from somewhere in the far interior as Kinnear refers to four skins in the National Collection, one of which is from Sikkim.

### 348. The Rufous Short-toed Lark. Calandrella brachy-dactyla dukhunensis. (Sykes.)

I saw undoubted birds of a species of Calandrella or Mirafra and took their eggs at about 7,500' in the Mai Khola in East Nepal, unfortunately I failed to secure any specimens. Blanford records it as common in all the higher valleys of Northern Sikkim above 12,000 especially abundant at Yumthang,12,000', Momay Samdong, 15,000' and Phalung, 16,000'. "At the latter place early in October, the Short-toed Larks were in flocks of several hundreds just as they are found in March in the plains of India". These records refer to Alauda brachydactyla but might well include the next species. Obtained by the Mount Everest Expedition up to 17,000'.

#### Brook's Short-toed Lark. Calandrella acutirostris tibetana Brooks.

Obtained by the Mount Everest Expedition at 14,000'.

Possibly may occur in the extreme north which remark also applies to Galerida cristata leatungensis (Swinh.).

#### 349. The Western White-eye. Zosterops palpebrosa elwesi. Stuart Baker.

Commonly and generally distributed up to 5,000′ at all events. Occurs at Gopaldhara, 4,700′, during the cold-weather months & 31-12-11. In all likelihood reaches an elevation of 7,000′ as recorded for the Himalayas.

#### 350 The Himalayan Yellow-backed Sunbird. Æthopyga siparaja seheriæ (Tick.).

Recorded for the "Himalayas up to 7,000' in summer". This elevation is entirely erroneous for the Sikkim Himalayas. Confined to low elevations only Entirely absent from the valleys of the foot-hills in the west which do not support a plains-fauna. Nurbong at 2,000', 21-2-14, conspicuous by their numbers. Obtained in the Tista Valley up to an elevation of 3, 600'. (G. E. Shaw).

# 351. The Fire-tailed Yellow-backed Sunbird. Æthopyga ignicauda ignicauda (Hodgs.).

Irregularly distributed from 2,000' and undoubtedly lower on occasions, up to over 10,000' in winter and higher in summer Phalut, 11,800', August. This Sunbird ascends the highest of the several species represented in the Sikkim, "Himalayas." "Observed by Blanford at 11,000'". Kalo Pokhari, Nepal-Sikkim Frontier, 10,160' These sunbirds were often seen in parties during brief, sunny spells of weather haunting the birch and rhododendron trees, when in flower in late March and early April, all vegetation and the surroundings being enveloped in a coating of snow at this time. A drop in the temperature or the wafting up of the clouds would force them into the valley below. Nurbong, 2,000', an immature male observed on the 20th of February and a similar male in March 1914. Eighteen specimens examined. Gopaldhara, 4,720', of 16-11-20 (a), juvenile no moult, breast suffused with orange-red, remainder of lower plumage greenish-yellow, rump yellow, upper tail-coverts crimson; in all other respects similar to the adult female. 4,700' & 28-12-11, (b), juvenile, similar to (a) with the exception that the red on the breast is wanting, the tail is margined externally with rulous, a few feathers on the upper surface showing signs of the change into the adult plumage. 4,720', 3 16-11-20, (c), similar to (a) excepting the tail is margined externally with rufous, and one middle feather is 63 mm. longer than the next pair; evidently an abnormality for this juvenile stage of plumage. Kalo Pokhari, 10,000', \$\times\$ 18-3-12, partial moult on crown. 8,500', 3, 28-3-12, partial moult on crown and throat.

Kalo Pokhari, 10,000′, & 18-3-12, partial moult, middle pair of tail feathers shorter than the remainder, measuring 30 mm. in total length. 8,500′, & 19-3-12, in moult. Darjeeling, 6,500′, & 13-304, partial moult. Gopaldhara, 6,000′, & 10-3-18, in moult; & 10-3-18, in moult. These five specimens agree with the first specimen in respect to the middle pair of the tail feathers, which measure in the order taken, 24, 32, 24, 30 and 39 mm. respectively.

Kalo Pokhari, 10,160′, ♂ 17-3-12. adult, middle pair of the tail feathers longer than the next pair by 24 mm. ♂ 20-3-12; ♂ ,22-3-12; ♂ 2-4-12; ♂ 3-4-12. These four adult specimens agree with the first specimen in having the middle pair of tail feathers longer than the next pair in the order taken by 19, 25, 16 and 26 mm. respectively. Five others collected, but not available for comparison; these did not vary in any appreciable extent from the average. Thus the elongated middle pair of tail feathers of the adult male; the measurement of which is given byOates as exceeding the next pair in length by2.7″=69mm. takes several months to reach their extreme length which is probably not attained before July and may not always be reached within the year, and this is further

confirmed by an adult of 11-8-05 showing a measurement of 61 mm. in this respect.

Blanford's record refers to the Cho La Range, 11,000', August.

### 352. Mrs. Gould's Sunbird. Æthopyga gouldiæ gouldiæ (Vig.).

Uncommon. Found at all elevations of from 4,000'-10,000' according to season. Once observed on the Mirik Ridge above Namsoo at an elevation of 4,000', exact date overlooked, probably late March or early April. Kalo Pokhari, 10,160',  $\Im$  Q 17-3-12;  $\Im$   $\Im$  22-3-12. With the exception of one other female these specimens constituted the sum total of this Sunbird's appearance on the Ridge, which occurred during a few days of tropical heat; they had come up from the densely wooded valley below, on the Sikkim side of the Frontier. Gopaldhara, 4,720',  $\Im$  15-3-16,\*  $\Im$  16-11-20, only this single male secured; as I failed to discern the female which was in all likelihood mixed up with the numerous immature males and females of  $\mathscr{E}$ . ignicauda.  $\Im$   $\Im$   $\Im$  2-11-21. First arrivals, which appeared immediately the cherry blossom opened.

This Sunbird was much in evidence at this time, dwindling down gradually until the 13th of this month when the flowers had mostly set and the last bird had disappeared: two males are in partial moult not having yet attained the full adult plumage.

#### 353. The Black-breasted Sunbird. Æthopyga saturata (Hodgs.).

Generally distributed. Occurs up to an elevation of 6,000' at all events in "the rains". During "the cold weather" it keeps to the warmer bottoms of the valleys. Gopaldhara, 4,720' Only a few birds of this species are to be seen in this "Sunbirds' paradise" when the cherry trees are in blossom in November, as there is no appreciable augmentation of their numbers as is so noticeable with £. ignicauda and in some measure £. gouldiæ at this favourable time; yet they frequent scattered cherry trees at lower limits to some extent along with £. nipalensis. During late April, I have seen odd birds probing the flowers of the cardamom at ground level.

### 354. The Nepal Yellow-backed Sunbird. Æthopyga nipalensis nipalensis. (Hodgs.).

Found at all elevations of from 3,500'-10,000' both in the Interior of Sikkim and on the Outer Ranges. Only recorded up to 6,000' for the Himalayas. Gopaldhara, 3,500',  $\delta$  17-1-19, the tail in this male has not acquired its full length. 4,700',  $\delta$  24-12-11, the head, throat, breast and back are undergoing moult into the adult stage of plumage. Sonada, 6,500',  $\delta$  6-2-17, adult. Lepcha Jagat, near Ghoom,  $\delta$  28-5-16\*. Common around Singhik at an elevation of 4,600' during the second week of March, 1920. Kalo Pokhari, Nepal-Sikkim Frontier, 7,000'-10,000'. A series of  $10 \delta \delta$ ,  $4 \varphi \varphi$  collected during March and April 1912; all of which are fully adult. Oates remarks the female is undistinguishable from the female of  $\mathcal{L}$ , seheriæ. A comparison of a series of both species shows  $\mathcal{L}$ . nipalensis to have the back a more defined yellowish-green, the throat to breast to be darker than in any specimens of  $\mathcal{L}$ . seheriæ, also some females of  $\mathcal{L}$ . seheriæ have the mantle feathers tinged in places with red. All these characters are easily discernable in well-prepared skins.

### 355. The Purple Sunbird. Cyrtostomus asiaticus asiaticus (Lath.).

A plains-species. Recorded as found up-to 5,000′ (Himalayas). This elevation is certainly not applicable to the typical form for Sikkim. It occurs in the

Eastern Dooars at Kumargram on the borders of Assam; where it does not encroach on the heavily forested region at the base of the hills. Specimens collected hereabouts in the plains in January 1922, have the back and upper tail-coverts of a steely-blue in comparison with the purple tone of specimens from farther west (Behar).

#### 356. The Larger Streaked Spider-hunter. Arachnothera magna magna (Hodgs.).

Commonly occurs in the Rungbong Valley up to an elevation of at least 5,000′, wherever it can find the clumps of plantain trees in the folds of whose leaves it constructs its nest. Obtained around Mangpu at an elevation of 3,600′, (G.E. Shaw.) and at Turzum, 5,200′, 17-4-21, (O. Lindgren). Gopaldhara, 4,720′, 21-5-23\* seen to take a spider out of a bed of Nicotiana flowers and demolish it on the ground.

# 357. The Sikkim Yellow-vented Flower-pecker. Dicæum chrysorrhœum intensum Stuart Baker.

A Plains-Flower-pecker obtained at elevations of 500' at Golar Ghat, Mahanuddi River, 3 29-12-20, up to 2,500', 3 23-2-21 in the Tista Valley. (G.E. Shaw).

### 358. The Fire-breasted Flower-pecker. Dicæum ignipectum (Hodgs.).

Generally distributed from 3,500-10,000′. Only recorded up to 7,000′ for the Himalayas. Partial to forest; during "the cold weather" it may be found in sparsely wooded tracts. Commonly occurs around Gopaldhara, 3,500′,  $\circlearrowleft$  31-1-19; 5,000′,  $\Lsh$  2 5-1-12;  $\circlearrowleft$  19-1-19; 4,900′,  $\Lsh$  21-12-19, obtained amongst the tangled growth of a lofty tree. 5,500′,  $\circlearrowleft$  21-12-19, shot whilst pecking away at the berries of a forest-tree,—name unknown. 5,800′,  $\between$  17-2-18; 5,000′,  $\between$  2-3-18.;  $\between$  16-3-16. 6,000′,  $\between$  10-3-18. In March 1919, females were much more in evidence than males; all were gaily chattering from the topmost branches in an incessant volume of song for such a small bird. Equally plentiful at elevations of 4,600′-4,800′ around Singhik on the 23-2—12-3-20.

#### 359. The Plain-coloured Flower-pecker. Dicæum minul-

In all probability occurs at the base of the hills in the Terai. Easily overlooked. Found in fair numbers in the densely forested area at the foot of the hills of Bhotan on the Raidak River in the Eastern Dooars, at the end of January 1922. Very noisy as they poured out their lively trill from the tops of the lofty trees. Specimens collected 25-1-22, showed the birds to be about to nest.

Soft parts: Iris brown; bill plumbeous-grey, upper mandible and tip of lower mandible blackish-plumbeous; tarsus plumbeous horny; soles grey. Dicœum cruentatum cruentatum (L.) is only likely to be found at plains-levels.

# 360. The Thick-billed Flower-pecker. Piprisoma squalidum squalidum. Burton.

Recorded for the "Himalayas at low elevations from the Sutlej Valley to Sikkim." I have seen no specimens collected nearer to these hills than Tirhut in Behar. C.M. Inglis.

### 361. The Yellow-bellied Flower-pecker. Pachyglossa melanoxantha. Hodgs.

Evidently rare and extremely local. Obtained near Sonada at 6,500′,  $\beta$  in May 1920 and  $\beta$  27-3-21. I am under the impression several scattered males, the females possibly overlooked, came under my observation in December 1911, when working the Semana-Mirik Ridge above Gopaldhara at an elevation of from 5,500′-6,000′. At the time I took them for *Chalcoparia singalensis*, a bird

which could not possibly occur hereabouts; as no specimens were secured this record lacks substantiation. Mr. G.E. Shaw's specimens are the only ones I have seen.

#### 362. The Ruby-cheek. Chalcoparia singalensis singalensis (Gmel.).

This species is gregarious in the cold-season when it occurs at this period in parties. Obtained at Bhotan Ghat on the Raidak River Eastern Dooars, in January 1922, 3 2 22-1-22. There was quite a crunching noise audible, caused by this small party of birds, out of which one pair was secured, as they probed vigorously with their bills, sometimes hanging on with their feet to the dry leaves reminding me more of the actions of White-eyes without their delicate movements.

Soft parts: Iris red-brown; bill black; tarsus yellowish-plumbeous, soles similar.

### 363. The Blue-naped Pitta. Pitta nipalensis nipalensis (Hodgs.).

Occurs sparingly around Gopaldhara upto 5,000' or thereabouts, and up to 3,700' at all events at Mangpu, (G. E. Shaw), at this same locality Gammie obtained it breeding twice at 5,000' in June.

Juvenile, 16-6-16, agrees with Oates's description in so far as that goes. Forehead to nape, feathers centred with pink, shading into pale ochreous, giving it a streaky appearance; upper portion of orbital ring fulvous; upper plumage black with broad fulvous spots, very prominent on the wing-coverts; primary-coverts black; wing and tail ochreous-green, the tips of the tail with ochreous centres; chin and throat, pink merging into fulvous and black of the posterior and upper portions of the ear-coverts and sharply defined from the black, fulvous-tipped feathers of the breast; belly, entirely pink with faint dusky edges; under tail-coverts with broad-white tips, tinged with ochreous and pink.

Soft parts: Juvenile, Iris hazel-brown; bill orange lobster-red; upper mandible dusky in centre; tarsus pale dusky lobster-red.

#### 364. The Indian Pitta. Pitta brachyura (L.).

I have observed this beautiful Pitta on one occasion 11-6-19° only, at a low elevation in the Great Rangit Valley. The B. M. Coll. also contains a single specimen collected by Mandelli from the Lower Hills in April 1874. The nearest locality where it commonly occurs is Behar and it is well represented by Hodgson's specimens in the National Collection.

#### 365. The Green-breasted Pitta Pitta cucullata cucullata. Hartl.

Probably confined to the Terai and Foot-hills only, in a similar lay of land and heavy forest to that, in which it occurred on the North frontier of Assam. Jerdon records obtaining one specimen breeding at 1,200' in the Gt. Rangit Valley. There are numerous specimens of this species from the lower hills in the B. M. Collection.

#### 366. Hodgson's Broadbill. Serilophus lunatus rubropygius (Hodgs.).

Recorded for the "Himalayas below about 5,000'." Evidently does not occur much beyond the plains-level as I have nothing to record in support of this statement excepting negative evidence. Gammie is mentioned by Hume, as having obtained it breeding at Mangpus around an elevation of 3,000' on one occasion. Mr. G. E. Shaw has so far not obtained it from this same locality so it appears to be confined to lower limits generally.



H. S. Photo.

ABOVE KARPONANG. March, 1917.

Haunts of Conostoma æmodius, Suthora fulvifrons, Pteruthius xanthochloris,
Läiscopus himalayanus, Carpodacus thura, Lophophorus impejanus,
Ithagenes cruentus, &c., &c.



H. S. Photo.

LACHUNG VALLEY ABOVE KEDOM.

Looking north. 11th March, 1920.

A Palæarctic Avi-fauna below the region of the Pines. Suthora unicolor, Aegithaliscus iouschistos, Yuhina occipitalis, Proparus chrysotis, &c., &c., in the valley bottom.



### 367. The Long-tailed Broadbill. Psarisomus dalhousiæ (Jameson).

This beautiful Broadbill is generally distributed up to an elevation of 5,000' in the Rungbong Valley; it appears only sporadically, and these movements are difficult to follow. Recorded up to 6,000'. Gopaldhara, 4,720', 13-1-18,\* calling adjacent to the bungalow and heard for some time previously, again on the 28-3-15.\* 5,000' upwards, calling in the forest, 22-4-16\* and also heard at a similar elevation 14-20-5-15. Sepoydoorah to Tindharia, 2,500', 13-3-14,\* much in evidence. Gammie obtained it breeding at 2,500' in April in the Tista Valley.

### 368. The Assam Black-naped Green Woodpecker. Picus canus gyldenstolpei Stuart Baker. "Larchi Pabaris.

Used without distinction for all Woodpeckers.

In the vicinity of Gopaldhara occurs up to an elevation of 5,500' or somewhat higher. Found in open, sparcely forested tracts, as well as the defined forested areas.

The young 3 (Assam) 7-8-04, has the crown merely tipped with fulvous, and with the exception of the head, the whole of the upper and lower plumage, especially the upper tail-coverts and tail are in moult; in this last condition resembles an adult 3 31-7-04.

#### 369. The Small Himalayan Yellow-naped Woodpecker. Picus chlorophus chlorophus. Vieill.

Commonly occurs at plains levels. In the Rungbong Valley is found up to an elevation of 5,000' at all events. Recorded upto about 10,000'. I have nothing to mention in support of this statement. Nine examined: Some females show a tendency to resemble the male in having a "few" feathers of the forehead over the black stripe and in front of the eye coloured red.

#### 370. The Large Yellow-naped Woodpecker. Chrysophlegma flavinucha flavinucha (Gould).

Recorded for the Himalayas chiefly between 2,000' and 7,000'. I have noted this Woodpecker at all elevations from 600' upto 5,500,' and it possibly exceeds these limits to some slight extent. Whilst it occurs commonly at plains-levels, the recorded limit is likely to be rarely reached.

#### 371. The Northern Pale-headed Woodpecker. Gecinulus grantia grantia McClell.

Recorded chiefly between 2,000' and 5.000'. Evidently locally distributed. Occurs in the Tista Valley, and obtained below Mangpu at 3,500'. (G. E. Shaw). My only information respecting this Woodpecker was obtained in the Plains of Upper Assam.

#### 372. Rufous-bellied Red Woodpecker. Dryobates hyperythrus hyperythrus (Vig.).

Occurs along the Singile La Ridge from Tonglo to Phalut at 10,000′—12,000′ during June to August. In the winter it is decidedly rare at these high elevations. I cannot follow Blanford's statement: "the commonest Woodpecker in the pine forests of Sikkim at 9,000′-12,000′" which would very aptly apply to D. darjellensis, and as I note the Lepcha name is given for the latter and not for D. hyperythrus I surmise the letterpress has been somehow transposed.

Three examined: Tonglo, 9,000′, East Nepal, & 3-2-12. Nepal-Sikkim Frontier, & 30-6-04. (C. M. Inglis). Phalut, 11,600′, & 9-8-05. (C. M. Inglis). The two last specimens evidently obtained in the Pine forests. I am wrong in my surmise but allow the original note to stand and quote Blanford's remarks. The change from the fauna of outer Sikkim where Woodpeckers abound as

they do throughout Malayasia, is strikingly exemplified by this family. It is doubtful if *P. hyperythrus* has been obtained in the neighbourhood of Darjeeling; specimens reported to have been brought thence were probably shot in the interior." He speaks of it as rare in the Pine forests where two specimens were obtained at 9,000', Lachen and 10,000', Lachung. It has of course, a decided Palæarctic status.

### 373. The Darjeeling Pied Woodpecker. Dryobates darjellensis (Blyth).

Recorded for the Himalayas in Nepal and Sikkim from about 3,000′-12,000′ elevation. This distribution is totally incorrect, although it has been obtained below the Sonada to Kurseong Ridge at 6,000'; this elevation may well be considered the extreme, lowest limit, as it does not appear to be found much below 8,000' in winter. Obtained on Tonglo at 10,000', 10-2-12. Commonly occurred around Kalo Pokhari during April 1912, at a similar elevation. Obtained south of Lachung at 8,600', 26-2-20. Observed at close quarters south of Senchal at 8,200', 324-3-15\*. Obtained above Mangpu at 6,000'. (G. E. Shaw). Mai "Khola", East Nepal. Several clutches of two and three eggs.  $28 \times 20$  average, taken in April and May at elevations of from over 8,000'-10,000'. Ten specimens examined.

♂ Wing 126-129, av. 127·3. ♀ wing 123-127, av. 124·4.

There is some individual variation in the depth of tone and in the intensity of the black streaks on the underside in adults.

Two immature 3 3 obtained on Tonglo at 10,000′, 6-7-04, (C. M. Inglis.), and between Dentam and Chiabanjan 7-8-05, have the whole crown tipped with crimson-red and orange-red respectively; this coloration is evidently a distinct, characteristic phase of the immature male and substantiates Scully's description to which Blanford merely makes passing mention. Wing in both examples 122.

### 374. The Lesser Pied Woodpecker. Dryobates cathpharius cathpharius (Blyth).

Recorded with a range similar to D. darjellensis (Blanford). I have failed to meet with this Woodpecker at such high elevations as the former. The zonal distribution of this species is mainly between 5,000'-6,000', and though these limits are exceeded in both directions, there is only a remote chance of meeting with it at 3,000'. Occurs in the Rungbong Valley from 4,500'-7,000' and also occurs in East Nepal at similar elevations; 7,000', 2 22-5-12. Obtained around Mangpu from 5,600'-6,000', (G. E. Shaw). Observed near Kedom at 7,000', in March in the Lachung Valley and at Mangam below Ringim Gompa at 4,300', in February, in the interior of Sikkim. Even in the winter, I have always found D. darjellensis above the highest limit of D. cathpharius.

Eight specimens examined:

d Wing 99-102, av. 100.5; d juv. wing 95. Q wing 96-101, av. 98.6.

Soft parts: Iris red-brown; bill plumbeous-horny; tarsus "greenish"—plumbeous, claws, similar only horny.

# 375. The Fulvous-breasted Pied Woodpecker. Dryobates macei macei (Vieill.).

Occurs in the Rungbong Valley up to an elevation of about 3,500′, and is found chiefly in the bottom of the valley and not in the thick forest which is above the limit of its range; so far it has not been obtained above 2,400′ in the Tista Valley (G. E. Shaw), where it might be expected to reach a higher limit than in the minor valleys to the west.

There appears to be well-defined limits in the distribution of each of the members of this genus, particularly where competitive forms have to maintain their status in a limited forested area, as is the case where cultivation has altered the face of the country through depletion of the forests.

Three specimens examined: Rungbong Valley, Darjeeling, (December)  $\sigma$  wing 108;  $\Omega$  wing 105-109, av. 107, compared with five Assamskins,  $\Omega$  wing 102.5-104, av. 103.3;  $\Omega$  wing 103. This disparity in size is significant and almost points to the formation of a race, distinct from the plains bird.

# 376. The Darjeeling Pigmy Woodpecker. lyngipicus semicoronatus (Malh).

Recorded for Sikkim at elevations above about 3,500'.

Occurs in the Rungbong Valley at elevations of from about 3,400'.4,500'. In the Tista Valley occurs as low as 1,100' to 3,800', (G. E. Shaw). Observed and obtained in pairs, four to five miles out from the Hills in the plains of the Eastern Dooars, between Jainti and Hathipotha and on the Raidak River in January 1922. Found in light, tree-growth outside the limits of the heavy forest. Gopaldhara, 3,500', 10-5-20. Three to four, or probably, two to three males and an odd female, the males vieing with each other for the possession of the female, they were so mixed up in their movements, I failed to count the exact number and the preponderant sex.

Five examined:  $\beta$  Wing 83-88 av. 85.7;  $\varphi$  wing 84-87, av. 85.5.

#### 377. The Red-eared Bay Woodpecker. Blythipicus pyrrhotis pyrrhotis (Hodgs.).

Confined strictly to close forest with heavy undergrowth. Occurs around Gopaldhara at from 4,700′ to higher limits on the Nepal Frontier at 7,600′ or even appreciable higher in the Mai "Khola". This Woodpecker feeds in a great measure on the ground in such dense cover as seems more in keeping with the habitat of some of the Laughing-Thrushes. Seven specimens examined:

d Bill from feathers 47-48, av. 47-5; wing 145-148, av. 146.5.

♀ At base 45-48, av. 45·6; wing 146-149, av. 147·4.

All my Sikkim skins have the tail barred throughout; in a single example from Assam, this character is only faintly indicated, the centre pair being uniform rufous.

### 378. The Northern Rufous Woodpecker. Micropternus brachyurus phaioceps Blyth.

Gammie mentions this species as breeding at 2,000' in the Tista Valley. Obtained around Mangpu at 3,800' (G. E. Shaw).

Absent at much lower elevations in the west of the Darjeeling district. I have failed to meet with it anywhere in the Rungbong Valley at its lowest limits.

#### 379. The Himalayan Golden-backed Three-toed Woodpecker Tiga shorei (Vig.).

Recorded for the lower valleys of the Himalayas as far to the east as Bhotan. So far I have failed to locate it, and it is only likely to be found along the *Terai* of the foot-hills.

# 380. Tickell's Golden-backed Woodpecker. Chrysocolaptes gutticristatus gutticristatus (Tick.).

Confined to low elevations, probably not occurring much above 2,000'.

# 381. Hesse's Great Slaty Woodpecker. Alophonerpes pulverulentus harterti (Hesse).

Evidently does not occur higher than the Terai, as it is only likely to be found in heavy, forested tracts.

#### 382. The Himalayan Speculed Piculet. Picumnus innominatus innominatus Burton.

Recorded up to 6,000' and even ascending to 9,000' (Stolickza); which latter extreme height evidently refers to a locality in the North-West Himalayas. Apparently does not occur at a higher elevation than 4,500' or thereabouts. 4,700; (G. E. Shaw.), both in the interior of Sikkim and on the Outer Ranges. Occurs sparingly around Gopaldhara; noted at Singhik, 4,600', and is generally distributed.

#### 383. The Indian Rufous Piculet. Sasia ochracea ochracea Hodgs.

Occurs around Gopaldhara up to an elevation of 6,000' at all events, and plentifully distributed throughout the whole area, both in the valleys and on the ridges. My observations place this Piculet with a *somewhat higher distribution* than *P. innominatus*. Observed commonly between Singhik and Dikchu in March, around an elevation of 3,500'. Gammie mentions this Piculet as breeding at 4,000' in the Tista Valley, which locality probably refers to Mangpu.

#### 384. The Japanese Wryneck. Jynx torquilla japonica Bp.

Represented in the National Collection by one specimen from Sikkim, January 1873. Evidently only occurs rarely at moderate elevations during "the cold weather"; as there is certainly no well-marked migration route through Sikkim as was obvious in Upper Assam, when it commonly occurred on its descent to the plains and at its time of departure. The few birds occurring on migration, may of course, pass over unnoticed without breaking their journey, though it seems hardly feasible. It is certainly remarkable that only a single occurrence has come to my notice during a period of ten years, when one was secured at 4,200' in December 1911, below Gopaldhara; on the ground as on every former occasion. As this form has a wide distribution, I have considered it expedient to examine my Assam material. Nine specimens measure:

- ♂ Wing 82·5-86, av. 84·5;♀ wing 80-85, av. 82·3.
- ♂ Bill from base, 15-19, av., 16.8; ♀ 15.5-17, av., 16-2.

Dr. Hartert gives the wing measurement, Ussuri, 80-86; Japan, 80-85; China, 80-86, thus the size of this Eastern form is fairly constant and Assam coldweather migrants show similar measurements.

## 385. The Yellow-backed Honey-Guide. Indicator xanthonotus Blyth.

Recorded for Sikkim, "very rare" which is undoubtedly the case. Represented in the Tring Museum by one specimen ex. Elwes Collection, and in the British Museum from Native Sikkim as follows: ♂October, ♀December 1878. 2 ♂ February 1879, ♀ March 1874, ♂ April 1879. I have not been fortunate to meet with it. Evidently resident somewhere in the interior.

#### 386. The Great Himalayan Barbet. Megalæma virens marshallorum Swinh. "Newal" Paharia,

Recorded for the Himalayas between 3,000' and 8,000'. Breeds commonly above Gopaldhara up to 6,500' at all events, and observed in the interior of Sikkim at Dikchu at 2,150' in February and March. Also heard calling in the foot-hills of the Bhotan Dooars near the Raidak Gorge in January; none however were actually seen at plains-levels. Gopaldhara, 4,720', 15-7-14; a party daily frequent the pear trees in the compound. 20-6-23, youngster brought in almost ready for flight, safely hand-reared to maturity.

The monotonous, wailing call of this Barbet is one of the most noticeable characteristics of the birds hereabouts.

# 387. The Assam Lineated Barbet. Thereiceryx lineatus hodgsoni (Bonap.).

Recorded for the Lower Himalayas, not ascending more than 2,000' or 3,000'. These limits are too great an extreme for Sikkim. This Barbet appears to be confined to its distribution area by the belt of heavy forest at the base of the hills. I found it to be common in the sparsely wooded country, four to five miles away from the hills in the Eastern Dooars.

### 388. The Blue-throated Barbet. Cyanops asiaticus asiaticus (lath.).

Recorded for the Lower Himalayas up to 3,500' or 4,000'.

In the Rungbong Valley occurs up to 4,500′, and observed on one occasion at 5,200′, 26-12-21; also obtained up to an elevation of 6,000′, above Mangpu. (G.E. Shaw).

# 389. The Indian Blue-eared Barbet. Cyanops duvauceli cyanotis (Blyth).

Recorded for Sikkim. I have seen specimens from the Terai where it is probably far from common. It appears to be strictly confined to the base of the hills in the Eastern Himalayas.

### 390. The Golden-throated Barbet. Cyanops franklini franklini (Blyth).

This Barbet commonly occurs in the Rungbong Valley from 4,500' up to 7,000', and may on occasions considerably exceed the higher limit. Whilst it is found as low as 3,500' in the interior of Sikkim; it appears not to be found below 4,500' in the hills to the west of the Tista Valley as there is practically no overlapping with C. asiatica in any areas of its distribution though both species meet; apart from some dispersal which causes a slight perceptible intermingling during the winter, when food is none too plentiful. This movement does not affect the distinct breeding areas of either species.

Gopaldhara, 5,000′, 11-9-21. Two youngsters about to leave the nest; evidently this Barbet is double-brooded, judging by this late date.

The young bird has the head golden-green; forehead crimson and patch on occiput faintly tinged with crimson; ear-coverts shading into bluish-green throat and spot at base of lower mandible pale yellow; primary-coverts on carpus bluish-green; otherwise the general coloration is as well defined as in the adult. Taken young, these birds make charming pets, readily taking food out of one's hand ande larning to recognise their master's voice and step. Tonglo, 10,000', 5-2-12.\* I saw an unmistakable Barbet which could only have been this bird, although no Barbets were calling at this high elevation in January and February.

### 391. The Northern Indian Roller. Coracias benghalensis benghalensis (L.).

Occurs at plains-levels only; observed at Rungpo, on the maidan, in the Tista Valley in Sikkim (March).

# 392. The Indian Broad-billed Roller. Eurystomus orientalis orientalis (L.)

Recorded for the base of the Himalayas up to 3,000'. Another plains and low elevation Roller; obtained up to an elevation of 2,000' in the Tista Valley

(G. E. Shaw.), and reported to me as having actually been seen on the Chowrasta in the Station of Darjeeling by the late Mr. E. A. Wernicke.

#### 393. The Common Indian Bee-eater. Merops orientalis orientalis Lath.

Commonly occurs at the *plains-level*, where it has been obtained in the south of the Darjeeling District at 500', (G. E. Shaw). I noted it as being plentiful in the open country in the Eastern Dooars in January.

### 394. The Chestnut-headed Bee-eater. Melittophagus erythrocephalus (Gmel.).

This Bee-eater has been obtained at the foot of the hills (G. E. Shaw).

### 395. The Blue-bearded Bee-eater. Nyctiornis athertoni (Jard. & Selby).

Observed in the Rungbong Valley at an elevation of 3,500' in December 1911, and obtained up to an elevation of 1,800' on the 1-9-20, in the Tista Valley, (G. E. Shaw). Recorded distribution up to about 4,000'. There is only a remote chance of meeting with it, except on rare occasions as above mentioned; as it appears to be strictly confined to the base of the Lower Foot-hills and Plains.

### 396. The Himalayan Pied Kingfisher. Ceryle lugubris guttulata Stejn.

Wherever this fine Kingfisher can get a sustenance, it is to be found on every river of consequence. In the Rungbong River, an odd pair or two reach the upper limits at an elevation approaching 4,750′. I have no information as to how far it penetrates into the interior by way of the Tista River; it has, however, been obtained on the "jhoras" in the lower portion of the valley up to an elevation of 1,200′. (G. E. Shaw).

### 397. The Common Indian Kingfisher. Alcedo atthis bengalensis Gmel.

Occurs in the Tista river and all tributaries where it has been obtained up to 1,900', (G. E. Shaw). On the Rungbong River it ascends as far as there is a sufficiency of water, but as the river gets depleted in "the cold weather" from December to March, it is found more noticeably to frequent the lower reaches from 3,500' downwards.

#### 398. Blyth's Kingfisher. Alcedo iredalei Stuart Baker.

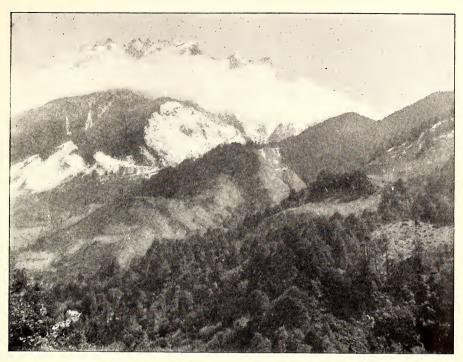
Recorded for the Lower Foot-hills of Sikkim.

# 399. The Indian Three-toed Kingfisher. Ceyx tridactylus tridactylus (Pall.),

Obtained on one occasion at Mangpu 3,600′, 6-9-13. (G. E. Shaw). This beautiful miniature Kingfisher seems addicted to wandering away from its accustomed haunts during "the rains" as was frequently noted in Assam, which accounts for it turning up in the most unexpected places.

#### 400. The Brown-headed Stork-billed Kingfisher. Ramphalcyon capensis gurial (Pearson).

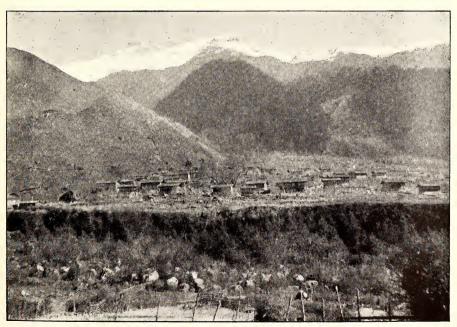
I always regarded this Kingfisher as being strictly confined to the "Jhils" and sluggish streams of the Plains, until one was obtained adjacent to the Rungbong River during a dry spell of weather at 3,400′ on the 27-4-17, Q; this specimen is altogether paler than any of my Assam skins: the point of the bill is much worn as a result of securing its food in the shallow water and stony bed



H. S. Photo.

LACHUNG VALLEY.

Looking north-east, elevation 9,000'. 11th March, 1920.



H. S. Photo.

LACHUNG VILLAGE, elevation 8,800'.

10th March, 1920.



of the river. Observed flying up stream on the 29-11-18,\* at an elevation of 3,750', and since this date I have seen it on several occasions over long periods though these occurrences have not been duly jotted down. It may ascend some the other swift-flowing, minor rivers of the foot-hills in a similar manner.

Entomothera coro-The Indian Ruddy Kingfisher. manda coromanda (Lath.).

Recorded for the Lower Himalayas up to about 5,000' for Sikkim.

No evidence has come to my knowledge in substantiation of its claim. As it is a rare bird generally and as there is a strong likelihood of it occurring at the foot of the hills "in forest" and being easily overlooked; it is worthy of inclusion on the recorded statement.

402. The Great Hornbill. Dichoceros bicornis (L.). "Kodong"

This exceptionally grand bird, attached to which there is so much interest in regard to its habits and in particular its nidification, may be regarded as the representative of the remarkable family of Hornbills; the different genera of

which are worthy of more than casual notice.

Evidently sparingly distributed throughout the Tista Valley up to an elevation of 4,500' at all events. More generally confined from the base up to a limit of 2,000'-3,000' in the foot-hills. As it is only to be found in heavy forest; there can be little doubt that it formerly covered a wider tract of country but extensive cultivation, and improvident and disastrous methods in clearing the land have resulted more often than not in producing nothing more than a barren waste in place of magnificent forest. Nurbong, 2,500', 14-3-14,\* a party of four birds seen to settle in the almost inaccessible forest on the left bank of the Mahanuddi. Heard calling on rare occasions in the Balasan Valley, some miles above Panighata.

Hathipota, Eastern Dooars, 6-1-22,\* I was gratified to come upon a party of six to eight birds in occupation of some lofty trees in virgin forest, but judging by the systematic harassing, amounting almost to persecution, by hoards of Paroquets (Psittacula a fasciata), there was little chance of ever obtaining that desired peace and quietness which the Hornbills stood sadly in need of.

There is every reason to suspect that a similar state of affairs exists towards the breeding season, as these pests will do their utmost to appropriate every nesting cavity, whether in occupation by the rightful owners or not. When competition for the right of survival becomes more acutes through the depletion of the forested tracts; the status of all our Hornbills is certain to be detrimentally affected. Opinions may differ as to the correct methods to adopt in this difficult question of giving protection to one species at the expenses of another. A drastic thinning out of such Paroquets, as haunted the vicinity of their breeding haunts, would have a beneficial effect, and would seem to be the only feasible and correct course of action to ensure the hornbills them the necessary protection. As the broad facts of the preservation of our wonderful and rich avi-fauna unfortunately concern only a limited few, and are not rightly understood; it is premature to expect any efforts to be centred on special cases calling for protection, therefore meanwhile it would be advisible to confine all attention to the reservation of sanctuaries, and endeavour to create a healthy public interest in this direction.

#### The Large Indian Pied Hornbill. Anthracoceros. coronatus affinis (Blyth).

Recorded for the Lower Himalayas.

Rufous-necked Hornbill. Aceros nipalensis "Kolep" Lepcha. (Hodgs.).

Recorded for the Himalayas of Nepal, Sikkim and farther east from 2,000' to about 6,000'. My first acquaintance with this Hornbill was noted as follows: Nurbong, 1,800′, 10-3-14.\* A large dark coloured Hornbill; bill, white, no perceptible casque; tips of wings white, and a heavy patch similarly coloured at end of the tail, uttering a call somewhat resembling the syllables "ghwa" "ghawa."

Since this occasion I have seen a few obtained in the Tista Valley. Formerly Hornbills used to ascend to the upper limits of the Rungbong Valley in the recollection of the oldest residents, but have long since disappeared when their favourite trees had been felled. In the event of such an occurrence happening nowadays, I should almost doubt my powers of vision at such a surprise. In Hume's "Nests and Eggs of Indian Birds" (Oates) Vol. III, p.77, is an interesting and long account by Gammie of the nidification of this species in May at Poomong. Reported to me as having been seen above Gopaldhara in March 1922, when a nest was found this year in Nepal. Obtained also in 1922 above Rungmook, in pairs on both occasions.

#### 405. The Tibetan Hoopæ. Upupa epops saturatus. Lonnb.

This Hoopoe is a common and familiar bird during the winter in the Plains and occurs at moderate elevations on migration. Gopaldhara, 4,720'. Odd Hoopoes make a brief sojourn almost yearly, on their descent to the plains; whilst the majority evidently pass over on migration. During the time they remain, are remarkably tame and as one or two invariably frequent the compound their arrival is always looked forward to with interest.

Earliest arrivals—7-9-17,\* 11-9-17,\* 26-9-18,\* 19-9-20,\* 2-10-21.\*

All these records refer to the bungalow elevation of 4,720′, and to single birds. 3,500′, 28-9-21,\* single bird. Mr. G.E. Shaw has seen it on migration at 5,300′, and at 8,000′. The earliest ar.ival noted at Mangpu, 3,860′, being on the 3-10-15,  $\Omega$ .

Latest departures, 30-3-18,\* Nagri, 4,500'. 17-3-20, above Turzum, 5,650'.

#### 406. The Indian Hoopoe. Upupa epops orientalis Stuart Baker.

If I rightly understand the nomenclature and distribution of the forms of the resident, plains Hoopoe was previously denoted under *U. epops indica* I take it the Hoopoes observed on the following dates at Gopaldhara on the 22-8-18\* and 30-9-19\* refer to this race, as these were probably the resident, plains species; some slight doubt exists as to the former record, whilst the latter record undoubtedly has reference to a richly coloured bird. As no resident Hoopoe occurs in the Rungbong Valley, these occurrences denote a partial migratory movement before the termination of "the rains".

During the Mount Everest Expedition, Mr. A.F.R. Wollaston saw this Hoopoe several times flying over a glacier at an altitude of about 21,000' in September and Mr. N.B. Kinnear remarks on this extraordinary altitude for a bird of such weak flight. For a list of the birds found at these extreme altitudes, consult his paper to which reference is made under other species. Kinnear refers these Hoopoes to "orientalis" and not "saturatus."

#### 407. The Alpine Swift. Micropus melba melba (L.).

Recorded for Darjiling, though apparently there are no specimens in the B.M. Coll. from the Sikkim Himalaya. It is well represented by a fine series from Simla, so it evidently has a clearer defined status in the North-West Himalayas.

# 408. The Common Indian Swift. Micropus affinis affinis (Gray).

Recorded as ascending the Himalayas up to about 6,000'.

This Swift, wherever stablished in the verandahs of dwelling-houses, invariably usurps the bulky mud structure of the Swallow (Hirundo daurica nipalensis), and having once obtained possession, its occupancy becomes a permanency. At Gopaldhara, one such nest has been occupied for ten years; the birds remaining the whole year round. There is little doubt, they cover enormous distances when climatic conditions are not favourable; and when the whole surrounding hills are enveloped in mist, it is nothing short of miraculous how readily they locate their quarters and dash in with arrowy flight. I noted these Swifts to have young on the 6-5-15; and young birds to leave the nest on the 31-5-16\*: a brood of the following year. They are absent for the whole day during the coldweather months, and at Nurbong 2,050', observations extending over a period of eight days from the 19-26-1-14. I noted the pairs arrived between 4-50 p.m. and 5-30 p.m. at the nests almost simultaneously, having been absent the whole Okayti, 7-6-23. I counted thirty-eight nests, comprising a colony, when every available site appeared to be occupied under the eaves of an office outbuilding.

Obtained in the Mai "Khola", East Nepal, ♂♀ 23-5-12.

#### 409. The White-necked Spine-tail. Hirundapus caudacuta nudipes. (Hodgs.).

Recorded as throughout the Himalayas. Specimens in the B. M. Coll. from Sikkim are dated March, April, May (Mandelli.), one from Nepal (Hodgson.), and one from Bhotan (Pemberton). I have observed it on very few occasions; once above Okayti at 5,600′ approximately,\*probably in May, when there was a party taking their food without any appreciable effort during a bright morning and at the Turzum factory when a pair were seen at an elevation of 4,900′ approximately, 24-6-21\*; on this occasion they showed their wing power to the best advantage, when climatic conditions were not so congenial as on the previous occasion. Often observed at Gopaldhara at the oncoming of a storm half-a-dozen birds seen on the 28th April in company with several Swallows and again 31-5-23, on this occasion exclusively.

### 410. The White-rumped Spine-tail. Idacapus sylvatica (Tick.).

Recorded for Sikkim. Not represented in the National Collection by any Sikkim specimens.

### 411. The Hymalayan Swiftlet. Collocalia pusciphaga brevirostris (Mc Olell.).

Occurs at all elevations up to 12,000′, but its appearances are very erratic. Several observed on the Singile La Ridge near Phalut at 11,700′ on the 19-2-12, a \$\displayses\$ secured out of a number at evening, a Kalo Pokhari at 10,160′ on the 22-5-12. Numbers observed hawking for food around the Gopaldhara Bw. at 4,720′ on the 15-8-15\*. Obtained in the Tista Valley at 3,600′, \$\displayses 2-9-20\$. (G. E. Shaw). Blanford also records it from the Cho La at 12,000′ (August) and throughout the Tista Valley at low elevations in the autumn of 1870.

Hume records finding the Indian Crested Swift Macropteryx coronatus (Tick.) breeding in May in the Darjeeling Terai.

### 412. The Nepal Long-tailed Nightjar Caprimulgus macrurus nipalensis Hartert.

This Nightjar is more a bird of the Plains than the Hills, and I have failed to locate it in the valleys to the west. Obtained at elevations of from 2,500'-3,760' in the Tista Valley. (G. E. Shaw). I have gone through all my Assam skins.

Nine examined: Juvenile,  $\mathcal{Q}$  (June) wing 193;  $\mathcal{S}$  (July) wing 200, probably not quite fully grown. Adult  $\mathcal{S}$  wing 204-219, av. 210·8. Adult  $\mathcal{Q}$  wing, 211-219, av., 214·3.

These specimens are very variable in the depth of tone and the barring on the underside.

### 413. The Himalayan Jungle Nightjar. Caprimulgus indicus jotaka. (Temm. & Schleg.)

Occurs up to 7,000'-8,000' during the breeding season and found at all intermediate heights from the base of the hills in "the cold weather." Gopaldhara, 3,500', 31-10-14, several in evidence. 3  $\circlearrowleft$  23-12-11. Mai Khola, East Nepal,  $\circlearrowleft$  22-5-12, wing 200; obtained with two eggs which measured 30×19, av.

Five males examined: 3 & Sikkim, wing 203-206; av. 205.7. Bhotan Dooars, 27-1-22, & wing 193. Assam, 12-2-05, & wing 199.

Dr. Hartert gives the wing measurement for "indicus" 197-203, and for "jotaka" type, locality Japan, 3 212-224.

In size my specimens are nearer the typical form.

### 414. Gould's Great-eared Nightjar. Lyncornis cerviniceps cerviniceps Gould.

Included on the recorded specimen said by Jerdon to have been obtained in the Tista Valley.

### 415. Hodgson's Frogmouth, Batrachostomus hodgsoni (G. R. Gray).

Recorded for Sikkim at *low elevations*. Great Ranjit Valley, 3,000′ and 4,000′ (Hodgson), Namchi (Mandelli). Evidently as rare as it was in the Foot-hills of Assam.

# 416. The Red-headed Trogon. Pyrotrogon erythrocephalus erythrocephalus (Gould).

Recorded for the Himalayas up to 5,000' at which elevation it occurs at Gopal-dhara, and as it is strictly a forest species it would appear to be isolated hereabouts at the upper limit of its range from its main distribution area, as for instance at Gopaldhara where to the south the country is under cultivation until the torest reserve is reached at about 2,000', with the exception of sparsely wooded areas intervening.

#### 417. The Asiatic Cuckoo. Cuculus canorus telephonus Heine.

With the commencement of the hot weather, it is possible to trace the ascent of the Cuckoo, as the birds commence calling almost immediately, when they enter the valleys, and announce their arrival according to the distance and elevation reached. Its appearances around Gopaldhara take place with marked regularity; and invariably occur during the latter days of March or the first week in April. Its arrival has been noted over a number of years. Gopaldhara, around 4,720'. First heard calling on the 1-4-14, and noted again on the 12th to be calling up to 6 p.m. The last occasion when I heard the familiar call being on the 11-7-14. The following year on the 31-3-15. Noted to be calling a few times at 6-30 a.m., on the 6-5-15. Calling somewhat inaudibly on the 23-3-16; its full note heard on the 27-3-16, and remarked as silent during July 1917 prior to the 21st; when it was heard to call, 31-3-17, heard again on the 2-4-17, and almost daily afterwards when the air resounded with each male bird endeavouring to outdo his neighbour. Heard above Avongrove at 5,500' on the 3-4-18, having been reported to me on the 1st at 4,500' around Sungma. (C. E. Brown). In 1919 calling commenced as early as the 19th of March, though the birds did not attain their full

vocal powers until a few weeks later. This cuckoo appears to ascend up to about 9,000' on the Outer Ranges, around which elevation, I came across it in the Mai Valley in Nepal. Mr. G. E. Shaw has so far not obtained it above Mangpu beyond an elevation of 3,800'. Birds collected in April 1921, on the 13th were feeding on the earliest to appear, cicada (Geana sulphurea Hope.), which was plentiful, and C. optatus was also taking this Cicada in numbers as was proved on dissection. During 1923 at Gopaldhara in the Rungbong Valley; the first arrival was noted on the 2nd of April, and while one bird was calling at evening on the 13th of June, its utterances being nothing more than a choking effort; another bird was heard on the 10th of July at its best and others were in evidence calling audibly on the 16th or 27th of the same month.

Six specimens examined: J Wing, 220-230, av., 225; Q wing, 204. Soft parts: J Iris gamboge-yellow; orbital skin yellow; bill greenish-black, deeper on culmen, a defined patch of yellow at the base of the upper mandible-gape bright orange; tarsus yellow. Q Iris, yellow; bill horny, greenish; yellow on the lower mandible; tarsus yellow.

#### 418. The Himalayan Cuckoo. Cuculus optatus Gould.

The first of the migratory Cuckoos to put in an appearance, arriving at Gopaldhara in the Rungbong Valley about the middle of March; when it ascends to an elevation of over 7,000′. Jerdon has aptly described the call of this Cuckoo which is a sonorous "whut" of four syllables, and the preparatory note at the commencement is quite audible at close quarters. Heard calling on the 27-3-16, and possibly earlier, but not noted down. 12-3-18, calling at mid-day, and possibly few a days earlier. 19-3-19, first occasion heard. 16-3-20, calling for the first time and again on the 19th. On the 25-5-20 I heard this Cuckoo calling at an elevation of 3,550′, but most of the birds appear to be confined from about 5,000′ and upwards.

Six specimens examined: Collected from the 31st of March to the 25th of

May. & Wing 182-195, av. 186.

#### 419. The Small Cuckoo. Cuculus intermedius intermedius Vahl.

I have no information respecting the exact date of arrival of this Cuckoo at Gopaldhara but my record of specimens obtained when the birds are particularly noisy, point to the end of May, and this in accordance with Jerdon's statement as quoted by Oates as to it being rarely heard at Darjeeling before this time, The earliest date at an elevation of 4,720' being 11-5-21, and the remainder from the 25th of May to the 5th of June. In the Mai Valley, 24-5-12, 7,000', circum. With this exception all were collected at elevations of rolling in fat; caught at a strong moth lamp. (O. Lindgren). Obtained at as low an elevation of 800' in the Tista Valley. (G. E. Shaw). Eight specimens examined: One \( \times \) 5-6-20, is in the hepatic stage, so that more than one year must elapse in some cases before the adult plumage is attained. One & 27-5-20, (b) shows signs of immaturity in that some of the greater-coverts and primarycoverts have not been moulted, the under feathers of upper tail-coverts are tinged with rufous, a few feathers on the forehead and crown are also rufous. It has a loud call, somewhat resembling the syllables "quik" "four" times rapidly uttered and this is the only call I have heard it produce.

Wing, Q (a) 150. d (b) 146. 5dd wing, 151-157, av., 154. Q wing, 141.

#### 420. The Indian Cuckoo. Cuculus micropterus micropterus Gould.

This Cukoo is more frequently heard, if not actually seen at lower elevations than its near congeners. It arrives at Gopaldhara about the second week in

April and does not appear to transcend an upward limit of 5,000' where it gives ground to C. optatus, whereas C. canorus appears not to be hampered by any such restrictions. The surprising number of this parasitic group of birds, both in regard to species and numerical strength is no better proof of the wealth of birdlife in general which can support them all. In 1914 noted to be calling as late as the 4th and 11th of July. First heard calling during the following years: 12-4-15, when on the 19th one call was heard at night. 20-4-16, 10-4-17, and noted as calling after sunset on the 23rd, 12-4-18, 11-4-19, 10-4-21. It is generally silent during July but in 1916 they were noted to have their full vocal powers previous to the 21st. I have not had the opportunity of watching the courtship of any of the Cuckoos with the exception of C. canorus.

The well-known call of this Cuckoo has been rendered into common parlance by tea-planters as being best expressed in the term of "make more pekoe," though it may not always be advisable to take the hint and which might be better defined at times as an imprecation. In addition to this vocal effort a rapid thrice or twice repeated "quik" is uttered on occasions. The females seem to be more secretive and do not lend themselves to observation, which is natural during the egg-laying period. During 1923 at Gopaldhara in the Rungbong Valley; the first arrival was noted on the 6th April, calling at night and replied to by another. On other occasions heard on the morning of the 14th of June; on the 19th had lost none of its sonorous notes and still in evidence on the 25th. These latter occasions being the only records noted towards the close of its seasonal vocal efforts. Five specimens examined: d Wing 194-200, av. 197-6.

### 421. The Large Hawk-Cuckoo. Hierococcyx sparverioides Vig.

Recorded as ascending the Himalayas in summer up to 9,000' or more.

Resident in the Rungbong Valley, being confined during "the cold weather" chiefly to the forest at elevations around 5,000'. These may be birds which have descended from higher limits? As their place is vacated others probably arrive from lower limits as its numbers are certainly augmented during March and April. The silence of these birds during "the cold weather" is quite as pronounced a feature of their existence as their noisiness is towards the breeding season. So far I have not obtained it above 6,000 while 4,000', is the highest limit above Mangpu for Mr. G. E. Shaw's records.

The following dates have reference to the period of its greatest activity. Gopaldhaia, 4,720'. First heard calling on the 8-3-15, and again on the 15-3-15. During May there was a full amongst all the Cuckoos with a recommencement at the last week. Finally heard on the 14-8-15, but only a feeble effort. 14-3-16, calling at evening and again on the 27-3-16. Noted to call on as late a date as the 21-7-16 and on a single occasion on the 11-10-16 which was most unusual, as during July there is a pleasant respite from the interminable volume of sound which prevails throughout April and June. During 1917 a single bird with no others in evidence was calling as late as the 27-7-17. 3,550', on the 23-2-18, one bird was observed to attempt calling but only managed to effect a two note utterance, the completed effort being attained on the 5-3-18; when a bird was heard to call around an elevation of 4,720' for three times at 6 p.m. on a dull day. 4,720'. First heard 19-3-19. Gangtok, around 6,000' much in evidence on the 14-3-20. Gopaldhara at 4,720' first time heard on the 9-3-21. rains" of 1923 were remarkable for spells of sunny weather, most of the rain falling in heavy showers at night which apparently had some influence on the Cuckoos as the pandemonium which reigns all day long and throughout the long hours of the night was certainly not so prolonged as is generally the case. Noted as calling on the 14th of June and during the first week in July when

the other species had for the most part finished. The preliminary "chu" "chu" "chu" call heard on the 12th also finally in evidence on the 1st August.

Nine specimens examined:  $\circlearrowleft$  Wing 217-230, av. 224·2;  $\circlearrowleft$  wing 217-221, av. 219.

#### 422. The Common Hawk-Cuckoo. Hierococcyx varius (Vahl.).

Recorded for the Himalayas as far as east as Bhotan, ascending the hills in summer to about 7,000′. I have no knowledge of the status of this Cuckoo in the hills. It occurs commonly in the plains around Jalpaiguri; on the 18-2-15, it was in evidence judging by its clamorus call emanating on all sides. Not represented in the B. M. series from the Sikkim Himalayas.

### 423. Hodgson's Hawk-Cuckoo. Hierococcyx fugax nisicolor (Blyth).

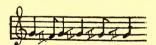
Recorded for the Himalayas as far west as Nepal. Its distribution is extended by the record of a specimen obtained at 4,500' above Mangpu, of 7-5-20, (G. E. Shaw), in the hills to the west of the Tista River, though Mandelli is mentioned p. 384 in Vol. II of "Hume's Nests and Eggs" (Oates) as having obtained an oviduct egg from a specimen, exact locality not stated.

#### 424. The Rufous-bellied Cuckoo. Cacomantis merulinus querulus Heine.

Recorded for the Eastern Himalayas from Nepal. I have no knowledge of this Cuckoo; which commonly occurred in the plains of Upper Assam, as to its status in these hills. Not represented in the B. M. series from the Sikkim Himalayas.

### 425. The Indian Plaintive Cuckoo. Cacomantis merulinus passerinus (Vahl.).

This Cuckoo occurs around Gopaldhara as a migratory bird in the summer, yet its appearance is somewhat irregular. During 1916, first heard to call on the 27th of March and in evidence on the 15th of August. During 1920, two 3 3 obtained in the compound at 4,720′, 14—16-5-20, and noted again on the 19th. It has two calls: the first is best described in the syllables "pe" "peah" and to be often followed by a mournful effort of three notes, generally uttered in semi-tones thrice in an ascendant scale rendered in syllables "tay" "tā" "tay" or "dhay" "dā" "dhay", but more effectively.



During 1923 the preliminary call was first heard on the 4th of April. In evidence on the 13th of June and from the 11th to the 16th of July which last date was the final occasion on which it came under my notice.

Two specimens examined: 3 Wing, 115-120.

Soft parts: Iris venetian-red or pale crimson-brown; tarsus dusky-yellow; soles ochreous; claws dark horny-yellow.

#### 426. The Banded Bay Cuckoo. Penthoceryx sonneratii sonneratii (Lath.).

Obtained on one occasion in the Tista Valley at 2,000'. (G. E. Shaw). Represented in the B. M. series by one specimen from Darjeeling and one specimen from Sikkim, April 1873.

#### 427. The Emerald Cuckoo. Chalcococcyx maculatus (Gm.)

A summer migrant of rare and irregular occurrence to the Rungbong Valley Easily overlooked in dense foliage. On its arrival at Gopaldhara in April, it is remarkably devoid of fear and shows a disinclination to avoid any possible chances of danger, trusting to its harmonizing plumage and unobtrusive habits for protection. I regret my inability to describe its call which is quite distinctive from any of the other Cuckoos and notwithstanding its weakness in volume savours of cuculine pecularities. On occasions its vocal strains are produced during the stillness of the night. Information in respect to it is as follows: Gopaldhara, 4,500′, ♀ 11-4-18, ovaries active; a few birds seen, but the first to be obtained by a youth who had knocked it down at short range. 4,250′, ♂ 2-5-18. Three birds reported to me as having been seen by an intelligent chaprassi on the 22-4-18. 4,720′, 17-4-19. My attention was drawn to two pairs of this beautiful Cuckoo this morning as they were busily occupied making a systematic search of the foliage of the cherry trees. They were allowed to complete their task without molestation and the caterpillars suffered a diminution of their numbers accordingly.

During a partially weak? monsoon in 1920, they appeared to be totally absent. The "Fauna" key to the species of this genus, as always seemed confusing, the distinguishing characters between the female of this species and "xanthorhvnchus" are evidently transposed, and comparison and checking by the description shows this to have been the case.

1923. Gopaldhara, 6,000'. Juvenile females within a few days of leaving the nest were brought in on the 13th of June and 7th of July, The nests of the foster parents (*Cryptolopha castaneoceps*) out of others which I got eggs, having been found on previous occasions.

#### 428. The Indian Drongo Cuckoo. Surniculus lugubris dicruroides (Hodgs.).

This Cuckoo arrives in the Rungbong Valley about the middle of April, or in some years, during the first week in April. At Mangpu, 3,860', seen and heard as early as the 25-3-15. Gopaldhara, 4,720', heard on the 2-4-15. 3,500', in the bottom of the valley, 13-4-16, and again at 4,720' on the 25-4-16, finally noted as calling on the 19-7-16. 4,720', in evidence, 19-4-18.

I have gone into a long list of dates in reference to many of these Cuckoos at the period of intense sexual activity, as an aid in determining its duration, and at the same time in fixing their arrival, if not always their departure. Meanwhile my notes on oology will of necessity have to stand over until a future occasion.

#### 429. The Pied Crested Cuckoo. Clamator jacobinus (Bodd).

Recorded for the Lower Himalayas. Unknown to either Mr. G. E. Shaw or myself. It would be an interesting fact, if the route were known of the specimen obtained at Tingri, 14,000', by the Mount Everest Expedition. (vide Kinnear N. B., Ibis, Vol. IV, No. 3, July 1922, p. 504.)

# 430. The Red-winged Crested Cuckoo. Clamator coromandus (L.).

Recorded for the base of the Himalayas and farther east. The only locality known to me is that supplied by Mr. G. E. Shaw from below Mangpu at elevations of from 2,500′-3,600′ in the Tista Valley where specimens have been obtained as follows: 2,500′,  $\circlearrowleft$  5-6-19. 3,500′,  $\circlearrowleft$  22-4-19. 3,600′,  $\circlearrowleft$  16-4-20. Mandelli appears to have obtained it from Namchi.

### 431. The Large Green-billed Malkoha. Rhopodytes tristis (Less.).

Recorded for the Outer Himalayas below about 8,000′. Obtained up to an elevation of 3,860′ at Mangpu. (G. E. Shaw). In the Rungbong Valley, it has an extension to the head of the valley up to 3,600′, being confined to the riverbed and surroundings as a resident. So far I have not seen it in any other locality hereabouts.

### 432. The Hill Sirkeer Cuckoo. Taccocua leschenaultii infuscata Blyth.

Recorded for the Lower Himalayas, and evidently referable to this form which, however, is unknown to me.

### 433. The Chinese Crow-Pheasant. Centropus sinensis sinensis (Steph.).

Occurs in the Tista Valley up to 3,600' below Mangpu. (G. E. Shaw). I have no record of its occurrence in the minor valleys to the west.

### 434. The Indian Lesser Crow-Pheasant. Centropus bengalensis bengalensis (Gm.)

Recorded as occurring up to about 5,000' in Sikkim according to Gammie. Once only observed at Gopaldhara in the Rungbong Valley at an elevation of 3,440', 28-1-15\*; when it was flushed out of a reed-bed. As these Coucals are dependent on the necessary dense cover; it can only be locally distributed and absent from large tracts of the country.

# 435. The Large Assam Paroquet. Psittacula eupatria indoburmanica (Hume.).

Recorded for the Sikkim Terai; which statement also refers to Psittacula cyanocephala cyanocephala (L.), and Psittacula cyanocephala bengalensis (Forst.).

### 436. The Slaty-headed Paroquet. Psittacula schisticeps schisticeps (Hodgs.).

Recorded throughout the Himalayas below about 8,000′. This Paroquet performs an upward movement into the Rungbong Valley at the end of "the rains," when large parties may be observed in flight, attracted to their favourite feeding grounds which consist of berry-laden trees. Blanford gives P.s. schisticeps with a wing measurement of 6.5'' = 165, and a total length of 16'' against P.s. finschi with a wing measurement of 6'' = 152 in males and a total length of 17''. These total length measurements evidently require reversal as the former is the bigger bird of the two.

## 437. The Indian Red-breasted Paroquet. Psitaacula alexandri fasciata (P. L. S. Muller).

Recorded throughout the Lower Himalayas up to about 5,000'.

Obtained in the Tista Valley up to 3,800'. (G. E. Shaw). Only seen in the Rungbong Valley during "the cold weather"; which is a movement evidently connected with the shortness of the food supply, necessitating a wider area to be covered. As is well known these Paroquets in common with the rest take safety in numbers, and whilst the screeching that takes place may be the means of warning all laggards; it can only result in drawing attention to the flight, even if undertaken with great rapidity. The breeding habitat lies in the foothills to which reference has previously been made.

#### 438. The Indian Loriquet. Coryllis vernalis (Sparm.).

Recorded from the Darjeeling Terai, eastwards to the Bhotan Duars and Assam. Authentic reports of its occurrence under the foot-hills of Bhotan have been given me, but so far I have not been able to substantiate its reported occurrence in the Rungbong Valley during "the cold weather", in which case it is a similar extension upwards along the bed of the river, at a time of food shortage.

#### 439. The Bay Owl. Photodilus badius (Horsf.).

Strictly confined to the heavy forest of the Foot-hills from where I have seen only a few specimens, inclusive of a record for the Tista Valley,2,000', 20-11-15 (G. E. Shaw).

### 44e. The Short-eared Owl. Asio flammeus flammeus (Pontoppidan).

An irregular cold-season visitor on the Outer Ranges at moderate elevations on its southerly migration to the plains. Observed quartering the "dharas" at Okayti on the evening of the 27-12-21.\* My specimens have been obtained in exposed ground on the ridges on both sides of the Rungbong Valley. Gopaldhara, 6,100', 24-2-18. Turzum, 5,200', 2-2-2-15. (O. Lindgren).

These two specimens compare similarly in colour and measurement with a  $\cite{C}$  from Tirhut, 21-12-04. (C. M. Inglis). The three  $\cite{C}$  measure: Wing 307-310, av. 309. whilst a  $\cite{C}$  from Hessamara, Upper Assam, is altogether paler with the streaks on the under surface much finer. Wing 294. Dr. Hartert does not consider this specimen to be referable to "leucopsis" (Brehm). The status of this Eastern form is obscure.

### 441. The Himalayan Wood-Owl. Strix aluco nivicola— (Blyth).

Recorded for the Sikkim Himalaya at elevations of 6,000'-14,000'.

This owl may not be so rare as it is generally supposed to be, in consequence of its nocturnal habits and high altitudinal distribution. Tonglo, Nepal-Sikkim' Frontier, 10,000'. The first clue to this bird's whereabouts was the finding of a few feathers in the vicinity of some huge boulders in January 1911; evidently one of its haunts on the south face of the mountain, but it was not until the 17-5-12; when in camp at Kalo Pokhari at 10,160', that I was able to obtain a specimen, a male being brought in by a "paharia" youth from the valley below in Nepal. Wing 290. Bill greenish-yellow. Stomach contained remains of Coleoptera, also a portion of a vole's skull, probably Microtus sikkimensis, several of which were trapped near my camp.

### 442. The Himalayan Brown Wood-Owl, Strix indrani newarensis Hodgs.

Recorded from the base of the hills up to 13,000' in Sikkim.

A nocturnal owl, sometimes to be seen on occasions in the depths of forest towards evening, at elevations of from 5,500'-6,000' at Gopaldhara; when it is on the alert, as if anticipating an attack from above and not as mindful of danger from below. The bird takes flight on the slightest audible noise at one's approach, and this is unavoidable as it is impossible to avoid crunching the thick layer of dry decayed leaves which carpet the ground, so common a feature in tropical forests and forests of moderate elevations in "the cold weather". It frequents the wooded portions in the station of Darjeeling, and occurs around Mangpu at elevations of from 3,600'-3,800'. (G. E. Shaw). Messrs. Barrett and

Shaw have both kept this Owl in semi-captivity, and it makes a docile and interesting pet when taken young. A pair disturbed in the forest at 6,000' on Gopaldhara, 13-5-23\*.

Three specimens examined: Gopaldhara, 6,000′, 2 27-1-18, one of a pair, wing 381. ♂ 10-3-18, wing 363; testes well advanced in development. 5,500′, ♂ 17-5-20, wing 385. Iris brown; bill pale greenish-horny.

(To be continued.)