

NOTES ON THE BIRDS OF THE SIKKIM HIMALAYAS

BY

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PART VII

(Conclusion)

(With 2 plates)

(Continued from page 685 of this Volume).

443. The Himalayan Brown Fish-Owl. *Ketupa zeylonensis nigripes* (Hodgs.).

This form is larger, and on the underparts somewhat paler. Wing 2-3c.m. longer than in the typical '*zeylonensis*.' Dr. Hartert gives the distribution Himalayas, exact distribution not known. Unknown to me, but a *Ketupa* was seen on a few occasions around Hathipota in the Eastern Dooars and could hardly have been referable to this form as it is only likely to be found above the base of the hills, though my largest ♂ (wing of 405) was obtained in the plains of Upper Assam. The wing measurement of typical '*zeylonensis*' is given 39-41.5 c. m. (Hartert).

444. The Tawny Fish-Owl. *Ketupa flavipes* (Hodgs.).

Recorded for the Lower Himalayas at elevations not exceeding 5,000'. The only specimen that I have seen in recent years is one secured in the Tista Valley by Mr. H. P. P. Barrett. This specimen is in the Darjeeling Museum.

445. The Forest Eagle-Owl. *Huhua nipalensis* (Hodgs.).

Recorded for the Himalayas at elevations not exceeding 7,000'.

Mai ('Kholā') Valley, East Nepal, ♀ 14-4-12, wing 450, obtained along with a single youngster from the nest. The latter became quite one of the attractions to the *paharia* youths who frequented my camp, being accommodated during the day in the nook of a rock, with snug quarters at night, as it was wont to sit at the foot of my stretcher inside my tent, and invariably awakened me with a friendly chuckle. After many vicissitudes and trials from the penetrating cold of these high altitudes to the steamy heat (100° in the shade) of Calcutta in May, and a rough voyage home in the S. W. Monsoon; it was safely deposited in the Regent's Park Collection where for several years it was an inmate. Mr. G. E. Shaw had one in semi-captivity for many years. Turzum, ♀ 29-5-15, wing 441 (O. Lindgren). Sungma, ♂ 27-12-18, wing 438 (C. E. Brown), procured at mid-day whilst demolishing the remains of a Kalij Pheasant when disturbed by the beaters. Reported to me on a few occasions in the Rungbong Valley, where these two last specimens were obtained at elevations below 5,000'.

446. The Himalayan Scops Owl. *Otus scops pennatus* (Hodgs.).

Obtained on one occasion only at Turzum, ♂ 29-10-18, at an elevation of 5,200' (O. Lindgren.), and seen at Gopaldhara on a few occasions at early day-break and often suspected of being in the vicinity of the Bw., but it is a strictly nocturnal owl, difficult to locate. In this specimen the wing is 140. Coloration: a dark phase, scupulars buff and white mixed, 1st quill longer than the 8th; 4th quill longest and slightly longer than the 3rd. This bird is evidently referable to Hodgson's '*pennatus*,' but is darker than any specimens in the B. M. from Nepal. *O. s. sunnia* Hodgs., appears to be the bird which is scattered over the plains of Northern India. One very rufous specimen I have, was collected by Mr. C. B. Antram in the Luskerpore Valley in South Sylhet. In this example the 1st quill shorter than the 8th; 4th quill longest and more pronounced in length to the 3rd than in the previous example.

447. The Spotted Himalayan Scops Owl. *Otus spilocephalus* (Blyth).

Apparently generally distributed, though few specimens are actually secured. Obtained around Mangpu at 5,000', above the Tista Valley. (G. E. Shaw).

Nagri, Rungbong Valley, 3,700', ♀ 11-1-12 (S. F. Boileau.) ; wing 150, ovaries well developed. This specimen agrees well with Assam birds which are very variable in coloration from russet-red to brown, 2 ♂ ♂ wing 142 4 ♀ ♀ wing 142-150, av. 147. Recorded for the Himalayas at elevations between about 3,000' and 6,000', but it occurred at lower limits in Upper Assam, being found at the base of the hills. Gopaldhara. Two youngsters brought in 7-7-23 which were safely reared to maturity.

448. The Himalayan Collared Scops Owl. *Otus bakkamena lettia* (Hodgs.).

This Scops owl is the commonest nocturnal owl in well-wooded tracts in the Rungbong Valley, and is frequently heard though rarely seen. It appears to occur up to at least 5,000'. Gopaldhara, 4,720', 24-4-16; three almost fully developed youngsters brought in. ♂ 8-7-20, juvenile. ♂ 26-4-21, juvenile; from which it may be inferred the nesting season is a prolonged period. One specimen was deposited in March 1922 in the Regent's Park Collection.

449. The Larged Barred Owlet. *Glaucidium cuculoides cuculoides* (Vig.).

This common Owl is widely distributed on the Outer Ranges up to an elevation of over 7,000'. Obtained at Sonada, 6,600', ♀ 8-2-17. Frequently seen in the Rungbong Valley in broad daylight in open tracts.

450. The Collared Pigmy Owlet. *Glaucidium brodiei brodiei* (Burton).

Recorded from the base of the hills to a considerable elevation in Sikkim. I have seen it in the deep valleys of the interior at low elevations, and it has been obtained at Gopaldhara around an elevation of 5,000', where it is occasionally to be met with. The Paharias attribute a call to this Pigmy Owlet, though it is almost an impossibility to locate the quarter from which the sound emanates. On rare occasions I have heard it uttered well on into the morning and frequently at night under the foot-hills in Upper Assam. There is every reason to believe this ventriloquist is the culprit as there appears to be no other feasible explanation of the riddle.

451. The Brown Hawk-Owl. *Ninox scutulata lugubris* (Tick.).

The specimens obtained in the Tista Valley at an elevation of 2,900' (G. E. Shaw.) may be referable to this race and not to *burmanica* Hume. Dr. Hartert gives the distribution: India from Rajputana to Bengal. Wing between 205-228, and whereas the exact distribution of *burmanica* is not known; it is the breeding bird of the Naga Hills in Assam, Cachar and Burma.

452. The Osprey. *Pandion haliaetus haliaetus* (L.).

I have not been fortunate enough to have seen the Osprey in the Tista River where it is surely to occur. In January 1922, a fine bird was frequenting the Gorge and lower reaches of the Raidak River at the base of the hills; when on more than one occasion, I had the opportunity of watching its methods of grasping captured fish.

453. The Cinereus Vulture. *Ægyptius monachus* (L.).

Recorded distribution in the 'Himalayas as far east as Bhotan, and there can be no doubt this bird breeds in the Himalayas.'

454. The Black Vulture or Pondicherry Vulture. *Torgos calvus* (Scop.).

Occurs at frequent intervals in the Rungbong Valley, and may on occasions be seen above the station of Darjeeling where it reaches an altitude of over 7,000' at all events.

455. The Eastern Griffon Vulture. *Gyps fulvus fulvescens* Hume.

Recorded as far east as Nepal and Sikkim.

456. The Himalayan Griffon. *Gyps himalayensis* Hume.

Recorded for the Himalayas from Cabul to Bhotan being confined to the mountains. In the precipitous rocky mountains on the west side of the valley, at an elevation of 10,000' upwards, above Lachung, in March 1920; I daily observed a huge congregation of several species of vultures which were undoubtedly breeding. They were never seen away from these haunts around which they sailed in majestic fashion. Mr. A. F. R. Wollaston during the

Mount Everest Expedition mentions seeing it in the gorges of the main Himalayan Range, up to 14,000', but not on the Tibetan plateau, where only *Gypaëtus barbatus grandis* occurred.

457. The Himalayan Long-billed Vulture. *Gyps indicus tenuirostris* Hodgs.

Recorded throughout the Lower Himalayas and near their base. Evidently occurs in Sikkim as Blanford quotes the Lepcha name.

458. The Indian White-backed Vulture. *Pseudogyps bengalensis* (Gmel.).

Recorded, "not found above moderate elevations in the Himalayas." It appears to ascend to *over 8,000' on the Outer Ranges* at which elevation, a ♀ was obtained in the Mai 'Khola' in East Nepal on 24-3-12. This bird was knocked over by some youths, when on the ground, and brought into my camp at 10,160', it was a juvenile with black bill and dark back. At varying periods, three other species of vultures were seen in some numbers, which in many cases appeared to be *Gyps himalayensis*, none were obtained with this exception as I must confess to an avowed aversion in the preparation of vultures' skins. Gopaldhara: I disturbed a single bird on my way home on the evening of 6-3-18; which had evidently settled for the night in a cryptomeria tree below the compound, 4,720'. I identified the vultures, which were breeding in January 1922 in the village of Kumargram in Eastern Bengal, to be this species, judging by their roaring though I failed to observe the white parts of the adult. For a better acquaintance with this group of birds, no more advantageous place for observation in the hills can be afforded than the municipal slaughter house at Darjeeling, where there is every chance of meeting with all the species that occur in the district. The whole surrounding ground is in occupation of vultures with kites and crows in attendance. The late Mr. J. L. Macintosh availed himself of this opportunity, and did not miss the humorous side of their habits in his description of their jaunts on the wire-ropeway which carries the refuse to its destination. It requires the enthusiasm of an ardent ornithologist but the results would justify the olfactory inconvenience.

459. The Bearded Vulture or Lammergeyer. *Gypaetus barbatus grandis* Storr. 'Lhema gida' Paharia.

There can be few more impressive sights in connection with any bird, than to be fortunate in seeing the majestic Lammergeyer proudly keeping ahead of an approaching storm, as the clouds roll along the ridge with an enveloping mist or whilst under more favourable circumstances, it soars at an intense height over the sublime depths of the valley below. They appear to have regular beats along the ridges and spurs, and at the close of the breeding season, extend over a wider area, as single birds may be seen as far out as Mirik or Kurseong, though I have no record of their descending to a lower limit than 4,800' when on one occasion it was observed flying leisurely above my home on 29-6-18. I have seen it on the Outer Ranges, Phalut, 11,811', 17-2-12. Sandakphu, 11,923', 8-3-12; when one passed overhead several times in company with vultures, and on this and similar occasions its curiosity was so aroused as I reclined on the ground to bring it within measurable distance, when the rich ferruginous tint of the breast feathers, and piercing eye, heightened by the blood-red membrane were seen to perfection. I have never seen more than a solitary bird on any one occasion,¹ which trait in its habits, almost discounts any near relationship with the vultures. Mr. H. P. P. Barrett informs me, whenever it appears with the latter at their feeding grounds it keeps aloof from the common herd. One specimen he obtained had its gullet and stomach crammed with undigested bones. This well-known fact prompted me to test the extent of the Bungalow *chaukidar's* knowledge at Sandakphu in reference to its habits, and as the old man vividly described what he had witnessed; I was content to let him have his final assurance that this bird was no ordinary 'Gida.' It occurs frequently over Ghoom and was noted daily in the Lachung Valley in March, when an adult bird was wont to wend its flight down the valley. I have only once seen it settle in a tree and remain there for some

¹ I have since seen three birds soaring at an immense height over the Gopaldhara Bw. 7-5-23. This occurrence most likely pointed to adverse conditions in the weather in the high upper regions.

time. They seem to spend only brief intervals on the ground, when they are attracted to their favourite repast. One adult ♀ was obtained in this manner by trapping near Kurseong on 11-1-20, wing, 830. Soft parts: Iris pinky yellowish-white; sclerotic membrane blood-red; bill horny, tip dark; tarsus plumbeous-grey, stippled with oxide of iron? Kalo Pokhari, camp, 10,160', ♂ 24-5-12. This specimen was in extremely ragged condition; as it was in the so-called immature plumage; some years must elapse before the full adult garb is attained, otherwise this record nullifies the usual accepted data in regard to this phase being a mark of the young bird. To me it seems akin to a melanistic phase. This bird in its dark plumage and blackish-brown head in flight appeared like a huge *Ictinaëtus*. Wing abraded. Soft parts: Iris stone-yellow; sclerotic membrane, dull orange; gape, blue.

Mr. A. F. R. Wollaston records seeing this bird flying at a height of not less than 24,000, during the Mount Everest Expedition.

460. The Eastern Steppe Eagle. *Aquila nipalensis nipalensis* Hodgs.

Blanford gives the Lepcha name for this Eagle. Mr. G. E. Shaw appears to have obtained it at Mangpu at 3,850'. Probably occurs with more frequency in the Tista Valley than in the minor valleys on the west. As these large Eagles have so many different phases of plumage, and opportunities seldom come one's way in the well-wooded country of the Eastern Himalayas for observation, I am unable to fix the identity of a few aquiline birds which have come under my notice which at sight appeared to be referable to this species.

461. Bonelli's Eagle. *Hieraetus fasciatus fasciatus*. (Vieill.).

It is with some diffidence that this fine Eagle is included in this list as, so far, I have seen no specimen from Sikkim, or the lower foot-hills, though this country is well within its recorded distribution. My observations point to its having some status, but until specimens have been actually obtained, its inclusion only rests on circumstantial evidence. The National Collection is represented by two specimens from Nepal (Hodgson and Scully) and one from the Bhotan Dooars collected in March 1875 by Mandelli. *Hieraëtus pennatus* (Gmel.) by one Sikkim skin, dated 1872, in the Hume collection and one specimen from Nepal collected by Hodgson. My thanks are due to Mr. N. B. Kinnear for supplying me with this information.

462. The Rufous-bellied Hawk-Eagle. *Lophotriorchis kieneri* (De Sparre).

This grand bird is apparently confined to the Tista and Great Rangit Valleys, occasionally straying to the surrounding hills. Reported to me as known by a few careful observers, and within recent years has been obtained at Bannockburn Estate at 5,000', ♂, 18 4-18 by the late Mr. E. A. Wernicke and a ♀ below Mangpu at 3,300' on 31-8-20 by Mr. G. E. Shaw. Observed at Gopaldhara at about 4,000' in the Rungbong Valley on 9-2-19 when the rich ferruginous underparts were prominent, and a wild resounding call was uttered on its taking flight.

463. The Indian Black-Eagle. *Ictinaëtus malayensis perniger* (Hodgs.).

The Black-Eagle has recently been recorded at the foot of the hills at 500' by Mr. C. M. Inglis. It is generally distributed at elevations of from 2,000'—10,000', on the Outer Ranges and occurs in the Interior around Gangtok at 5,800', in February and March. I have noted its appearances, which have attracted my notice, though excepting the period, when it is occupied in breeding; it is often to be seen leisurely quartering the wooded 'kholas' of the hill-sides. Gopaldhara, occasionally seen in January 1912. Observed the first week in July 1914. On 13-5-16, pursued Drongos (*Chaptia ænea*), several of which are addicted to mob it daily, as it appears on its rounds. Sandakphu, 11,923', 1-3-12, several hereabouts. In flight it shows some resemblance to the laboured motion of the Marsh Harrier; this trait is more noticeable as it passes overhead than from a broadside aspect.

Four specimens examined: Rungbong Valley, Sungma, 4,500', ♂ 29-9-14, (C. E. Brown), wing 572. Nagri, 4,300', ♂ 11-2-16, wing 576. Gopaldhara, 6,000', ♀ 4-11-19, wing 580 'worn'; a broad patch of white on the throat extending behind the ear-coverts with the chin and a gular stripe black, otherwise in the rich deep black plumage of the adult female. The gullet and crop

contained the carcasses of six or more young field-mice. Balasan Valley, Pussimbing, 4,500', circum. ♀ 15-12-15, wing 585.

Soft parts: ♂ Iris stone-brown; cere deep ochreous-yellow; base of bill greenish-yellow; bill black; tarsus ochreous-yellow; claws black.

♀ Iris brown; cere and gape gamboge-yellow; bill basal half, yellowish-green, remainder bluish-black darkening towards the tip; tarsus dark ochreous. 'A *Synopsis of the Accipitres*' (Kirke Swann.) gives the measurement of the wing, as 550-600.

464. The Himalayan Hawk-Eagle. *Spizaetus nipalensis nipalensis* (Hodgs.).

This bold and aggressive eagle is the great terror of the country-side. It is generally distributed in the forested tracts at elevations of from 2,500'-10,000' on the Outer Ranges. Often to be seen around Gopaldhara. Being a wary bird, it is difficult to obtain. Sungma, 4,500', ♀ 10-1-12. Sandakphu summit, 11,800', 8-3-12. This day, I was the witness of the manœuvres of a pair of these grand birds, as they were too wary to allow of a near approach, I had to be well content with the excellent view attained from a secluded vantage point amongst the rocks. At times they remained stationary in the clear atmosphere, hovering perceptibly against the wind, occasionally making some terrific dashes in a down-ward direction, closing the wings at each attempt; in one instance this feat was performed by a single bird as it came to roost on the topmost, naked branch of a tall, commanding pine-tree; but more frequently these acts were performed in combination, in true exuberance of spirits. Ambootia, 3,000' approx., 18-4-15. I watched a prolonged bout in mid-air at a great height up, between a pair of these eagles endeavouring to seize a domestic pigeon, which eventually escaped after an exciting time to the accompanied shouts of the owner of the bird to which the eagles were oblivious. Nigali, 5,000' approx., 28-1-16; a Kite (*Milvus lineatus*) was brought in to me with its throat ripped open by one of these eagles, the combat, which took place in mid-air, was witnessed by my informant. Gopaldhara, a large 'utis' tree adjacent to the bungalow has been a favourite roosting place on more than one occasion and a date against this fact is 18-9-15*. Seen to take a Kalij Pheasant from the ground and carry it away with perfect ease. Three specimens examined: Ghoom, 6,500', ♂ 18-1-19, wing 462; the whole of the lower parts from the chin to the under tail-coverts without streaks or bars. ♀ the pair to this male, is in a melanistic phase, with black head and bars on the tail well defined, throat and breast with heavy dark streaks, and the whole of the lower surface dark and barred throughout to the under tail-coverts, wing, 465. Rungbong Valley, 10-1-12, ♀ wing 432; this appears to be a younger ? bird but with crest fully developed, gular stripe on throat and streaks on breast well defined, lower parts pale with barring on the flanks, abdomen, thighs and under tail-coverts also prominent. Kirke Swann gives the wing measurement of this form as ♂ 450-460, ♀ 485-495. In my 'Notes on the Birds of Upper Assam' I recorded a ♂ from Dejoo, N. Lakhimpur, 30-11-08, under this species which on further examination is referable to *Spizaetus cirrhatus linnaëus* (Horsf.), being the pale phase (*S. caligatus* Raffles). This species appears to be restricted to the Lower Himalayas along the base of the hills; the wing in this specimen is 440.

465. The Crested Serpent Eagle. *Spitornis cheela cheela* (Lath.).

A common and generally distributed eagle. It occurs on the Outer Ranges and well into the Interior, where I have observed it around Singhik in the Tista Valley. Amongst the numerous occasions it has come under my notice, the following records have been duly noted. Gopaldhara, 4,720', 7-4-19. * Turzum, 5,200', one secured, minus one tarsus, on 25-7-17. (O. Lindgren.) 25-2-21, ♂ wing 495. Seeyok, ♂ 31-3-20, wing 493. Thurbo, ♀ 1-5-21, wing abraded.

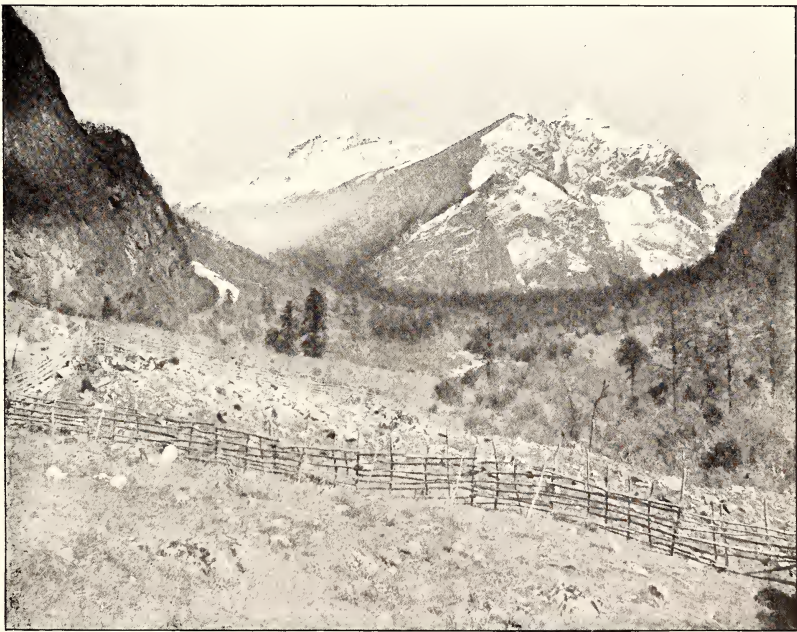
Kirke Swann gives the wing measurement of this form as ♀ (Himalayas) 495-532, ♂ 500-510 and that of *S. c. albidus* (Temm.) ♂ (Assam) 430-443; ♀ 430. I find five ♂♂ measure (a) 405, (b) 455, (c) 460, and (d) 485 respectively whilst a single ♀ measures only (e) 415. Some of these low wing-measurements for Assam specimens are significant. Whilst the single female (e) refers to an adult in typical dark plumage, male (a) is in the pale phase; throat entirely white, breast white with centre streaks, abdomen banded, head and nape showing a preponderance of white, upper surface fringed with white; (c) is a



H. S. Photo.

CRAGS, NORTH-WEST OF LACHUNG VILLAGE.

Haunts of Vultures sp.?, *Pyrrhocorax graculus*, *Grandala caelicolor*, &c.
7th March, 1920.



H. S. Photo.

LACHUNG VALLEY ABOVE THE VILLAGE.

Looking north. "An excellent example of a glacial valley."

Pines in foreground chiefly *Abies smithiana*, the Spruce of Hooker.
Haunts of *Pyrrhocorax pyrrhocorax*, *Columba leuconota*, &c., &c. 7th March, 1920.

still paler bird which almost discounts this phase of plumage being a mark of immaturity. Stuart Baker restricts *albida* to Southern India. Kirke Swann gives the distribution of this form.—E., C. and S. India from Assam to Travancore; whereas Kirke Swann restricts *ruthefordi* to Hainan Isl. and French Indo-China. Stuart Baker gives the distribution of this form.—Assam, Burma and Siam to Hainan Isl. My specimens show much disparity in size and thus best agree with the last-mentioned distribution.

466. The White-eyed Buzzard-Hawk. *Butastur teesa* (Frankl.).

The only record for this species is that of a ♂ obtained at Mangpu, 3,800', on 19-2-21. (G. E. Shaw). A bird seen at Chungthang on 11-3-20* appeared to be referable to this *Butastur*, as it was not secured, this occurrence lacks substantiation. Blanford refers to this species as wanting in the Himalayas. The above record is apparently *an extension of its distribution area*.

467. Pallas's Sea Eagle. *Cuncuma leucorypha* (Pall.).

Obtained on one occasion in the Rungbong Valley at Sungma 4,500', ♂ 16-6-19 (C. E. Brown.), wing, 585. Kirke Swann gives the wing-measurement of this species: ♂ 563-573; ♀ 600-618.

468. The Brahminy Kite. *Haliastur indus indus* (Bodd.).

Apart from a few birds occurring in the cold weather, there appears to be an influx into the hills of this kite on the advent of the S. W. Monsoon. Obtained at Turzum at 5,200', ♂ 11-12-21. (O. Lindgren.) Gopaldhara, a single bird seen on 8-4-19, and a pair in evidence at Nigali, 5,200', on 14-6-15. This kite ascends to 7,000'.

469. The Indian Kite. *Milvus migrans govinda* Sykes.

Recorded as 'found in the Himalayas up to an elevation of about 12,000', but is uncommon above about 8,000'. I have identified this kite from a few low elevation specimens, Nurbong, 2,000', 18-3-14. I picked up a bird with a wing-measurement of only 13 $\frac{3}{4}$ " = 350, and I have received specimens from Thurbo in January 1916, and from Sungma, 11-5-15, wing, 19" = 483.

♂ Wing, 430-450. ♀, 460-480. (Kirke Swann.).

Blanford records this kite from Lachung, 8,000' and Yumthang, 12,000', (September). All the birds I saw in Lachung in March were referred to the next species.

470. The Black-eared Kite. *Milvus lineatus* (Gray).

The following information has reference to this large kite. I have neglected to obtain specimens, since a number were obtained in Assam. Balasan Valley, Namsoo, 2,000'. Observed in some numbers frequenting the river-bed in the first week in January 1912. Kalo Pokhari, Nepal-Sikkim Frontier, 10,160', 29-3-12. Not much in evidence at these heights but a single pair seen to-day and a solitary bird on 1-4-12. Jalapahar, 7,500' circ., 9-4-17. Numerous kites congregating hereabouts, disporting in a high wind on a bright afternoon. Lachung, 8,800', 9-3-20. Numbers in evidence around the village. During the Mt. Everest Expedition observed in the Kharta Valley up to 17,000. (A. F. R. Wollaston). ♂ Wing 475-485; ♀ 500-530; tail 300-335. (Kirke Swann).

471. The Indian Black-winged Kite. *Elanus cæruleus vociferus* (Latham).

During the early summer in 1921 there appeared to be an extension of this kite into the hills, as both Mr. O. Lindgren obtained it at Turzum in May at 5,200' in the Rungbong Valley and Mr. G. E. Shaw below Mangpu at 3,700', ♀ 15-4-21; 3,800', ♂ 16-4-21.

472. Montagu's Harrier. *Circus pygargus* (L.).

Evidently occurs sparingly in the Rungbong Valley during the 'cold weather.' Turzum, 5,200' circ., ♀ 12-1-21 (O. Lindgren.), wing 338; both ovaries well defined. Iris brown; bill black; tarsus yellow; claws black. As will be noted from the wing measurement this bird is a diminutive specimen. ♂ Wing 350-370, (one 340 and one 380 mm.) ♀ wing 350-380 (one 335). *British Birds, vol. ii, p. 153, Witherby.*

473. The Pallid Harrier. *Circus macrourus* (S. G. Gmel.).

This harrier most likely occurs under favourable conditions in 'the cold weather.' On the west side of the Rungbong Valley, all harriers give the wooded tracts a wide berth, and on no single occasion, have I ever seen a bird on Gopaldhara; yet they occur in the valley fairly frequently, but much more commonly on the bare, open ground around Pokharibong and Mirik.

474. The Hen Harrier. *Circus cyaneus cyaneus* (L.).

This harrier is probably the commonest of all the members of this genus, Rungbong Valley, Selimbong, ♀ 20-1-16, wing, 398. Iris gamboge-yellow; this specimen is a fine adult bird. A female observed at Mirik, 29-3-20.

475. The Pied Harrier. *Circus melanoleucus* (Forst.).

I have seen it on a few occasions, and it has been reported to me at other times. It evidently extends into the hills, covering a wider area in 'the cold weather.'

476. The Long-legged Buzzard. *Buteo ferox ferox* (S. G. Gmel.).

This buzzard appears to be more common in the North-West, than in the Eastern Himalayas. Recorded for Sikkim, and I obtained it under the hills in Upper Assam. A further examination proves the specimen to be the typical form. It is quite impossible to distinguish between adults in the pale phase of this species and *Buteo japonicus* = *B. plumipes* (Hodgs.), unless they are available for comparison, when the former shows a more decided ferruginous coloration generally; which is pronounced on the tail, the inner webs of which have a preponderance of white. Birds from the eastern limits of its range appear to have the naked portion of the tarsus in front reticulated and not scutellate as in European examples. Buzzards seen on several occasions on the Singile La Ridge during the winter of 1911-12, in particular near Phalut on 16-2-12 and 19-2-12, some of which were dark coloured birds, and at Sandakphu, 15-3-12, and Kalo Pokhari in March 1912; which latter records to refer to very pale birds may have in some cases been this species, though no definite certain identification was possible, and this remark applies to birds seen on various occasions at much lower limits.

477. The Upland Buzzard. *Buteo hemitasius* Temm. & Schleg.

Dr. Hartert treats this buzzard as a race of *B. ferox* and *Buteo leucocephalus* and *Archibuteo strophiatius* (Hodgs.) are synonyms. Both these two latter birds have been recorded from Sikkim. On Sandakphu, 3-3-12, I saw a large bird with a dark head, inclined to black, breast distinctly ferruginous, tail much rounded; as it soared overhead it uttered a plaintive, mewing cry. To all appearances it seemed too large for a buzzard but might have been this species. The few small birds in the gully below which, at the time, I was watching were a pair of Redstarts (*P. schisticeps*) a Wren (*T. nipalensis*) and several Cole-Tits (*L. rufonuchalis beavani* and *L. dichrous*), but these suffered no molestation, whilst busily occupied in and about the dwarf rhododendron bushes.

478. The Japanese Buzzard. *Buteo japonicus* (Temm. & Schleg.).

This is the *B. plumipes* (Hodgs.). Kirke Swann queries the Himalayas in his, distribution key. Rungbong Valley, Turzum, 5,000' circ. ♂ 18-11-19, wing, 380. This example is in the stage of plumage which is probably referable to a not yet adult bird and has the zone on the abdomen, which Kirke Swann has very aptly compared with *lagopus*. Iris stone yellow (pale brown); cere greenish yellow; bill slaty-black; tarsus scutellate in front, dull ochreous. Stomach contained remains of a mouse, some Orthoptera and a skink in the gullet. 5,200', ♀ 16-2-21, an adult, wing, 412. Very similar to some specimens of *B. ferox* without the rufous markings, tail uniformly dark. Iris pale stone-brown; cere greenish ochreous; bill black; tarsus reticulate in front, dull ochreous; claws black. Stomach contained remains of a field-mouse and a chameleon. Lachung, 10,000', ♂ 3-3-20, wing, 360; this example has the bare portion of the tarsus reticulate in front, and is in a melanistic phase of plumage throughout. Several buzzards were seen in this Valley, when on occasions they have been observed to descend with closed wings in a terrific swoop but which calmly ended by settling on a tree-stump or other

equally accommodating perching site. This buzzard is frequently to be seen in the Rungbong Valley during the 'cold weather,' and I saw a fine pair of birds at Mirik, which had taken up their quarters in a lofty tree adjacent to the swampy ground in the winter, 1921-22; when odd birds were to be seen around Gopaldhara, a specified date being 28-10-21. Blanford records it from Yumthang, 13,000'. (September).

479. The Siberian Goshawk. *Astur gentilis schedowl* Menz.

The only specimen that I have seen from these hills is a ♀ obtained on the 18-11-18 at Sungma, 4,500' in the Rungbong Valley by Mr. C. E. Brown, to whom I am indebted for many interesting *Accipitres*. The wing of this example measures 337, tarsus 83. It is richly suffused with cream colour and heavily blotched on the underside so, is apparently in the immature stage of plumage. This bird was molested by a pair of Jungle-Crows, being driven from tree to tree. Iris bright golden-yellow; cere greenish-yellow; gape yellow; bill, bluish, shading towards tip into black; tarsus, lemon-yellow; claws black. Stomach contained only two small fragments of micaceous gravel, being absolutely empty of any food.

480. The Shikra. *Astur badius dussumieri* (Temm.).

The Shikra breeds at moderate elevations and is generally distributed. After an examination of my material from the Eastern Himalayas, I can detect no differences from extreme limits, which are not explained by *seasonal change*, and my conclusion is that all these birds must be relegated to one form. *A. b. poliopsis* (Hume.) is said to be darker grey above; with broader and brighter vinous bands below whilst *A. b. dussumieri* is above lighter grey, below paler rufous in comparison with the typical form (Kirke Swann); there is apparently no difference in the size of these two forms, which are larger than *A. b. badius* (Gmel.).

Adult males, all very similar on upper side.

Sikkim Himalaya. Rungbong Valley, Turzum, 5,200' circ., ♂ (*a*) 8-3-19. (O. Lindgren.), wing 182. Iris crimson; bill bluish at gape, sheath, horny bluish-black, deepening towards tip; cere bluish and yellowish on top of culmenal base; tarsus dull yellow; claws black.

Sungma, 4,500', ♂ (*b*) 2-4-20 (C. E. Brown), wing 186; the palest example of all, gular stripe best defined. Iris orange-yellow; bill bluish at base, varying to the dark tip, cutting edge of upper mandible yellow; cere bluish-yellow; tarsus dusky-yellow; claws black; testes active. Stomach contained remains of *Leiothrix lutea calipyga*, identified by the bill, which was intact.

Upper Assam. Dibrugarh, Rungagora (Plains), ♂ (*c*) 4-7-03, wing 187. Iris crimson; the darkest example of all, traces of the bars indicated on the thighs, otherwise showing the white under tail-coverts as in the rest. Sibsagar. Komilabari (Plains), ♂ (*d*) 1st-13-9-04, wing 178, bars not as deep in colour as (*c*) but brighter than (*a*), identical with an example from the Luskerpore Valley, South Sylhet, month not noted, wing 190.

Immature males, all showing the rufous fringes to the feathers of the upper side, and bloched below.

Upper Assam. N. Lakhimpur, Dejoo, ♂ 23-7-04, wing 191, ♂ 5-8-04, wing 188; ♂ 10-8-07, wing, 192. Iris pale yellow; the darkest example in this series.

Sikkim Himalaya. Rungbong Valley, Gopaldhara, 4,700', ♂ 5-8-20, wing 182. Iris pale yellow.

Adult females, all very dark on the under side with the head slaty in example (*h*) which is brownish-slaty in the rest; bars on thighs well defined in (*g*), only faintly indicated in (*h*); gular stripe most prominent in (*f*).

Sikkim Himalaya. Rungbong Valley, Gopaldhara, 4,700', ♀ (*e*) 15-7-16, wing, 209, a breeding bird, tail in heavy moult. Sungma, 4,500', ♀ (*f*) 7-8-17 (C. E. Brown.), wing 214, a breeding bird, tail in moult.

Upper Assam. Nth Lakhimpur, Dejoo, ♀ (*g*) 15-9-08, wing 216. ♀ (*h*) 21-10-08, wing, 214.

Immature females. *Upper Assam.* Nth. Lakhimpur, Dejoo, ♀ 2-8-04, wing 208. *South Sylhet.* Luskerpore Valley, ♀ wing 207. *Sikkim Himalaya.* Rungbong Valley, Gopaldhara, 4,720', ♀ 18-9-21 wing 201. Iris pale yellow, cere greenish-yellow; bill black at tip, gape and basal half of lower mandible, bluish; tarsus dingy-yellow; claws black. This bird flew into the bungalow verandah at 3 p.m. in a bold endeavour to seize a caged barbet.

481. The Larger Crested Goshawk. *Astur trivirgatus rufininctus* McClell.

Recorded for Sikkim, but apparently occurs more commonly farther to the east and is evidently a bird of low elevations. Mandelli obtained it breeding at Mantchu? (Namchi) in May.

481 (a). The Larger Besra Sparrow-Hawk. *Accipiter alpinus* Gurney.

This Sparrow-Hawk occurs, yet is apparently far from common. Turzum, 5,200', ♀ 28-12-15. (O. Lindgren.) wing 203, tail, 156, this example is a fine adult bird. Gopaldhara, 6,000', ♀ 5-11-19, wing 196; tail 138; this last example is an immature bird; both specimens were obtained in the Rungbong Valley. A female observed in December 1911 near Thurbo at 4,600' was certainly referable to this species.

482. The Indian Sparrow-Hawk. *Accipiter nisus melanoschistus* Hume.

An examination of my material is detailed, as it seems to me impossible to separate this form from *nisosimilis* as far as cold-weather birds are concerned. The measurements overlap and colour differences are an unstable guide—due to age and seasonal change. The distribution of the two races appears to be not yet clearly defined, especially if the two forms intermingle in their winter limits; if this is the case; there must be some confusion in an exact determination.

Nepal-Sikkim Frontier, Kalo Pokhari, 10,160', (a) ♂ 22-3-12, wing 204; tail 142; this example is an adult. Iris orange-yellow. Upper parts dark slaty, head still darker and the whole of the lower surface rusty-red, obliterating the bars, excepting on the abdomen and flanks.

Rungbong Valley, Thurbo, 4,500', (b) ♂ 25-1-16, wing 212; tail 143, not quite as dark as the previous example, bars on the under surface defined and suffused with rufous.

Upper Assam, N. Lakhimpur, Dejo, ♂ (c) 2-12-10, wing 216, tail 150.

Similar to (b) lower surface suffused with rufous; bars distinct. Dibrugarh, Rungagora, ♂ (d) 6-4-03, wing 205; tail 142; an immature example in abraded plumage. ♂ (e) 26-1-04, wing 216; tail 150; an immature example in fresh plumage.

Sikkim, Lachung, 10,000', ♀ (f) 3-3-20, wing 253; tail, 183. Left ovary developed, stomach empty. On migration, held up with a snow storm. This example is the darkest of six females, and has the head almost black, yet this bird was accompanied by the next specimen which is equally adult ♀ (g) but which is correspondingly in a lighter phase of colouration, wing 247; tail 162; and both ovaries showing signs of activity, stomach empty.

Rungbong Valley, Thurbo, 4,500', ♀ (h) 28-11-20, wing 253; tail, 169; head and nape showing more white than is usually present in adult females, with the under surface and bars dark and well defined. Attracted to the precincts of the bungalow by the Pigeons. ♀ (i) 24-12-21, wing 240; tail, 156; an immature bird in fresh plumage, ♀ (k) 20-1-19, wing, 258, tail, 180; a fine adult bird with the head dark slaty, contrasting with the back and wings which are a slaty-brown; an altogether paler phase than (f). Gopaldhara, 3,500'. ♀ (l) 30-1-19, wing 245; tail, 160, evidently an immature bird in slightly abraded plumage. Males Nos. (b) & (c) in comparison with (a) and female (k) in comparison with (f) might be referred to *A. n. nisosimilis* (Tick.) provided the specimens with which they have been compared are typical and in normal plumage,—not the result of excessive vigour or a phase of melanism.

Blanford refers to a sparrow-hawk as common in the Lachen and Lachung Valleys after the middle of September, evidently migrating southward but none were seen on the Cho La Range at the end of August 1870.

483. The Indian Crested Honey-Buzzard. *Pernis cristatus ruficollis* Less.

This Buzzard occurs with frequency in the hills at moderate elevations. An adult ♀ obtained in the Rungbong Valley in late March 1912. Wing 452; underparts more white than cream-coloured with the streaks well defined on the breast. Sungma, 4,500', ♀ 14-10-19 (C. E. Brown.), this example is a very fine adult bird, showing a rich creamy suffusion over the whole of the lower surface, particularly marked on the breast; the streaks are well defined. Wing 448. Soft parts: Iris gamboge-yellow; bill greenish-plumbeous at base of both mandibles, upper mandible plumbeous-black, darkening towards

the tip; lower mandible bluish-plumbeous darkening similarly; tarsus dusky-yellow.

A few observations have been duly noted. Gopaldhara, 9-10-16.* A kestrel seen in company with a honey-buzzard when the former was observed to harrass it, but this act could hardly amount to a serious effort as it was glorious weather at the time and seemed to be more of an ebullition of spirits in sheer delight; even the Butterflies (*Papilio philoxenus*) which usually flitted about the compound at no great height, were this morning disporting some hundreds of feet above their accustomed realm, when they appeared like diminutive birds in the clear atmosphere. Nagri Spur, 31-3-17*. Mangpu, 3,800'. ♂ 5-5-20; ♂ 13-8-21. (G. E. Shaw). For comparison my specimens from Assam, 3 ♀♀ Wing, 412, 415, 432, ♂ 398. The measurements of my adult birds exceed Kirke Swann's: ♀ 405-418, ♂ 380-390.

484. The Black-crested Baza. *Lophastur leuphotes leuphotes* (Dumont).

Sparingly distributed and confined to *low elevations*. Reported to me from few localities but evidently breeds on the Nagri Spur at an elevation not higher than 4,250'. Two specimens examined from this locality for which I am indebted to Mr. E. G. Birch. ♂ 26-6-19, wing 232; tail 122; bill from cere, 18; tarsus 36. Iris hazel; bill plumbeous-blue, darker at tip; tarsus plumbeous; claws plumbeous-horny. ♀ 10-7-20, wing 242; tail 128; bill from cere, 18, tarsus, 34. Iris, brown; cere, dark bluish-plumbeous; bill, pale-blue, tip and edges of notches of upper mandible dark; tarsus, pale bluish-plumbeous; claws dark horny. Stomach contained insect remains entirely—grasshoppers and caterpillars.

485. Blyth's Baza. *Aviceda jerdoni jerdoni* (Blyth).

Recorded from Kurseong, 6,000', by Mr. E. A. D'Abreu and by Mr. A. M. Primrose from the foot-hills, 1,200'-2,000', in this Journal, vol. xx, pp. 518 and 1152, respectively. It has since been obtained by Mr. G. E. Shaw at Mangpu, 5,500', ♂ 13-12-20.

486. The Indian Hobby. *Falco severus indicus* A. B. Meyer & Wiglesw.

The only specimen obtained in recent years to my knowledge was shot by the late Mr. E. A. Wernicke at Bannockburn Estate below the station of Darjeeling. Observed in lofty forest on the left bank of the Raidak River in January 1922.

487. The Central Asian Hobby. *Falco subbuteo centralasiæ* (Buturlin).

The typical form appears to be a winter visitor to North-West India, where my specimens have been obtained. Until the following specimens from these hills have been compared, it is impossible to decide whether they refer to this form or *F. s. streichi* Hart. & Neum. Mangpu, 3,850', ♂ 3 10-18. ♂ 11-10-19. (G. E. Shaw.). Both of us observed a hobby to take up its position in the trees facing the bungalow at Mangpu on 16-10-18* when its identification was fixed. Observed at Gopaldhara on 19-10-18* and again at 3,700', 7-2-19*, single birds on both occasions.

488. The Eastern Red-footed Falcon. *Falco vespertinus amurensis* Radde.

A single ♀ obtained at Mangpu at 3,860', on 18-10-18, (G. E. Shaw.) is the only record that I am aware of for these hills within recent years.

489. The Himalayan Kestrel. *Cerchneis tinnunculus saturatus*. (Blyth.).

490. The Eastern Kestrel. *Cerchneis tinnunculus* subsp. ?

So far as can be ascertained, no reason has been cited for the acceptance of McClelland's *interstinctus* in place of Blyth's *saturatus*. McClelland's type came from Assam, where two or more races are likely to occur. While some of my skins from the Sikkim Himalaya are without doubt referable to *saturatus*; this appears not to be the case with my Assam skins, as the majority of my specimens are not 'saturatus.' This kestrel is resident in the Rungbong Valley, and breeds sparingly around Gopaldhara from 5,000' upwards. It seems to lay fewer eggs in the clutch than the typical form. A single youngster, taken from the nest in early 1915, either in March or April, was a female. This bird is now in the Regent's Park Collection.

Six specimens examined: Gopaldhara, 4,720', ♀ 16-1-12, wing and tail in heavy moult. Thurbo, 4,500', ♂ 20-8-21, wing 243; tail 146, first two primaries in process of growth. ♀ March 1919, wing 259; tail 150. ♀ 22-11-21, wing, 234; tail, 132; wanting the deep rufous suffusion on the breast, probably not fully adult, otherwise agrees with the rest, in the average run of coloration; noted to be in fat condition.

Turzum, 5,000', ♀ 17-9-20 (O. Lindgren.), wing 253; tail 144, not fully adult. ♀ 8-11-20, wing 257; tail 149, a fine adult bird; stomach contained Diptera Larvæ and parasitic filariæ.

My Assam specimens and with these are included one ♂ from the Sikkim Himalaya, approach nearer to *japonicus* Temm and Schleg., in coloration, but are far too large for this race, yet at the same time are too small for *dorriesi* Kirke Swann. Another race has been described from Fusan and Corea, 1907:—*perpallida* Clark.

The measurements of my specimens are detailed.

Assam. ♂	Wing	250	;	tail	149	(November),	Immature.
" ♂	"	250	;	"	141	(April),	in change of plumage.
" ♂	"	258	;	"	143	(December),	Adult.
" ♂	"	256	;	"	158	(November),	Adult.
Sikkim. ♂	"	255	;	"	149	(January),	Adult.
Assam. ♀	"	254	;	"	156	(November),	Immature.
" ♀	"	258	;	"	147	(April),	Adult.

This series I consider to be well removed from '*saturatus*' and sub-specifically underterminable. The elucidation and correct identification of these eastern forms is most desirable. Numbers of kestrels are to be seen during 'the cold weather' at moderate elevations in these hills, and a few pairs were observed in the Lachung Valley up to 9,000' at a similar period of the year, where Blanford records first seeing it on the 9th of September when it made its appearance a few days sooner than the sparrow-hawk, which evidently refers to the cold-season migrant.

491. The Red-breasted Pigmy Falcon. *Microhierax cærulescens cærulescens* (L.).

The true home of this interesting, miniature falcon is the deep, hot valleys and at the base of the heavily forested hills. It has come under my observation at limits of from 800-1,700', and I have not seen it at a higher elevation in the interior of the country; whilst on the outer hills, it has been obtained up to 3,860' at Mangpu, 16-2-18, as well as at 1,100', 2-3-20 (G. E. Shaw.), and reported from the Nagri Spur at 4,000' by Mr. E. G. Birch, and from Bloomfield at 6,000' near the station of Darjeeling by Mr. H. P. P. Barrett. I have seen a number of specimens from the Terai. There is little doubt that it disperses over a wider area after the breeding season, notwithstanding its distribution limits are strictly confined to low elevations. Towards April they congregate in small colonies at their nesting haunts and are then partial to clusters of lofty 'simal' trees in open tracts in preference to the dense forest, when towards evening, they become very active, enlivening the air with their bold, dashing flight, which partakes of the combined actions of *Artamus* and *Cypselus*, and though they eventually settle on the naked branches at a great height from the ground, they often dash overhead within a few feet, uttering all the while a shrill whistle. At midday it is no unusual sight to observe an odd bird enjoying a siesta in the open branches of any diminutive tree by the road-side, and even in a village quite oblivious to the daily routine of its human occupants; unless one is acquainted with this habit it might be mistaken for a shrike. I have found their breeding haunts entirely deserted at other times. In one day, 28-3-17, I had the gratification of observing six birds, at scattered intervals, along one valley. My observations have reference to the years 1917 and 1920 in March between periods covering the 12th-28th.

Four ♂♂ examined: Bill from cere, 10-11, av. 10-4; wing 99-104, av. 100-8.

One ♀ examined: Bill from cere 11; wing 100; ovaries developed but not breeding, 28-3-17. Several filariæ taken from behind the eye of one of these specimens. I have come across them in other birds of diverse genera such as *Spilornis*, *Motacilla*, *Siphia*, &c., &c.

Soft parts: Iris brown; tarsus greenish-plumbeous.

I have refrained in this solitary instance from stating the exact locality as

it would be quite within the realms of possibility for an over-zealous or selfish collector to decimate the birds at their breeding colonies to such an extent to disastrously affect their status. As the eggs are very rare, or even not known of this form in collections, no such charge can yet be brought against the brother Oologist, and he well might have a grievance against the skin collector.

492. The Bengal Green Pigeon. *Crocopus phoenicoptera phoenicoptera* (Lath.).

Entirely a plains-species. I found it plentiful around the village of Kumargram in East Bengal near the Assam boundary.

493. The Thick-billed Green Pigeon. *Treron curvirostra nipalensis* (Hodgs.).

Evidently confined to the base of the foot-hills and adjacent forested country of the plains.

494. The Pin-tailed Green Pigeon. *Sphenocercus apicauda* (Hodgs.).

Recorded for the Himalayas below 5,000' or 6,000'. This pigeon only appears in the Rungbong Valley in the cold weather, and is then generally found below 4,700' or thereabouts. Gopaldhara, 3,500', 30-1-19. I counted twenty-six Pin-tailed Pigeons at rest on the bare branches of a tall 'sirir' (*Albizzia stipulata*) tree at the bottom of the valley. Obtained in the Tista Valley at 2,000'. ♂ ♀ 6-3-19. (G. E. Shaw)

495. The Kokla Green Pigeon. *Sphenocercus sphenura sphenura* (Vig.). 'Halisa' Paharia.

Recorded for the Himalayas between 4,000' and 7,000' at which limits it is generally distributed in well-wooded tracts of the Outer Ranges during the summer. It breeds around Gopaldhara at elevations of from 3,440'-6,000' during 'the rains'; a few birds remaining around 5,000'-6,000' throughout the 'cold weather' though the majority migrate; in what direction can only be conjectured. It is recorded to the west of Nepal in summer, but stated to remain throughout the year in Nepal and farther east which requires modifying for the Sikkim Himalaya. I have heard the delightful notes of this Green Pigeon in the station of Darjeeling, where the birds are quite at their ease amongst the trees with no likelihood of being molested. Evidently double-brooded, as young birds have been found in the nest as late as 14-9-15 when I saw two nestlings at Okayti. As soon as they arrive or shortly after their arrival at Gopaldhara, they commence calling, when on 24-5-18 between a limit of 3,500'-4,720' I noted this to be the case. 5,000', 16-10-14, much in evidence in the forest. 8-10-21, half-a-dozen birds congregated; on 24-10-21, apparently had deserted this same patch of forest and evidently had migrated. In evidence on 27-7-15. Specimens obtained 4,720', 2-10-19, juvenile male, 5,800', ♂ 23-11-20, when several pairs were in evidence feeding on a dark purple berry. 6,000' and below. ♀ 30-1-19; ♀ 21-12-11.

The rufous of the crown, orange wash of pink on the upper breast is wanting in the young male of the year which is in similar coloration to the adult female, inclusive of the under tail-coverts; while there is an entire absence of the maroon on the back, a few feathers of the lesser wing-coverts showing this character, which is faintly indicated on the median wing-coverts. On several occasions I have seen these birds called up to within measurable distance by an almost perfect imitation of their familiar notes.

496. The Green Imperial Pigeon. *Muscadivora ænea sylvatica* (Tick.)

Recorded for the base of the Himalayas from Sikkim eastwards. Evidently confined to the Terai and Plains. It is entirely absent from the Rungbong Valley even as a straggler.

497. Hodgson Imperial Pigeon. *Ducula insignis insignis* Hodgs 'Hukas' Paharia.

Recorded for the Himalayas at moderate elevations, 'about 2,000'-6,000'. Obtained in the Tista Valley at 2,200', ♂ 29-7-20, 2,500', ♂ 9-7-18, elevation? ♂ 6-8-15; 3,500', ♀ 6-3-21. (G. E. Shaw). I observed it in small parties in the rocky, wooded ground on the precipitous right bank, in the Gorge of the Tista River at Dikchu, at an elevation of 2,800' in March 1920. I signally failed to locate any Imperial Pigeons in the Eastern Dooars, in January 1922. My impression is these birds ascend in 'the cold weather,' as it is only at this period of the year they occur sparingly in the minor valleys on the west.

A pair was obtained in the vicinity of the Gopaldhara Bw. at 4,720' in January 1914. I had an excellent view of a pigeon at 3,500' on 14-11-19* which could only have been this species but the fact of its being single and showing a decided chestnut colouration, intensified by a white crown; were this area within the distribution limits of *Alsoconus puniceus*; this record would have been nearer the mark by a reference to this last species.

498. The Bronze-winged Dove. *Chalcophaps Indica* (L.).

Generally distributed at all elevations from the plains-level up to 6,000'. Equally plentiful in the valleys of the interior, where it occurs commonly in winter, as it is on the outer ranges throughout the whole year.

499. The Blue Hill-Pigeon. *Columba rupestris turkestanica* But.

Recorded under "specimens labelled Kashmir, Sikkim, and Darjeeling in the British Museum Collection probably came from more northern localities". During the Mouut Everest Expedition, Mr. A. F. R. Wollaston found this Pigeon above 12,500' below this elevation occurred the next species.

500. The White-bellied Snow-Pigeon. *Columba leuconota leuconota* Vig.

Recorded for the Himalayas, 10,000'—14,000' in summer, but descending to lower elevations in winter. The Snow-Pigeon was reported to come down on the maidan at Chungthang, 5,350', in the interior during severe weather, which is quite feasible. The forest officer who supplied me with this information had a sound local knowledge of the birds. I met with it on the first occasion at about 6,000' on 26-2-20, when a solitary bird was disturbed out of some growth above a huge projecting boulder along the path to Lachung; in its flight it crossed the foaming river before a clear view was obtained, once it had taken up its fresh quarters amongst the trees! During my stay in Lachung up to the 10th March; it was an every-day occurrence for large parties to settle in the rough ground surrounding the village, and on the morning we left, a last impressive view was obtained of a large flock in the valley, at just about the most distant point reached by the Choughs after a fall of snow in the higher reaches. Seen at a distance, long before it is possible to distinguish the form of the birds as they move over the ground, bunched together; one can aptly describe their rippling motion only by comparing it to that of a forthy sea lapping an open beach. Numerous Fritillaries (*Argynnis lathonia issæa*) chiefly, with a sprinkling of Swallow tails (*Papilio machaon sikhimensis*) were on the wing, and as we reached the wooded glades, a further acquaintance with the rare vivid Blue (*Herda moorei*) was in store.

On leaving Lachung my thoughts were expressive of regret in taking leave of its primitive people—nature's gentle-folk, still isolated from the turmoil of life; and if smiling countenances heightened by rosy cheeks are any criterion of a happy disposition; here was ample evidence that, the fewness of their wants more than compensated for any questionable advantages that are likely to accrue from the penetration of Western influences.

Dr. Hartert gives the wing measurement of this form as 233-245.

My three specimens measure: ♂♂ Wing 239-243; ♀ wing 241.

501. The Tibetan Snow-Pigeon. *Columba leuconota Gradaria* Hart.

This form is recorded from Gnatong in the Chumbi Valley, and there is a strong likelihood of it occurring within the frontier of Independent Sikkim. The wing measurement is given by Dr. Hartert as 239-262.

502. The Speckled Wood-Pigeon. *Dendrotreron hodgsoni* (Vig.).

Recorded for the Himalayas at elevations of from 10,000'—13,000' in summer, and at 6,000'—9,000' in winter. Obtained at Gopaldhara at 5,000', ♀ 7-1-12, when feeding on 'Jinghana' berries in the forest, and also at Mangpu at 5,500', ♂ 2-4-20. (G. E. Shaw). Elwes obtained it on the Tankra La at 13,000' in the autumn of 1870. (Blanford).

503. The Eastern Cushat. *Palumbus palumbus casiotis* Bp.

Reported to have been obtained on Tonglo on several occasions. Up to the present it is unknown to me. Information in respect to its status, if actually occurring in these hills, is desirable. Stuart Baker records it from the better wooded parts above Gyantse and further north. (*Indian Pigeons and Doves*).

504. The Ashy Wood-Pigeon. *Alsocomus pulchricollis* (Blyth).

Recorded for the Himalayas at elevations of from 7,000'-10,000' or higher. I have seen specimens obtained on Senchal at 8,000' during the winter (H. P. P. Barrett). It is said to have formerly frequented the station of Darjeeling in flocks of ten or thirty from November to April, and odd parties probably occur at the present day in the well-wooded portions on occasions. During the cold-season, when on the ridge above Gopaldhara at 6,000' I saw large flights of this pigeon presumably, descending in a southerly direction, possibly under stress of weather.

Obtained by Messrs. E. O. Shebbeare and W. P. Field from the plains at Gorumara to the east of the Tista River. Recorded *Ibid.* Vol. XXV, page 300. (C. M. Inglis.).

505. The Indian Turtle-Dove. *Streptopelia orientalis meena* (Sykes).

This Dove is the *Turtur ferrago* (Eversm.) of Blanford's 'Fauna.' As there is some confusion with the forms of the *orientalis* group, both in the nomenclature and recorded distribution; the following extracts have been collected for future information, as correctly identified specimens, from any locality and every month, from the hills in particular, are a desiderata. The nomenclature here followed is in accordance with Dr. Hartert's treatment of the group. Recorded as breeding in the Himalayas as far east as Sikkim at elevations of from 4,000'-8,000' from May to August. Migratory in the winter throughout the whole of India as far east as Behar, from whence my specimens have come. Tirhut. (C. M. Inglis). So far, I have failed to locate this form in the Sikkim Himalaya. All the forms in the *orientalis* group differ from the *turtur* group in having the tips to the feathers of the neck patch grey, *meena* is the palest form of the three here mentioned: the throat is albescent and the belly is almost white, which last character cannot be lost sight of in life. For the purpose of discrimination between the other two forms when available for examination: vent and flanks very pale grey and under tail-coverts white. (Stuart Baker). ♂ ♀ Wing 187-202, maximum 195. (Hartert).

506. The Rufous Turtle-Dove. *Streptopelia orientalis orientalis* (Lath.).

Recorded from 'East Tibet to Nepal and Sikkim, at all events the northern boundary of the latter State, also from Bhamo in Upper Burma; probably also in northern Assam as an occasional visitor'. (Hartert.) According to Stuart Baker, Nepal birds are true *orientalis* as are those from Sikkim and Tibet while Darjeeling specimens in the B. M. Coll. are mostly (*meena* = *agricola* Tick.), and recorded as resident in the extreme north. Vent, flanks and under tail-coverts pale grey. (Stuart Baker). ♂ Wing 190-204; in most cases smaller in ♀ 180-198 (Hartert). ♂ 185-200, ♀ 176-195 (Witherby). Specimens obtained around Maling, near Ringim, 4,590', in the early summer of 1920 are referable to this form, which appears to be found at all events in the interior, though the exact determination of the birds which occur on the outer ranges around Mirik, sparingly in winter at 6,000'; when I last observed one on the 6th of November 1921, remains doubtful, until specimens have been actually secured. In the Mai ('Khola') Valley in East Nepal all birds obtained are intermediate *orientalis* × *meena* where at an elevation of about 7,000', a pair of breeding birds with a clutch of two eggs were taken on 2-5-12, ♂ wing 191; ♀, 193. In the female the under tail-coverts and the broad tips to the tail feathers on the underside are white equally; these characters are less pronounced in the male, which remark applies to another specimen obtained from this locality on 19-4-12, wing 185; which agrees more with *orientalis* on the upper surface and in showing less rufous and no white tips to the lesser and median wing-coverts, scapulars and tertiaries; and while the underside approaches nearer to 'orientalis' there is no plumbeous suffusion as is the case with a bird from Kumargram, ♀ 14-1-22, wing 182. This was certainly the typical form; as this specimen was neither the pale *meena* nor the rich vinaceous *agricola*. It also showed more plumbeous on the forehead and crown than is the case with *agricola*. In the Eastern Doons in January, this dove was fairly common in the open country around the villages, but did not occur in the heavily wooded tract at the base of the hills; unfortunately I failed to make the most of my opportunities.

These doves never seem to be plentiful in the hills, and I have never seen them in the well-wooded portions of the country, which was not the case with the next form in Upper Assam.

507. The Indian Rufous Turtle-Dove. *Streptopelia orientalis agricola* (Tick.).

Recorded for Assam, Cachar and Sylhet, the Bhotan Dooars and the Terai, south of the last form eastwards to Burma, etc. (Hartert.) It is thus recorded from the Bhotan Dooars and Stuart Baker mentions it as resident in Darjeeling. This is the form with vent, flanks and under tail-coverts dark grey. (Stuart Baker). Wing measurement between 165-191. (Hartert). Blanford did not recognize this form in the 'Fauna' treating it as a synonym of *orientalis*. In my 'Notes on the Birds of Upper Assam' (Ibid. vol. xxiii, No. 4, 1915, page 722), reference is made to the typical form No. 368 which requires alteration to *agricola*. It was common at the foot of the hills in N. Lakhimpur in Upper Assam, where in July 1904, I obtained two pairs of this form. While 'meena' may extend on its descent to the plains somewhat to the east of its breeding range. It appears as if, where the birds are not actually resident, a straight descent from their breeding habitat is all that is accomplished, and the cold-weather distribution area is almost as well defined as the breeding lateral distribution, at all events in the country along the foot of the hills. This group affords an interesting illustration of the overlapping of the several geographical races and we can only expect to find typical birds at the centre of each distribution area.

508. The Spotted Dove. *Streptopelia chinensis suratensis* (Gm.).

Recorded for the Himalayas up to 7,000'. This little dove arrives at Gopaldhara about the last week in March, when it immediately becomes a familiar object in the bungalow compound at 4,720'. One pair accommodates to the ramblers growing around the porch of the verandah as there is generally one nest in this situation. It breeds commonly up to an elevation of 5,500' in the open country. The majority leave about the first week in October. First arrivals seen on 17-3-20*, but heard a few days previously. During 1921 the first birds arrived on 25-3-21*, and several departed on 16-10-21*, a pair still about on 29-10-21, whilst a straggler was in evidence 9-11-21 up to the first few days in January 1922. I anticipate the wet and cold which was experienced later on, would compel it to leave; however, I was unable to follow this out. This late stay is most unusual, as crowds are to be seen at the foot of the hills throughout the winter, and are then everywhere obtrusive. Gammie says this Dove leaves in November in reference to its disappearance from Mangpu during 'the cold weather.' Gopaldhara, 4,720'. Whenever unmolested in the quiet hours at midday they congregate at the godown, picking up the remains of the pony food: twelve observed in a cluster on the 8th and eight on 12-6-23.*

509. The Bar-tailed Cuckoo-Dove. *Macropygia tusalia tusalia* (Hodgs.).

Recorded in its distribution from 3,000' to about 10,000'. Resident and generally distributed at all elevations from 3,500'-6,000' in the Rungbong Valley, and in the Tista Valley from 1,500'-6,000'. (G. E. Shaw). A number of birds breed in the bottoms of the valleys and they scatter over a wider area during 'the cold weather,' so that they may be found on the wooded ridges at that period of the year. It commonly occurs in the interior of Sikkim. Obtained above Dikchu at 3,000', approx. on 22-2-20, and commonly observed around Singhik at 4,500', 13-3-20*, when they were in parties on both occasions. Noted as plentiful in forest at Gopaldhara around an elevation of 6,000' on 24-10-21. Obtained at 5,800', ♂ 23-11-20; 5,900', ♂ 3-1-15; 5,500', ♂ 27-12-14; 4,000'-5,000', ♂ ♂ 2-7-1-12; ♀ 30-1-16; 3,500', ♂ 15-2-16, wing 189.

The deep sounding note of this dove is characteristic of the bird-life in forest at moderate elevations. The young ♂ (February) has the crown barred, the throat and abdomen barred in patches, whilst the breast and remainder of the plumage is similar to the adult. One ♂ obtained on 23-11-20 had the testes showing signs of activity. Seven adult specimens examined: 5 ♂ ♂ wing 190-219, av. 202.2. ♀ wing 188. The depth of colour on the belly and under tail-coverts is subject to variation. The barring on the tail is more pronounced in some specimens; whilst in others, it is almost obsolete.



H. S. Photo.

SANDAKPHU FROM KALO POKHARI.
Nepal-Sikkim Frontier. May, 1912



H. S. Photo.

KALO POKHARI CAMP, 10,160'.
May, 1912.

Surroundings, the haunts of *Ægithaliscus ouschistos*, *Suthora unicolor*,
Xiphirhynchus superciliaris, *Myzornis pyrrhoura*, *Æthopyga gouldiae*, &c., &c.

510. The Tibetan Sand-Grouse. *Syrrhaptes tibetanus* Gould.

Recorded for the country north of Sikkim, strictly not within our limits, though there is every likelihood of it occurring in the snowy ranges in the extreme north. Blanford only met with it beyond the actual borders of Sikkim.

511. The Common Jungle-fowl. *Gallus ferrugineus murghi*. Robinson & Kloss.

Records of the Indian Museum, 1920, vol. xix, pp. 13-15, 181-183.

***Gallus bankiva ferrugineus* Stuart Baker.**

Recorded up to about 5,000' in the Himalayas as a breeding bird, keeping much to the valleys. Commonly met with in the Tista Valley and reported as occurring up to an elevation of 5,500', circ. above Chungthang in the interior of Sikkim. It occurs very sparingly in the Rungbong Valley up to an elevation of 4,500' or thereabouts, yet formerly, according to local information, it was to be found at somewhat higher limits. The few birds obtained in the Rungbong Valley were shot in 'the cold weather.' I have no record of their breeding at anything approaching an elevation at which they are occasionally reported to breed. Insufficient protection, accounted for by the clearing of the forest and molestation at the nesting season are no doubt the main causes of its disappearance in many parts of the country, where it was formerly comparatively common. The Jungle-fowl delights in the warmth of the deep, hot valleys; and provided there is a sufficiency of suitable cover such localities are ideal breeding haunts. In the foot-hills at and around 2,000' in 1914, I heard the first bird to commence calling during the second week and again on the 21st of February at evening, when it was to be heard daily afterwards.

The Peacock, *Pavo cristatus* L. is recorded as ascending the Himalayas to about 2,000' and locally somewhat higher. I have only seen them on the level ground at the base of the hills in the Eastern Dooars.

512. The Black-backed Kalij Pheasant. *Gennæus leucomelanos melanotus* (Hutton).

The distribution of this Kalij Pheasant is recorded as 1,000'-8,000', chiefly 2,000'-6,000', Sikkim Himalayas. Obtained as far west as the Mai 'Khola', East Nepal. Its ideal habitat is the densely overgrown, steep gullies of the hill-slopes on the Outer Ranges, where they manage to maintain a precarious existence, for their numbers are undoubtedly diminish wherever their haunts are brought into cultivation, and when they are not assured protection from molestation during the breeding season. Pine Martens account for much destruction of the eggs and young birds, and this Kalij suffers, in common with other ground game, from the depredations of these animals. They are partial to dense cover in close proximity to running water, moving out in the mornings and evenings, when feeding, to more open cover and apparently do not frequent forested land to any appreciable extent. Gopaldhara, 23-4-17. Observed to be by no means shy and fairly numerous, as I saw a cock bird on my way down, flushed out of 'the tea' by my dog; when it took refuge in an adjacent tree, paying little attention to me as it gave vent at this annoyance to a loud scolding; seen on my return in much the same place. 11-5-15, a single youngster in evidence. 10-6-16 remains of a female found on a secluded path with the eggs mashed in the nest. 15-8-16, a party of two adults and four youngsters seen in 'the tea.' Females are subject to marked differences in the varying depth of the coloration as a whole. Some males show a preponderance of white on the long lanceolate feathers of the breast, which appears like a patch, at the same time the upper tail-coverts have well defined white tips, which is indicated to a less extent over the whole of the back, whereas some examples have the upper tail-coverts devoid of these white markings which are only fairly indicated on the back; but most show the white shaft character on the upper back. The first-mentioned characters seem to be a sign of full maturity. Gopaldhara. Observed on two or three occasions during May and June 1923 in forest at 6,000' circ.

Six specimens examined: ♂ wing 234-240, av. 235.5. ♀ wing 216-223.

513. The Monal. *Lophophorus impejanus* (Lath.).

Blanford records the zonal distribution of this Pheasant in Sikkim in summer at elevations of 10,000'-15,000', in winter lower. Whilst Dresser states 8,000'-10,000' in summer and as low as 4,500' in winter. This latter records may

refer to the N. W. Himalayas but is entirely inaccurate for the Sikkim Himalaya. The lowest limits reached according to my observations and where specimens have been obtained is 9,500' during the winter at Karponang and below Changu in the mountains of the Interior, when birds were often to be flushed out of the dense bamboo-growth on the rocky slopes with the ground under snow, in fact most of the birds were well above the winter snow-line. All efforts to trace it on the Singile La Ridge at elevations of from 10,000'-12,000' during a severe winter in 1911-12 totally failed, and the Nepalis assured me its whereabouts was unknown to them. Reported by a competent observer to have been seen on Senchal, and said to have been obtained on the above-mentioned Outer Ranges ; I prefer to keep an open mind in respect to these latter statements. Around Lachung it was said to occur, but no trace of it was to be had above the snow-line, and there is little doubt that the villagers had reduced its numbers for some miles, beyond the village. It is very probable that it formerly occurred in the afore-mentioned localities even if never numerous, and its disappearance partial or complete, must be put down to persecution. Blanford found it above the level of the forest, 14,000'-15,000' (September). Three ♀ ♀ in wing measurement are 260, 267 and 282 respectively.

514. The Crimson Horned Pheasant. *Tragopan satyra* (L.).

This Pheasant—the 'Monal' of the Paharias, occurs on the Outer Ranges and in the Interior of Sikkim at altitudes of from 7,000'-9,000', March and April, and probably as low as 6,000' in the Interior during the winter and ascends to 12,000' in the summer. A large number of specimens collected have enabled me to fix its breeding habitat at much lower limits than *L. impejanus*. It is very restricted in its zonal distribution but widely spread wherever it has the necessary dense cover. Immature males, assuming the adult plumage, present a patchy appearance with the red and ocellated feathers distributed irregularly on the under surface. Its call resembles the syllables 'wak' repeated several times in a loud pitched tone. Blanford never met with it below 8,000' and bears out its lower distribution zone in comparison with *L. impejanus*. I have had specimens from the above-recorded low limits above Mangan, in the interior. Breeding commences on the Outer Ranges in late March or early April. An oviduct egg has been extracted as early as the 5th of April. Available for comparison : Twenty specimens. The wing of four immature ♂ ♂ measures from 249 (18th March)—260 (5th April), av., 257. 11 adult ♂ ♂ 265-277, av. 270.6. 4 ♀ ♀ 216-245, av. 231. My female skins thus show a decided difference in size, which seems to be the case with the females of some of the other pheasants.

515. The Blood Pheasant. *Ithagenes cruentus cruentus* (Hardw.).

During the winter it occurs only sparingly on the Singile La Ridge at 10,000'-12,000'. It is plentiful in the Interior of Sikkim at similar elevations throughout the winter keeping well within the snow-line, yet under exceptional stress of weather it is sometimes driven down to the clear ground below; this is more likely to take place on the Outer Ranges towards the end of March, and when this event happens, the males generally announce their arrival, and if it is possible then to surround the patch of dense growth ; their stupidity gives every opportunity to secure them as they do not readily take to flight ; a female was secured alive in this way, 23-3-12. It is somewhat surprising, yet at the same time gratifying to know they exist in substantial numbers along the mountain ranges in the interior ; which is accounted for by their occupying the wilder tracts beyond the villages, as to get at their habitat entails some considerable hard toil.

The flesh is the least appetising of our game birds ; but if considered as a change of diet, when only tinned food is available, can never be entirely spurned. A number of specimens have passed through my hands from various localities in Sikkim. Fifteen specimens, 8 ♂ ♂ and 7 ♀ ♀ are available for comparison. The presence or absence of the blood splashes on the breast apparently has nothing to do with age as the smallest ♂ with a wing of 202, though minus the spurs has some crimson spots, whilst a ♂ with the maximum wing measurement 214, is devoid of any of these markings. A not quite mature ♀, with a wing of 183 shows the minimum measurement ; it had a proportion of the crest feathers, banded with fulvous, which appears to be a sign

of immaturity; after eliminating three birds which are obviously not fully mature. 6 ♂♂ measure in wing 210–214, av. 212·3. 6 ♀♀ 187–205, av. 193. The males are very variable in regard to the crimson spots on the breast which may be entirely absent or more or less indicated or heavily splashed; all show a trace of crimson on the upper black band where it meets the lower band behind the eye; some examples have an almost complete crimson band with traces of crimson on the forehead and lores, or only on the forehead, but in a single example which is also the densest crimson-splashed on the breast, all the black feathers of the forehead and lores are fringed with crimson and, after comparison with the type, is very near to *tibetanus* of Stuart Baker. This bird was obtained along with others—showing all these variations in colour characters. The females vary slightly in the depth of the tone of the ground colour and in a few examples there is a distinct trace of crimson on the lores, under the eye and on the lower posterior portion of the band above the eye.

516. The Common or Grey Quail, *Coturnix coturnix coturnix* (L.).

A cold-season visitor to elevations of from 5,000'–6,000' on their descent to the plains; they mostly disappear as it becomes colder with the advancement of this period. Its numbers vary each year and sometimes it may be regarded as plentiful. A few birds are generally to be met with in the roughly cut 'makai' 'baris' around Gopaldhara. Unfortunately, very few specimens have been examined and none actually compared, so that it is uncertain whether *C. c. japonica* Temm. and Schieg. is to be also found. This Eastern Quail has been recorded on the evidence of a female skin from Bhotan. In this race 'the adult male has the sides of the head, chin, and throat dull vinous-red without black marks, the female and young male have the feathers of the throat and chin elongate and lanceolate, especially those on the sides of the throat.' (Blanford). Dr. Hartert gives the wing measurement of this form, ♂ 98–102; ♀ 100–106, and in the typical form, ♂ 104–115, most 108–111; ♀ up to 117. Behar birds are the typical form, but these probably descend to the plains by way of the North-West. *Coturnix coromandelica* (Gm.) has been reported to have been obtained in the Rummam Valley where it may possibly be resident to some extent.

517. The Common Hill-Partridge. *Arborophila torqueola* (Valenc.).

Recorded "commonest between 5,000' and 8,000' or 9,000', occasionally found at 14,000'." This partridge is, in my experience, much *more plentiful on the Outer Ranges* than it is in the Interior, yet occurring at similar altitudes. It may possibly reach this recorded lowest limit of 5,000' in the interior, which is however erroneous for the outer ranges, as there is no overlapping in the zonal distributions of this species and *A. rufogularis* where they meet. Neither do they move to any extent during the winter. A fine series secured in the Mai 'Khola' in East Nepal at elevations of from 7,000'–10,000' during *March and April*, and obtained in the Lachung Valley at 8,000', ♀ 26-2-20, one of a pair. It breeds at the end of April and in early May. Twenty-three specimens examined: 16 ♂♂ wing 144–155, av. 150·5; 7 ♀♀ wing 136–145, av. 142.

Soft parts: Iris brown; bill black; tarsus ochreous-salmon in the male, with a more decided ochreous tinge (dusky salmon-pink) in the female.

518. Blyth's Hill-Partridge. *Arborophila rufogularis rufogularis* (Blyth).

Recorded from the base of the hills up to 6,000', which is substantially correct for these hills. I have no definite information of its lowest limits, but it is fairly plentiful in forest around Gopaldhara at from 5,000'–6,000', where I have obtained many during December to February.

It appears to have a somewhat higher zonal distribution in the Tista Valley where it apparently does not come into competition with *A. torqueola*, as Mr. G. E. Shaw reports it at elevations of from 3,000'–8,400' below and above Mangpu. This partridge is often to be heard calling before and after rain when I have known this to happen after a thunder-storm as late as the 20th of July. Towards the breeding season they commence to call in the foot-hills around 2,000' as early as the 21st of January. The chick soon after hatching, actually gives utterance to the identical call of the adult.

Seven eggs are sometimes laid, one such clutch averages, 42×34 ; all are somewhat conoidal, and in three in the same clutch, this character is much pronounced.

Twelve specimens examined: 9 ♂♂ Wing 138-149, av. 143.6; 3 ♀♀ wing 133-142, av. 135.7.

519. The Red-breasted Hill-Partridge. *Arborophila mandellii* Hume.

Recorded for the Lower hills of Sikkim at elevations of from 1,000'-6,000'. The Tibetan Partridge *PERDIX HODGSONIÆ HODGSONIÆ* (Hodgs.) is recorded for the Tibetan Plateau, north of Sikkim, strictly not within our limits, but in all probability occurs at extreme elevations in Sikkim.

520. The Tibetan Snow-Cock. *Tetraoallus tibetanus tibetanus* Gould.

Recorded for very high tracts in Sikkim and as rarely descending below 15,000' in summer. Blanford refers to a Captain Chamer having obtained it at Phalung near the Kangra Lama Pasa.

521. The Snow-Partridge. *Lerwa lerwa* (Hodgs.).

Recorded for the Himalayas from Kashmir to Bhotan and farther east at elevations of 10,000'-14,000' in summer; lower in winter. Reported to have been obtained formerly on the Singile La Ridge between Sandakphu and Phalut but these records require confirmation. Blanford met with it at Thangu and Yumthang. (September and early October). Not seen below 17,000' by the Mount Everest Expedition.

522. The Himalayan Bustard-Quail. *Turnix pugnax ocellatus* Blyth.

Recorded for the 'Eastern Himalayas, ascends to 7,000''. Occurs at moderate elevations in the foot-hills and breeds around Gopaldhara during 'the rains'. Gammie mentions it as equally common from 2,000'-4,000' breeding in May and June on the eastern side of the Darjeeling district. Gopaldhara, 28-5-23, ♀ taken with clutch of four eggs. Soft parts: Iris white; bill pale plumbeous, culmen and tip of both mandibles horny, base of upper mandible whitish; tarsus pale plumbeous, claws yellowish.

523. The Little Button-Quail. *Turnix dussumieri* (Temm.).

Recorded for the 'Lower Himalayas up to about 6,000'', though not represented in the National Collection from the Sikkim Himalaya.

524. The Indian Button-Quail. *Turnix tanki tanki* Blyth.

Recorded for the 'Himalayas up to about 4,000'', Bhutan Duars, etc.

525. The Ruddy Crane. *Porzana fusca bakeri* Hart.

Recorded 'Lower Himalayas, probably occurs in Sikkim.' No authentic data of its occurrence in these hills are known to me.

526. Elwes's Crane. *Porzana bicolor* Walden.

When I was in camp at Kalo Pokhari, 10,160', on the Nepal-Sikkim Frontier, 22-5-12, two ♂♂ and one ♀ were brought in by some Paharias, who said they had been captured at an extreme height between 12,000' and 13,000'. I did not place full reliance on their word, as the tarn or 'pokhari' where they were likely to have been obtained was probably not at this extreme height, but might well have been a long distance from my camp in Nepal; these birds were taken alive. Obtained below Nagri, 4,250' circ. in the Rungbong Valley, ♀ 27-3-18 (F. S. Boileau); an oviduct egg was extracted from this bird. Four specimens examined: ♂ Wing 113-116; ♀ wing 110-117.

Soft parts: Iris crimson; orbits, venetian red; bill, sap-green, dusky grey at tip with a tinge of venetian-red at the base of both mandibles, inside gape slaty colour; tarsus dull lobster or venetian-red, dusky at front; claws, horny.

527. The Eastern Moorhen. *Gallinula chloropus parvifrons* Blyth.

Certain to occur at plains-levels, which remark also applies to the following.

528. The Purple Moorhen. *Poryphyrio poliocephalus poliocephalus* (Lath.).

529. The Red-wattled Lapwing. *Sarcogrammus indicus indicus* (Bodd.).

Obtained by Mr. G. E. Shaw at an elevation of 500' at the foot of the hills.

530. The Indian Spur-winged Plover. *Hoplopterus ventralis* (Wagl.).

This Plover occurs at low elevations along the Tista River.

531. The White-tailed Lapwing. *Chetusia leucura*. (Licht.).

Recorded for Sikkim. Unknown to me.

532. The Eastern Golden Plover. *Pluvialis dominicus fulvus*. (Gm.).

I have seen this Plover in open country at the foot of the hills, Sukna, 28-2-15*, observed a party of twelve to twenty settle on the east side of the Railway line. Some of the Ringed-plover (*Charadrius*) are certain to occur in the bed of the Tista River and possibly also in the minor rivers.

After making a further examination of my Assam material, which is now available for comparison; there can be little doubt that two forms of this genus breed at all events in the river-beds at the base of the hills on North Lakhimpur, Upper Assam, though probably, only sparingly, and the eggs yet remain to be discovered. I have recorded obtaining *placidus* in July, ♂ 7-7-04 and two ♂♂ obtained on 7-1-11 are in breeding plumage with the testes well advanced in development. These specimens were secured in the bed of the Dejoo River where there was ample scope and suitable gravelly stretches of ground for nidification in 'the cold weather'. The other bird is evidently *jerdoni* with a wing measurement far in deficit of the true cold-weather migrant: a ♂ obtained on the Subansiri at Hessamara, 31-12-05, wing 103, is in full breeding plumage; whilst another example obtained on the Runganuddi. ♂ 6-5-04, wing 100, is in similar plumage, but showing signs of moult. Three specimens obtained at Gogaldhubi bhil, ♀ 8-12-05, wing 115; ♀ 11-12-05, wing 116; ♂ 18-12-05, wing 114, are in winter plumage and are evidently the typical form *dubius* to which I refer a ♀ obtained on the Dibru River at Rungagora on 15-4-03, wing 107.5; though this example has assumed the summer plumage with the exception of the black ear-coverts. I am confident that a systematic search from January to March will eventually prove my surmise to be correct in respect to these breeding birds. The fact that Ringed-plover occur at the same period of the year in both summer and winter plumage, if not remarkable, is of interest. The winter migrants appear to frequent the soft, muddy ground around the 'bhils' in company with other numerous non-resident waders and not the sandy beds of the rivers, then occupied by the breeding race.

533. The Green Sandpiper. *Tringa ochropus*. (L.).

This sandpiper commonly occurs in all hill rivers at low elevations. Others of this genus are certain to be found if sought for.

534. The Ibis-bill. *Ibidorhyncha struthersii* Vig.

Recorded by Blanford from the interior of Sikkim at 12,000' at Yematong (Yumthang) in September. It has been obtained during 'the cold weather' in the Tista and Great Rangit River beds. I saw it frequently on the Raidak River in January, in small parties. It evidently occurs on all the rivers of the Eastern Himalayas at the foot of the hills in the winter.

535. The Woodcock. *Scolopax rusticola rusticola* L. 'Simkukra' Paharia.

The Woodcock is widely distributed at moderate elevations in the cold-season, though they apparently do not extend into the plains, as was the case in Upper Assam. In the Rungbong Valley it does not appear to be as plentiful as formerly. It is partial to strips of ground under cardamom cultivation along the 'kholas', when the soft soil at the edge of the running water, wherever these birds have taken up their quarters, is pitted with probings. They arrive at Gopaldhara in late September or early October, 3,500', 30-10-14*. One noted at evening flying south, evidently intent on settling, and another observed the next day during the evening. A pair were often to be seen at Lachung, 8,800', in early March 1920, in the bed of a small water course overgrown with scrub vegetation, during the frosty days; at early morning they came out more into the open.

536. The Wood-Snipe. *Capella nemoricola* (Hodgs.).

The generic name *Gallinago* is discarded for the earlier name *Capella* of Frenzel which takes precedence over the former.

Recorded as breeding at 7,000'-12,000' in the Himalayas. A few are obtained in the Rungbong Valley nearly every 'cold weather.' Previous to the draining of the 'pokhari' at Mirik, this locality must have been a sanctuary for numerous Warblers, Rails and Snipe. Mr. G. E. Shaw has obtained it at Mangpu 3,500'-400'.

537. The Pintail Snipe. *Capella stenura* (Bp.).

This Snipe occurs at moderate elevations, though I anticipate the majority of the birds descend to lower limits which is apparently the case also with the Fantail Snipe.

538. The Himalayan Solitary Snipe. *Capella solitaria* (Hodgs.).

Very few specimens are shot of this rare Snipe. I observed a pair on Tonglo at 10,000', a short distance below the summit level on the Nepal side of the Frontier in the bed of a mountain stream in January 1912. I am indebted to Mr. A. J. H. Tietkins for a ♀ which he obtained at Tukdah on the 14-11-21. wing, 160. Iris hazel; tarsus pale yellowish-olivaceous. This snipe is recorded at 9,000'-15,000' or higher at the breeding season. Inglis obtained a ♂ in the Rungbong 'jhora' at Sukna, 9-12-19.

539. The Indian Shag. *Pahalacrocorax fuscicollis* Steph.

This is evidently the cormorant or Shag which commonly occurs on all the large rivers; it has been frequently observed on the Tista River. On the Raidak River observations pointed to this species. Probably the Large Cormorant occurs, but no specimens have been obtained to settle this point beyond doubt.

540. The Great White-bellied Heron. *Ardea insignis* Hodg.

Observed on a few occasions on the Tista River below Birik, when it kept well over to the uninhabited left bank, with little chance of molestation.

541. The Cattle Egret. *Bubulcus ibis coromandus* (Bodd.).

Commonly occurs at low elevations.

542. The Little Green Heron. *Butorides striatus javanicus* (Horsf.).

This species frequents the Rungbong River up to at least 3,600' and possibly right up to the head of the valley. Obtained below Turzum on 15-2-20 (O. Lindgren), and Mr. G. E. Shaw has also secured it in the Tista Valley at an elevation of 1,400'.

543. The Barred-headed Goose. *Anser indicus* (Lath.).

This goose has occurred in the Rammam River, from whence Mr. H. P. P. Barrett has shown me a specimen obtained out of a small party in 'the cold weather.' The following records refer to unidentified geese on the upward migration: Sandakpu, 11,929', summit level, Nepal-Sikkim Frontier 2-3-12. Fourteen geese passed overhead going north; on reaching the summit, they paused in their flight after an apparent momentary impulse; as they quickly assumed their accustomed V formation and again headed north. At their oncoming I was located below a spur on the wind-ward side of the mountain; and thus was unable to follow their movements, after they passed my field of vision. 7-3-12. From sixty to seventy geese passed overhead at an immense altitude cackling at the time. On reaching the summit they dispersed into three parties, of which, the two outer gaggles were much the more numerous, probably to unite again once the direction was decided upon, though I could not follow out this conclusion. They were heading north, in the same direction generally as the previous lot, which would take them over the 'Everlasting Snows.' Every appearance of hot weather in the plains yet on 15-4-12, the worst snow-storm during this winter was experienced, which lasted for several days.

Jalpaiguri (Plains of N. Bengal), 27-2-15*. Two huge migrations of geese occurred this morning heading north in a leisurely manner; the second congregation consisted of several V shaped companies which appeared to intersect each other at many points as to cause an apparent break in their formation, but on careful observation this proved not to be the case; the white plumage was enhanced at certain strokes of the wing in the strong light.

Gopaldhara, 4,720', 11-4-16, 10 a.m. Geese estimated between three and four hundred leisurely wending their flight in a northerly direction ; another lot passed over at evening 7 p.m.

12-4-16, 10 a.m. On this occasion I estimated about one hundred geese to pass overhead, going north.

544. The Ruddy Sheldrake. *Casarca ferruginea* (Pall.).

Kalo Pokhari, 10,160', Nepal-Sikkim Frontier, 28-3-12. A pair of Brahminy Duck passed over Sandakpu this morning, heavy north-west and north-east gales accompanied with falls of snow the following two days. 1-4-12. This afternoon during a heavy, dense mist I heard these birds in evident distress at their inability to find their bearings ; they failed to negotiate the ridge, as their cries became fainter as they retreated down the valley. They migrate in pairs and keep in close company at all times. Blanford records a pair on the lake Bidan near the Jelep-la in the Cho La Range when one was shot by Elwes (August).

545. The Gadwall. *Anas strepera* L.

The Gadwall is to be found on occasions in small parties on the large rivers before the upward migration commences.

546. The Wigeon. *Anas penelope* L.

Obtained on the upward migration in the Lachung River on 8-3-20, ♀ during a bad spell of weather, when the birds were forced to seek shelter in the river-bed at an elevation of 8,700'.

Soft parts : ♀ Iris brown ; tarsus greenish-plumbeous ; bill slaty-blue, nail, black, terminal portion.

547. The Pintail. *Anas acuta acuta* L.

Two ♂♂ obtained on 8-3-20 in the bed of the Lachung River on the same occasion as the previous records were obtained out of a small party. One bird was 'rolling in fat', but the stomach only contained small seeds. There had been a heavy snow-storm at this time.

548. The Eastern Goosander. *Mergus merganser orientalis* Gould.

Recorded, 'summer in pairs at 10,000' and upwards on the Himalayas.' They commonly occur at the foot of the hills on all fair-sized rivers and may be seen for a long way up the Tista River. When in the Gorges they almost clip the water in flight, while on their return at evening, to the more open water in the plains they fly at a considerable height and with rapidity, generally in a well-separated cluster and it requires accurate shooting to bring a bird down. Unless it can be put to some useful purpose ; there is no object served in such a wanton act, as this handsome Duck is every bit a part of the attractions which go to complete many an entrancing picture of wild-life. On numerous occasions have I watched them busy at work diving in the clear, flowing water or resting contentedly at mid-day, allowing the current to carry them on its course. While it is no unusual sight to see a group sunning themselves in shallow water, when every now and then, they assume an erect position with much beating of the wings.

549. The Indian Little Grebe. *Podiceps ruficollis capensis* Salvad.

It is generally conceded that the Grebe which Mandelli obtained in Sikkim and described by Blanford as *P. albescens* is an albino ; which record probably refers to this species.

Note.—A number of additional records have been inserted since the compilation of this paper bringing it up to date 31st August, 1923.

H. S.