BIRDS FROM NEPAL

AUSTIN L. RAND

ROBERT L. FLEMING

FIELDIANA: ZOOLOGY
VOLUME 41, NUMBER 1
Published by
CHICAGO NATURAL HISTORY MUSEUM
OCTOBER 11, 1957

BIRDS FROM NEPAL

AUSTIN L. RAND
Chief Curator, Department of Zoology

ROBERT L. FLEMING
Field Associate, Department of Zoology

FIELDIANA: ZOOLOGY
VOLUME 41, NUMBER 1
Published by
CHICAGO NATURAL HISTORY MUSEUM
OCTOBER 11, 1957

Library of Congress Catalog Card Number: 57–12810

PRINTED IN THE UNITED STATES OF AMERICA
BY CHICAGO NATURAL HISTORY MUSEUM PRESS

Contents

List of Text Figures

Introduction

Ripley (1950a, p. 355) has summarized the brief history of ornithology in Nepal, from the pioneer work of Brian Hodgson to his own 1947–49 collecting trips. The present report deals with the collections made by the junior author in Nepal on a series of trips between 1949 and 1954. During this time he was with the Board of World Missions of the Methodist Church, first as Supervisor of Woodstock High School at Mussoorie, United Provinces, India (1949–53), and then as superintendent of the Medical Mission to Nepal, in Kathmandu (1953–54).

The collections comprise about 2,500 specimens, representing some 490 species and subspecies.[1]

We wish to express to the following individuals our appreciation of the kindness and help they gave the parties working in Nepal: General Rudra Shumshere Jung Bahadur Rana, Field Marshall, Colonel Ishwar Shumshere Jung Bahadur Rana, Governor Dhairya Shumshere Jung Bahadur Rana, and Sri. Bhakti Shumshere Jung Bahadur Rana.

We also wish to thank the fellow members of the expedition for their co-operation: Dr. Carl E. Taylor, Ludhiana Medical School; Harold Bergsma, Grand Rapids, Michigan; T. Robert Bergsaker, Norwegian missionary, artist and handy man; Dr. Carl W. Friedericks, United Medical Mission, Tansen, west Nepal, who accompanied us on our second and fourth expeditions; Robert L. Fleming II, Richard B. Parker, and Ray C. Smith, who collected numbers of birds new to our list; and Dr. Bethel H. Fleming, who took over Dr. Taylor's hospital for three months during our first expedition and who accompanied us on our second expedition and took care of many Nepali patients.

For the loan of specimens and for information, we wish to acknowledge the help of Dr. Dillon Ripley of Peabody Museum,

[1] Since this report was written Dr. Fleming has returned to Nepal where, as opportunity presents, he is continuing to collect birds. A recent letter tells us that he has added several more species to the list of those he had collected. Chicago Natural History Museum has also received another Nepal collection, made by Dr. Walter N. Koelz in the Kathmandu area in 1947. These collections will be reported on later.

Yale University; Mr. H. Deignan, of the United States National Museum; and Dr. Ernst Mayr and Dr. Charles Vaurie, of the American Museum of Natural History.

Summary of the Field Work

By Robert L. Fleming

A brief account of each of the trips is given, each followed by a description of the collecting localities.

FIRST EXPEDITION: WEST NEPAL

(October 26, 1949 to January 31, 1950)

For ten years I had been sending birds of India to Chicago Natural History Museum. During this time the late H. Boardman Conover encouraged the collection of game birds and when I had a chance to visit little-known Nepal, Mr. Conover generously financed the expedition. It took all summer to complete our plans. We finally decided to visit the Kali Gandak River valley in west Nepal, directly north of Gorakhpur, India, and to go as far as Tukche.

We were successful in securing a medical doctor to go with us only after my wife, Dr. Bethel H. Fleming, agreed to take over Dr. Carl Taylor's 150 bed hospital at Fatehgarh, United Provinces, while he was away. His Presbyterian Mission gave him extra medicines and some equipment in case he met patients along the way. Rev. T. R. Bergsaker, of the Norwegian Mission, joined our party. Three days before our departure, Mr. Harold Bergsma, a Woodstock High School student, arrived from the United States with all my American equipment and he also went with us.

Our guns included a .22 rifle and dust shot cartridges, two 12 gauge shotguns with an auxiliary barrel for .32 and .410 cartridges and a heavier rifle. We ourselves skinned the specimens. Only half of our personnel was available for ornithological work most of the time because the demands of many Nepali patients took the attention of Dr. Taylor and one of us who assisted him. However, we were glad to do something for the people of Nepal in return for their hospitality.

On October 25, 1949, Harold Bergsma and I and a Garhwali cook who knew a little Nepali left Mussoorie and on October 26 were in Lucknow, where Dr. Taylor and Mr. Bergsaker met us. The whole party then went by rail (the Oudh and Tirhat Railway) via Gorakhpur to Nautanwa, within six miles of the Nepal border. There our party was delayed for four rainy days, waiting for our shipment of food. The boxes finally came, the weather cleared, and we crossed the Nepal border and went on to Butwal where we spent the night, and then proceeded to Marek (November 1) and Tansen (November 2–5).

We pitched our tent on the Tansen parade ground, a spot never free of the noise of thousands of fruit bats hanging in trees around a large temple. Next day we were granted an audience with His Excellency the Governor of west Nepal, General Rudra Shumshere Jung Bahadur Rana. We were met at the palace door by a son of His Excellency, Colonel Ishwar Shumshere Jung Bahadur Rana, who spoke English and was most interested in bird collecting. When His Excellency arrived he greeted us in Hindustani. I opened the interview, but India-born Dr. Taylor carried on with the language. We made a small presentation gift of the book *Look at America*, and in return His Excellency pointed to the skin of a rare Himalayan bear on the floor of the reception room and said he would like to give it to Chicago Natural History Museum. His Excellency also provided the party with a police official and two assistants to accompany us. The cordial reception and the generosity of His Excellency were characteristic of all the officials we met.

At Tansen Dr. Taylor began his medical service, and from then on our camp was never without a stream of patients. These included the village headman and about half the population of Tansen. Here the police official attached to our party, Kaman Singh, hired coolies for the next stage, and this practice of hiring coolies by the day continued until we reached Dana.

We left Tansen November 5 and started west. At dusk we came to a pass from which we looked down on the broad expanse of the Kali Gandak River, on which Riri Bazaar is situated. We followed the river northward from there to a point about 30 miles south of the Tibetan border. We collected specimens at Riri Bazaar, November 6–8; Lumpek, November 8–11; Phurti Ghat, November 12; Belawa, November 14; and Baglung, November 15–18. North of Baglung the river became narrower and swifter and there was an ascent of 2,000 feet to the village of Dana, where we stayed November 21–23.

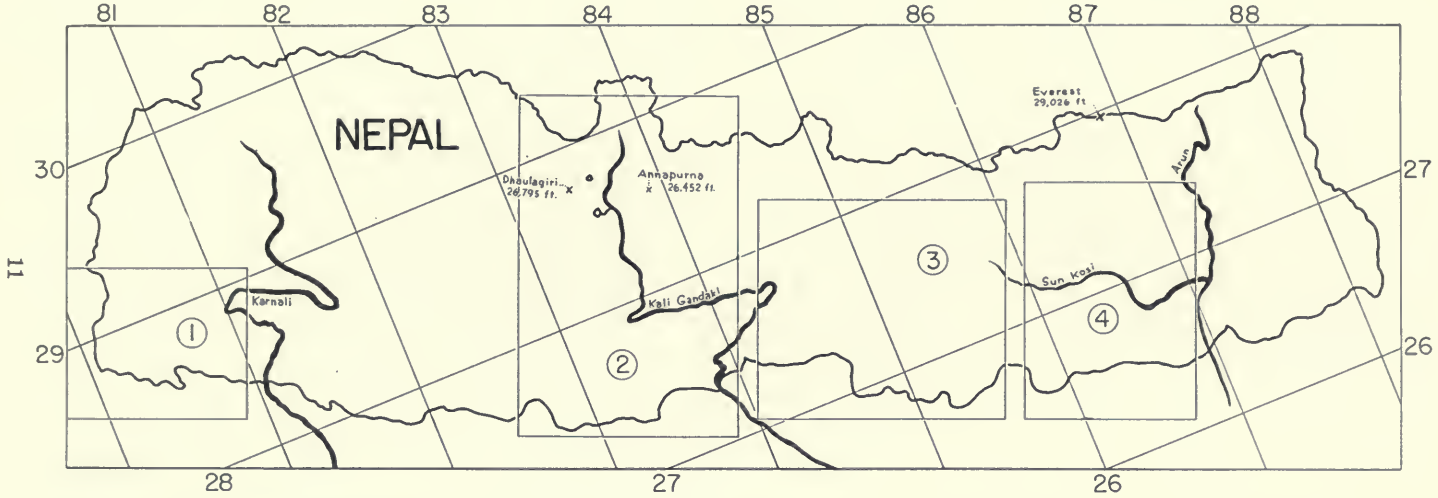

FIG. 1. Map of Nepal, showing areas in which collections were made, with key to detailed sketch maps shown in figures 2, 4–6.

From Dana north to Jomosom and back again we used pack animals to carry our baggage. The roads were narrow and rough and our boxes banged against the rocks on the side of the path.

About three miles above Dana the route lay up hundreds of narrow stone steps hewn out of solid rock overhanging the river. Here we left Hindu Nepal behind and entered Buddhist Nepal. People, animals, birds, vegetation, and architecture changed. At 9,000 feet the river valley widened to a two-mile stretch. We collected birds on November 23 and 24 at Ghasa and from November 24 to December 6 at Tukche, where the Burra Subha Sahib provided spacious quarters for us. Just before we reached Tukche the trail crossed the river five times.

Above Tukche we made a high altitude camp at 12,000 feet. Three local hunters volunteered to act as guides. They led Dr. Taylor and me to a small rock lean-to—scant shelter from the falling rain. We had to negotiate a narrow, slippery trail for 1,500 feet up the face of a cliff, in order to hunt on the ridges above. Dr. Taylor and I spent several days up there, going as high as 18,000 feet. We sent our birds down to the other two men, who skinned them in the base camp at Tukche.

When we returned to Tukche the Subha Sahib invited us to a seventeen-course dinner. Here they told of a game bird called "rare-wah," to be found 10 or 15 miles to the north. So instead of turning southward to avoid the approaching winter, as we had planned, we went north to Jomosom, within 30 miles of the Tibetan border. December 7–9 we collected from an upper camp at 13,000 feet. At 15,000 feet we had a clear view of the mountains in Tibet.

Winter overtook us before we could get back to Tukche, but with the snow came hundreds of birds, seeking shelter in the ravines along the river. We stayed in Tukche December 11–13 and travelled via Lete and Ghasa to Dana, where we stayed December 15–19. Here we set up a third high camp in the mountains northwest of Dana. The climb from 5,000 feet to 9,000 feet was easy; the ridges went on up to 12,000 feet. Local hunters brought us kalij and koklas pheasants.

Our return to Tansen was by a different route. We left the Kali Gandak River at the hot springs, climbed up the Ulleri ridge to the southeast, stopped at Ulleri village over night, went eastward to Pokhara, and then southwest to Tansen. On December 19, we gathered a few birds from Tatopani, Ghara, and Sikha. At Ulleri, December 20–21, Dr. Taylor picked up the headman, who knew the

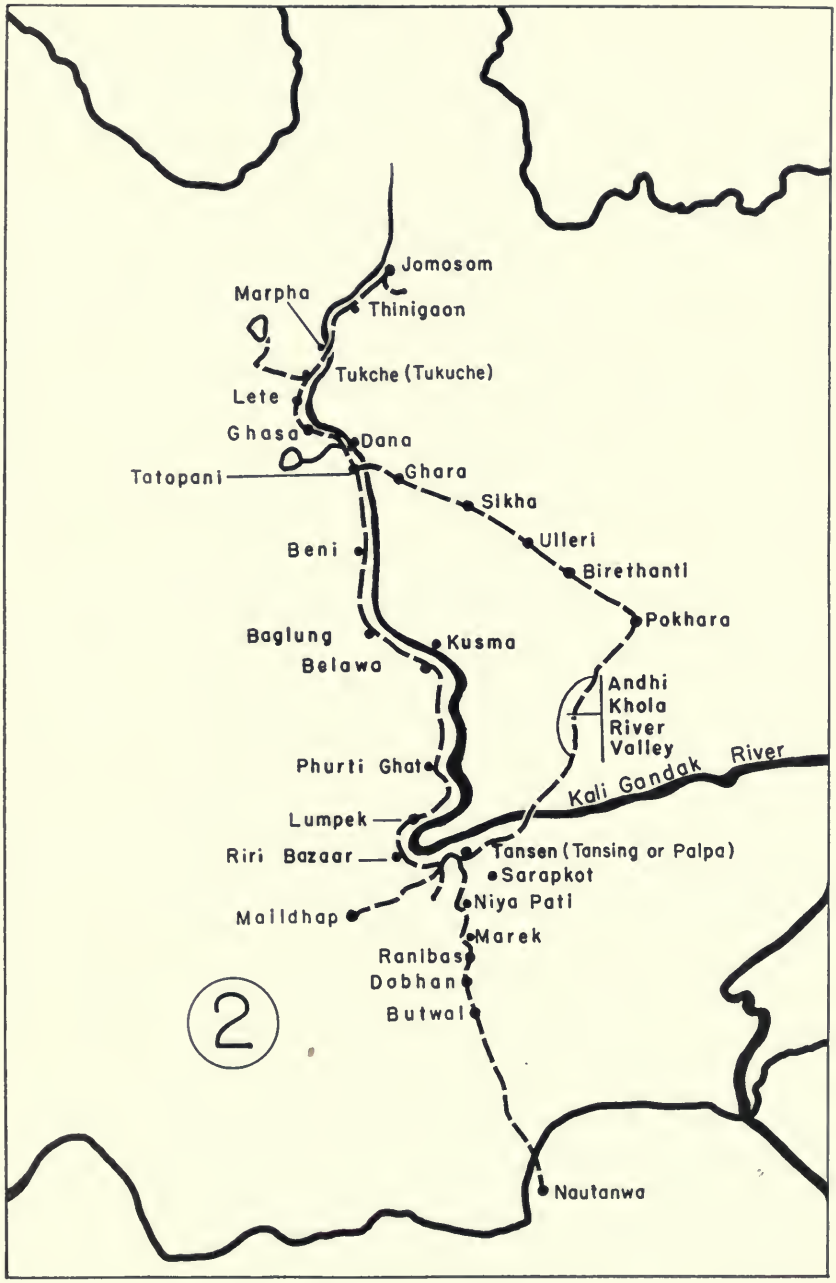

FIG. 2. The area covered by the first and second expeditions to west Nepal.

jungle well, and was taken to the hillside where he got the rufous-throated hill partridge. We went down to Birethanti at the foot of the ridge and stayed there at the invitation of the headman, who wanted to kill a goat in our honor. He presented us with a crudely prepared empeyan pheasant.

We reached Pokhara on the afternoon of December 24, in time to buy pineapples for Christmas. We crossed the bridge over the narrow Seti River and pitched our tent on the parade ground near the house of Captain Man Bahadur. We stayed here until January 7 and found excellent collecting in the hills near the lake. Bergsma became ill with a high fever and was incapacitated for the rest of the trip. We had to carry him 60 miles in a litter to the nearest bus station over some of the worst roads we had seen. At Tansen, which we reached on January 12, we were met by Dr. Stuart Bergsma, Harold's father. He and Dr. Taylor left with Harold at once for India.

Mr. Bergsaker and I remained in Tansen for the rest of the week, January 13–15, and lived in a house next to the temple wall. On January 16 we started for Butwal but stopped a day and a half at Marek, January 16–18, where the heavy forest was full of birds. Then we went on down through the last narrow passes into the lowland country to Butwal, where we again met His Excellency, General Rudra Shumshere Jung Bahadur Rana, and members of his family. They supplied us with two elephants which we used in our collecting. In this way we were able to comb high grass, penetrate swamps in the forest, and cover twice as much territory as we would have, had we been on foot. On January 31 we took a truck to the railhead in India and our expedition was finished.

SECOND EXPEDITION: WEST NEPAL

(December 4, 1951 to February 15, 1952)

Rana friends whom I had met in west Nepal in 1949–50, gathered in Lucknow in March, 1951. I went down from Mussoorie to meet them. General Rudra Shumshere J. B. Rana, several sons and their families accepted an invitation to tea at the Methodist compound. At that time they told me that should I ever wish to visit Nepal for further bird collecting I was only to let them know and they would arrange it. At the end of October, 1951, permission came from the Government of Nepal to conduct a second expedition for two and a half months. The purpose of the trip was twofold: to add to our

FIG. 3. Graph showing altitudes reached by Fleming party in west Nepal.

birds from the Tansen and Pokhara areas we had visited previously, and to continue medical work which the people there so much wanted. This trip was personally financed by the Fleming and Friedericks families, and medicines were given by the Presbyterian and Methodist Missions.

December 4 our party arrived at Nautanwa, crossed the border in a hired truck at Surauli, and reached Butwal before dark. We slept in a native hut that night. The acting Governor of Tansen sent his police guard, Kaman Singh, an old friend of ours, to arrange for the 15 mile climb through the mountains from Butwal to Tansen. We made it in two days with the aid of 22 porters and a horse. They directed us to a guest house near the parade ground, which we occupied for the next six weeks. The only furniture was a table but neighbors brought in other bits of furniture until our spacious rooms up-stairs were quite comfortable. Two weeks later Dr. Carl Friedericks and his family joined us. When two dispensaries were

set up on the first floor there was a rush of patients. The doctors saw 1,500 different people in 40 days.

My son Bob and I collected in the vicinity of Tansen from December 6 to January 22. We combed the Srinagar forest of about four square miles until we knew the territory very well. We failed to get a small quail and several Raptores which flew over the forest, but we secured a good representation of resident birds, including the spiny babbler.

We made several trips to Niya Pati, a ridge which is a few miles south of Tansen and rises several hundred feet above surrounding rice fields. The bird life was like that of Tansen.

We visited a wooded range above Sarapkot, about seven or eight miles southeast of Tansen. We crossed extensive rice fields down at 2,500 feet and saw crested buntings, shrikes, black partridges, crested serpent eagles, wagtails, and snipe. After a steep climb of 3,000 feet we came to an oak forest where there were pheasants, white-collared blackbirds, woodpeckers, and tits.

A week's trip to Maildhap in the Mahabharata Range to the west was interesting. Villagers carried ancient muzzle-loaders and game was fairly abundant. In the oak-rhododendron forest we saw thrushes, barbets, babblers, woodpeckers, tits, and finches. We wished we could have stayed here longer.

The main road north of Tansen led to Ranighat, down on the Kali Gandak River. The 5-mile descent was rapid, and the damp, north-facing slope was covered with ferns and tall trees. Five species of bulbuls inhabited the narrow valley in the space of a hundred yards. We saw wrens, forktails and the large Himalayan pied kingfisher.

Dr. Friedericks, Bob, our Garhwali cook, and I traveled from Tansen back to Pokhara. We were gone from January 23 to February 8. We stopped at a couple of rest houses along the Andhi Khola River. The winding valley was bordered with clumps of bamboo. To the north of this stream, about five miles up the mountain was Nuakot No. 4. We arrived there after dark and heard two strange owls which we did not get. This place would have been worth a week's hunt.

From February 8 to 15 we covered the same route as we did in 1950: Pokhara–Tansen–Butwal. Instead of porters we arranged with a North Nepali to hire mules which quickly carried our loads over steep roads to the lowlands, and we left Nepal on February 15.

Description of Collecting Stations of First and Second Expeditions

As parts of the routes were covered more than once, the present section will treat the country traversed in a geographical arrangement as follows: (I) Butwal with its lowlands in the south, and then Tansen in the foothills; then the country northward along the Kali Gandak from Riri Bazaar to Jomosom, the farthest north point the expedition reached. Part of the return was over a different route, described in order (II) from near Dana to Pokhara and Tansen, where the old route was again joined.

I. Butwal–Jomosom and Thinigaon

Butwal: Altitude 900 feet, October 31, 1949, January 19–31, 1950

This is a frontier town situated about 25 or 30 miles north of Nautanwa (about 20 miles north of the India-Nepal border) and is at the northern extreme of the lowland country (*terai*) and at the foot of the first hills. The Tinau River, 30 yards wide, flows through the middle of the two market places (bazaars). Hills, about 1,500 to 2,000 feet high, rise abruptly to the north, east, and west. In November collecting was carried on in heavy forest, mixed forest, and *sal* forest.

In January, the final two weeks of the expedition spent here were the most pleasant of all. We appreciated the balmy weather after the chill of alpine snows. We again met His Excellency and camped near his palace as state guests. His sons often visited our camp and they and His Excellency himself walked over to see our bird display. One of their boys learned to skin birds. His Excellency sent out his hunters with their decoy birds and brought us kalij pheasants, red jungle fowl, and the black partridge. Two elephants were put at our disposal free of charge and we made eight or ten all-day trips into the surrounding jungles and brought back many birds. Between the two of us we skinned 80 birds the last week, which was our record. We did 21 birds in one day, which was another record. Here we obtained the largest number of game birds we collected in one week, including four species of green pigeons. We greatly enjoyed the food from the palace and began to put on a few pounds. One evening Bergsaker and I shared a whole peacock, as well as breast of jungle fowl, shredded venison, and all that goes with it. I had never collected birds from elephant-back before and

it did seem ridiculous when such a mass went charging through the forest for something no larger than a sparrow! But this was an effective way to hunt; we retrieved almost every bird we hit. My .32 accessory barrel slipped out of my hunting bag when Gopal Kali (our elephant) chased a racquet-tailed drongo. That ended my collection of smaller birds. The next day, following a rain, the winged ants emerged, and catching them were hundreds of birds. A roller we skinned had ants from its stomach all the way up the neck while the last insect was sticking out of its bill because it could not swallow any more. When we returned to camp for the last time, a son of His Excellency, Colonel Ishwar Shumshere, urged me to stay a few more weeks and go back into the hills to collect trogons. Much as I wanted to, I felt that I would have to leave the next day, January 31.

Dobhan: Altitude about 1,500 feet, December 5, 1951; February 9, 1952

A small wayside village of about 100 people just above the Tinau stream. We saw two or three neophron vultures, and among the trees were a green pigeon and a hair-crested drongo. On the stream were a dipper and white-crested and plumbeous redstarts.

There was much traffic through town as long lines of porters were passing to and fro from Butwal and Tansen. They stopped at Dobhan to drink tea.

Ranibas: Altitude 2,500 feet, February 8–9, 1952

Another wayside village of about 200 people. The village was situated above the stream and was surrounded by steep, wooded hillsides. Bird life was especially rich in this area. On or near the forest floor were the white-crested and slaty-headed laughing thrushes, several kinds of babblers, and the red jungle fowl. Among the shrubs and smaller trees were trogons, black sunbirds, the green magpie, and the white-eye. Near a pond we saw a flycatcher. Higher in the trees were many orange-breasted chloropsis as well as the bronze drongo, blue-throated and ruddy barbets, fulvous-breasted and black-naped woodpeckers, the hair-crested drongo and gray flycatcher shrikes.

Marek: Altitude 3,000 feet, November 1, 1949; January 16–18, 1950

A wayside market of two or three shops. The path is steep here and the jungle very heavy. Off the road 200 yards is a fine rest house surrounded by forest. A good-sized stream flows 100 feet or

more below the rest house, and the wooded ridges rise some 1,500 feet above it. This is now in the foothill country. In January the heavy forests yielded chloropsis, babblers, flowerpeckers, barbets and drongos. We also found a red-headed trogon and broadbills, along with laughing thrushes, white-eyes, sunbirds, and bulbuls.

Niya Pati: Altitude 3,000–3,500 feet, December 15, 21, 1951; January 16, 1952

A wooded ridge about two miles long and 500 feet above the rice fields south of Tansen. At the base of the ridge, in open fields, shrubs, and ravines, were red-wattled lapwings, greenshanks, wagtails, munia, crested buntings, malkoha, and kingfishers. To the east of the road in scrub forest near a burying ground were a redstart and a black drongo.

Up among the oak and pine trees were the iora, a barred owlet, a minivet, a large hawk-cuckoo, a kalij pheasant, the large Himalayan barbet, and some kind of quail which we didn't get.

Tansen (Tansing): Altitude 4,500 feet, November 2–5, 1949; January 12–16, 1950; December 7, 1951–January 21, 1952

This, the capital of west Nepal, is built on the side of a ridge at 4,500 feet altitude. The exposure is southern and rather open. The lower part of the city levels out a quarter of a mile before dropping 2,000 feet to the valleys of rice fields.

In November our tent was pitched in the parade grounds. The noise of thousands of fruit bats hanging in the large trees about the temple was continuous. Birds were collected in the bushes along the road, in hedges along rice fields and in forests, and a pheasant was shot over a decoy in the forest. In January, the birds were collected from 16 miles north of Tansing to 4 miles south of Tansing, in villages, in trees, along the roads and fields, in forests, and along streams.

In January the party was housed in a two-story house next to the temple wall. Here the fruit bats had been common and noisy in November but none were heard in January. I hunted in the Srinagar forests above Tansing while Bergsaker sketched.

On our second visit to Tansing we hunted through the Srinagar forests very thoroughly for several weeks and added the small yellow-naped woodpecker, the black-brownish flycatcher, and the orange-breasted parakeet to our list.

Directly north of town the road dropped away steeply to the Kali Gandak River, only five miles away. Along the damp, wooded road we found chestnut-headed wrens, forktails, Himalayan pied kingfishers, and five bulbuls—all within a short distance.

Maildhap: Altitude 6,500 feet, January 2–8, 1952

This was a village 18 miles west of Tansen, near the top and on the southern slopes of the Mahabharata Range. Some two or three hundred people lived in scattered houses at the edge of oak-rhododendron forests. The main product was corn instead of the usual wheat or rice. The people were primitive and shy. Men carried ancient muzzle-loaders.

There was a good deal of bird life in the forests. Groups of sivas, barbets, mesias, sibias, and quaker babblers passed through the treetops and the gray-winged blackbird, the hill partridge, and the kalij pheasant frequented the lower bushes or the ground.

Sarapkot: Altitude 5,500 feet, January 18, 20, 1952

A village of about 200 population on a ridge above rice fields, 3,000 feet below. It is about seven miles southeast of Tansen in the Mahabharata Range.

As we passed through the rice fields we saw the crested serpent eagle, black and gray partridges and numbers of snipe, which we failed to collect. Around the village of Sarapkot was a flock of kalij pheasants. Higher in the oak forests above town we found the brown-fronted pied woodpecker, the siva, the gray-winged blackbird and the white-throated laughing thrush. On the top of the hill was a small shrine to a Hindu deity.

Riri Bazaar: Altitude 2,000 feet, November 6–7, 1949

This is a town of about 1,000 persons, located on a bend of the Kali Gandak River, the river that the party followed almost across Nepal. Little hills and well-wooded valleys lie to the west. Camp was in a mango grove. In this grove were found tree-pies, nut-hatches, woodpeckers, and, along the stream, forktails, redstarts, and wagtails. Here Dr. Taylor was visited by a number of Hindu holy men, who came to consult him.

Lumpek: Altitude 6,000 feet, November 8–10, 1949

A small village on the saddle of a ridge. The hill to the east, with small trees, rises to about 7,000 feet; to the west is the Satavati Range of about four large wooded peaks extending some five or six

miles. The highest point is about 8,000 feet. The southern slopes were fairly well wooded, with grass and bushes. The northern slopes were wet and steep. Many huge oaks threw a dense shade, and there was a heavy underbrush including nettles and ferns.

Phurti Ghat: Altitude 2,500 feet, November 12, 1949

A small village just above the Kali Gandak River.

Belawa: Altitude 2,300 feet, November 14, 1949

A large village four miles southeast of Baglung; birds were collected in light forest, in bush, about the rice fields, and in village trees.

Baglung: Altitude 3,000 feet, November 15–18, 1949

A large town, the head of an extensive district, located on a plateau at about 3,000 feet. The trails from Riri Bazaar are narrow paths above the river. Two rivers cut below the place, the Kali Gandak and a tributary that meets it nearby. River level is about 2,300 feet. To the north moderately steep spurs rise to six or seven thousand feet; across the river, west, and to the south, the ridges rise to about 5,800 feet.

Birds were collected along the river, in the heavy damp forest and on rocky walls in the valleys, in fields, in the village and in bamboo clumps. Natives brought in some birds, including a pheasant and a coot. The forests are some distance below this town, but kalij pheasants, kestrels, drongos and flycatchers were secured. The lower forests would repay exploration.

North of Baglung the river becomes narrower and swifter.

Beni: Altitude 3,300 feet, November 18, 1949

A large village at the fork of the Mayangdi and Kali Gandak Rivers. Rice fields and poinsettia hedges are characteristic of the landscape. Nearby hills rise to several thousand feet above the village.

Birds were collected in the forest along the river, in undergrowth in ravines, and along rocky streams.

Dana: Altitude 5,000 feet, November 21–23, December 15–19, 1949

We collected 63 birds here and at an upper camp, at 9,000 feet.

A village along the narrow bed of the Kali Gandak River. The village extended for about two miles. To the east, mountains rise

sharply to eight or nine thousand feet, beyond which the Annapurna Range, rising to 23,000 feet, was visible. To the west are steep, wooded ridges rising to over 12,000 feet. To the north, a steep, narrow pass, with steps cut out of the stone cliffs overhanging the Kali Gandak, leads into Buddhist Nepal. In November birds were collected up to 11,000 feet, in forests, wooded ravines, scrub jungle, dry undergrowth, bushes on open hillsides, and hedge rows and edges of cultivated fields. Mixed flocks of birds including nuthatches were seen. The country covered was up the ridges to the southwest; the party used belled dogs in hunting game birds. Kalij pheasants and hill partridges were found at 8,000 feet, and at 11,000 feet chir and empeyan pheasants were found. Sibias, yellow-billed magpies, babblers, and finches populated the higher forests.

On the return journey in December the third upper camp was established December 15–17 above Dana and collections were made up to 10,000 feet. The route used lay a mile north along the road, then away from the road and the river toward the northwest, up a very steep ridge along a large stream. At about 7,000–8,000 feet the jungle was heavy and contained many birds—barbets, bush robins, shrike-babblers, finches, thrushes, woodpeckers, kalij pheasants, and a few pigeons. Only about two hours were spent there; then the stream was crossed and the party went up another thousand feet on a southern slope in a belt of bamboo forest. The mountains extended about 3,000 feet above the camp. The higher ridges were nothing but rock; a little lower there was grass. On the sunny side of the slopes, trees stopped at about 10,000 feet. Koklas pheasants were secured in the bamboo forests, and hunters brought in chir and horned pheasants.

About three miles above Dana the way led up hundreds of narrow stone steps. On our return over this route in December we saw several snow pigeons here, but it was impossible to get any of them.

Ghasa: Altitude 7,000 feet, November 23–24, 1949; December 13, 14, 1949

Ten birds were collected.

A wayside village with houses clustered in four groups over a distance of 1½ miles. There was heavy pine forest near the road, and mountains rose abruptly on each side of the valley.

Birds were collected in bushes along the road, in ravines and bamboo clumps, and in thick bushes on open hillsides.

With the climb on the trail north of Dana there is a great change; one leaves Hindu Nepal and enters Buddhist Nepal. The people and the architecture change, the Buddhist temples and prayer flags become a feature, and the towns are built of gray limestone in the Tibetan style. The vegetation, birds and other animals also change. The forest grows heavier, and the weather colder. Nutcrackers were found in the pine forests, and titmice and Himalayan griffons were seen.

Lete: Altitude 8,400 feet, November 24, 1949; December 13, 1949

Nine birds were collected.

A wayside village like Ghasa and about three miles above Ghasa. It has many well-built limestone houses.

The river valley here is about two miles wide, and is filled with huge stones. There is little vegetation except for groves of pine trees.

Tukche: Altitude 9,000 feet, November 24–December 6, 11–13, 1949

Here 101 birds were collected, at altitudes up to 17,000 feet.

A compact village of about 2,000 population at 9,000 feet; to the west the mountains rise to 23,000 feet and to the southwest to 26,000 feet (Dhaulagiri). The Kali Gandak here runs in an almost level plain and the bed has widened from only a few yards above Ghasa to a mile wide here. Tukche, built of gray stone, is a city of prayer flags.

We established an upper camp on the stream to the west at 12,000 feet and collected up to 17,000 feet. This first upper camp was at the head of a small valley at 12,000 feet. Nearby peaks rose to 25,000 feet. To hunt at higher altitudes it was necessary each day to negotiate a dangerous, slippery path up some 1,500 feet. Taylor and I spent most of a week at this 12,000 foot camp while the other two men were collecting at Tukche below. On rolling ridges at about 16,000 feet I saw at least 50 giant snow cocks one day. I tried to get them with Number 6 shot, but soon found that only S. G. or L. G. shot would bring them down. Finally it was native hunters who collected these, and also the snow partridge. There was a variety of finches as well as koklas and empeyan pheasants. The area was noted for musk deer, but none was secured. Steep snow fields made travel hazardous, and on one day a snowstorm at 15,000 feet made return to camp additionally difficult.

Birds were collected in the pine and fir forests, and among the dwarf junipers at timberline, as well as on rocky cliffs along the streams, and in fields and from the edge of cultivation.

Marpha: Altitude 9,100 feet, December 6, 10, 1949

A wayside village of about 1,000 people four miles north of Tukche, noted for its red Lamas. Three birds were collected. A flock of 40 or 50 blue rock pigeons lived here.

Jomosom: Altitude 9,400 feet, December 7–11, 1949

A village on the bank of the Kali Gandak, 30 miles south of the Tibetan border, and a toll place. The valley was about a half mile wide, but the stream itself was swift and only about 30 yards wide. There were several pools of water on the west bank and many terraced fields above the east bank.

Birds were collected in the hedges by fields, in the pine forests, near cultivation up to 12,000 feet and among the dwarf junipers at about 14,000 feet.

December 11, just as it was beginning to snow, hundreds of small birds crowded into hedges along sides of cultivations above the river bed. About five of the twelve or fifteen species present were obtained.

While we were here hunters brought in some snow cocks from high altitudes above Tukche.

Thinigaon: Altitude 9,200 feet, December 6, 10, 1949

This was within a couple of miles of Jomosom, on a tributary of the Kali Gandak, and most of the birds were collected along the stream, in hedges, or at the edges of fields next to the mountain.

We made our second high altitude camp at 13,000 feet to the east of the Kali Gandak and just under the Muktinath Range to the east and the Annapurna Range to the south, both rising to well over 20,000 feet. This was yak country; blue sheep, a weasel, and numerous marmot-like mammals were seen. Wolf tracks were found about the tent, and the animals' mournful howl was heard. At Tukche the party had been told of a game bird present here they had not recognized; the people called it "*rare-wah*" and described it as a chukar partridge but smaller. The male was said to be blackish gray and the female reddish brown. It was this that influenced the party to come north of Tukche. At the yak hut where the tent was pitched, a reddish brown feather, said to be that

of a female killed with a sling a few days before, was shown the party. A Tibetan shepherd volunteered as a guide. Fresh tracks of this bird were found along yak trails between clumps of dwarf juniper. Then, while attempting to see a flock pointed out by the guide, one appeared at close range and was secured.

II. Dana to Pokhara and Tansen

Tatopani (or *Thatophani*): Altitude 4,000 feet, December 19, 1949

Three birds collected.

This was the hot springs along the Kali Gandak. Crossing the Kali Gandak at the hot springs, the route to Pokhara (a six-day journey away by Gurka porters) started up a 4,000 foot ridge to the east. Shrikes and bush robins were found along the road, which here was made of many marble steps. Then it passed through a section full of powdery mica, on over the wooded ridges. The party was watching for game birds, but was disappointed. White-collared thrushes, woodpeckers, and jays were seen.

Ghara: Altitude 5,800 feet, December 19, 1949

Three birds collected.

A large village about one mile east of the Kali Gandak. It was on an open, rolling hillside. Seams of mica were seen in the ground.

Birds were collected over cultivated fields, and along a small stream.

Sikha: Altitude 6,000 feet, December 19–20, 1949

Four birds collected.

A village similar to Ghara, about a mile to the east, on the same ridge.

Ulleri: Altitude 6,000 feet, December 21, 1949

Here 22 birds were collected.

A large village on the eastern side of the ridge, above the Kali Gandak. The Ulleri forests stretch along the top of the ridges, which reach 8,000 feet.

Birds were collected in cultivated areas and in the forests on the ridges.

At Ulleri Dr. Taylor picked up the Munkia or headman, who knew the jungle to the inch and who guided Taylor to where he got

one of a pair of rufous hill partridge. The headman also presented the expedition with the skin of an empeyan pheasant shot five days before. This completed the list of the five different kinds of pheasants obtainable in this part of Nepal. Nightjars, kingfishers, serpent eagles, dippers, and various passerine birds in the upper forests made the party wish they could stay a week or two.

Birethanti: Altitude 3,500 feet, December 22, 1949

Here and within 6 miles 23 birds were collected.

A village mostly of Brahmins, on the Modi River. To the east and south wooded ridges rise from the river bed to about 5,000 feet. Toward the northwest, back toward Ulleri, the path rises steeply to about 8,000 feet. There are fields in level places along the river where this and other villages are located.

Birds were collected along the Modi River and in the fields. The forests up to 4,500 feet were full of birds.

Pokhara: Altitude 3,000 feet, December 24, 1949–January 7, 1950; January 29–February 2, 1952

Here and up to 9 miles south 137 birds were collected.

A large town of about 5,000 inhabitants spread for several miles along a level valley about two or three miles wide and several miles long. To the north, east, and west well-wooded hills rise to 3,500 and 4,000 feet. Farther to the north the hills become higher and higher, the Annapurna Range reaching about 22,000 feet. The Seti River comes in from the north, and to the south is a lake, Phewa Tal, about 2½ miles long and 1½ miles wide. Very little marsh surrounds the lake; from most of its shores the hills rise abruptly 1,000 or 1,500 feet. The center of the valley is given over to the main town and many small cultivations. The paths between the fields are mostly lined with trees, frequented by a variety of birds.

Birds were collected about the rivers, the town, in bamboo clumps, hedges and groves, fields, the lake, and in the forests.

The hills around the lake abounded in thrushes, babblers, tree pies, woodpeckers, nuthatches, tits, bulbuls, and magpie robins. Along the lake were snipe, rails, lapwings, spur-winged plovers, ducks, and grebes. Around the camp and in the town were barbets, stone chats, owls, pigeons, kestrels, and rollers.

Due to Bergsma's illness, and the necessity of carrying him to Tansen in a litter, the stage from Pokhara to Tansen was hurried, though over the difficult roads only seven miles could be made some

days. However, there was time to collect such things as drongos, kingfishers, chats, parakeets, thrushes, emerald doves, sparrows, and woodpeckers. From the Andhi Khola River, a tributary of the Kali Gandak, where the altitude is 2,000 feet, the way led through wooded hills to Tansen, at 4,500 feet.

Two years later we came over this road again. Along the Andhi Khola we found three ibis-bills, two of which we collected.

III. Additional Material

Additional material was presented by Colonel Ishwar Shumshere Jung Bahadur Rana. This collection consisted of 35 birds which were all collected in February, 1950, and skinned by a palace boy. They are from Butwal (between February 2–26, 1950) and the nearby Dobhan and Ranibas (3 birds only, on February 8, 1950).

THIRD EXPEDITION: FAR WEST NEPAL

(November 28, 1952 to January 15, 1953)

The Rana family of west Nepal sent two children to Woodstock School after our first visit to their country in 1949–50. The father of the boy who came to our school now became governor of Kailali-Kanchanpur in the extreme western part of the Nepal *terai*. His Excellency, Governor Dhairya Shumshere Jung Bahadur Rana, invited us to visit him and to collect birds not only there but also north among the hills of Doti. No ornithologist had ever visited any of these places. We had permission to visit Kathmandu as well, but as we financed the trip ourselves and our means were limited we decided to spend seven weeks in the Kailali area only. We had no medical man so our party included my son Bob, Richard Parker, his classmate, our Garhwali cook, and myself.

At Lucknow we purchased provisions for our expedition, and the same afternoon we took the Ouah Tirhut railway northwest to the Nepal border. One day later, November 28, 1952, we reached Ghauriphanta at the end of the line. H. E., The Governor of Kailali-Kanchanpur, met us at this border town with an elephant. Our baggage was piled onto a couple of oxcarts and we traveled by cart and elephant over the border to Dhangarhi, four miles distant. We made this our headquarters for the next month. H. E. The Governor had put up two large tents for our use and we were most comfortable.

Our headquarters were at Dhangarhi for the period November 28–December 29, but during this time we made a trip to Malakheti by oxcart across 12 miles of *terai* (December 10), and on to Badamachli with carriers (December 11), Baila (December 12), and Sahajpur (December 13), where we stayed until December 16; then we returned to Dhangarhi (December 21).

The two weeks from December 30 to January 13 we spent in the *terai* of Kanchanpur District: December 30 at Bichchua; December 30–January 5 at Bilauri; January 5 at Emelie; January 6 at Patia; January 7 at Ainthpur; and January 8–15 at Barmdeo on the Sarda River, which divides Nepal and India. Here we crossed into India and thence to Tanakpur, India, and to Lucknow.

At this time of year it was difficult to find porters, for all travel was from Nepal to India. Fortunately His Excellency the Governor located four men whom we hired for the entire mountain trip, and we travelled by oxcart, hired by the day, in the lowlands. Thanks to the Governor we had two men as guides for the oxcart trip to Barmdeo Mandi. This route lay through the country of the picturesque Hindi-speaking Taroos. At Barmdeo Mandi two or three main roads start, to reach far back into the Nepal hinterland. When we crossed into India finally, the people there were surprised for they had never seen white men crossing the Sarda River from Nepal.

Description of Collecting Stations

Barmdeo Mandi: Altitude 950 feet, January 8–15, 1953

This is a frontier town on the banks of the Sarda River. Tanakpur, India, is about a mile away on the other side of the Sarda. Below the town a fringe of acacia trees and a mixed forest extend away from the river to the foothills about a mile distant. Above the town the foothills come to the river's edge. *Sal* and other trees cover the hills, which rise about 1,000 feet or more.

At the edge of the water were the redstart, spur-winged plover, greenshank, crested swift, and a few ducks. The strip of acacia trees produced the Bengal red-capped babbler, the bay woodpecker, and the red-vented bulbul. The mixed forest near the river contained several kinds of vultures, gray tits, shrikes, willow warblers, nuthatches and red jungle fowl. In the hills among the *sal* trees and above we found the lesser racquet-tailed drongo, the gray-headed flycatcher, the scarlet minivet, the blue-bearded bee-eater, the Himalayan rubythroat, the redstart and the forktail. Two or

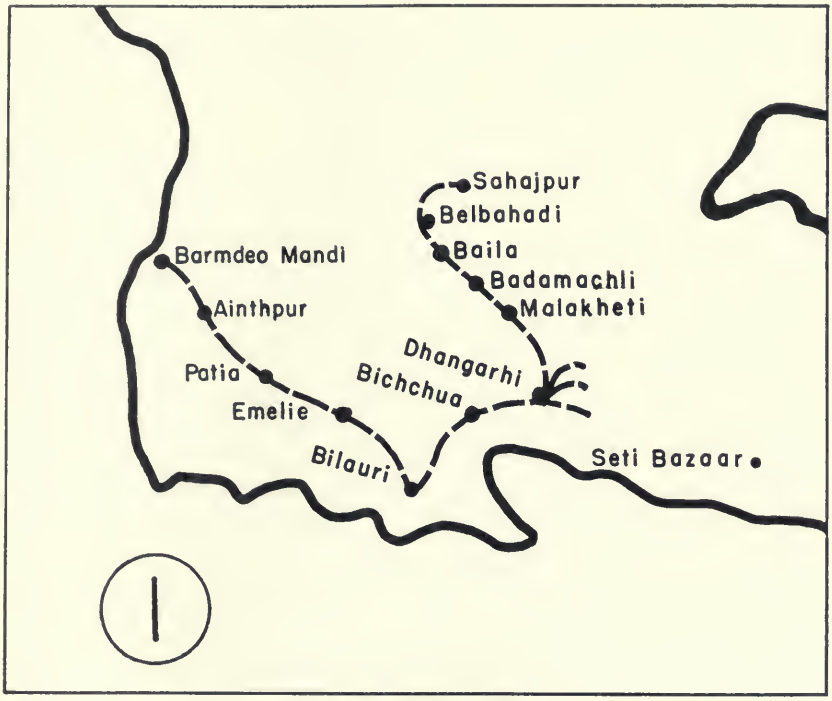

FIG. 4. Far west Nepal: the area visited by the third expedition in 1952–53.

three miles up the river are little grassy deltas, covered with trees. Sand martins were nesting in the 15-foot sand banks. Along the small streams in the delta were the gray-winged blackbird and the ground thrush, while a barbet and other birds ate fruit in a fig tree overhead.

Ainthpur: Altitude about 930 feet, January 7, 1953

A dozen or two houses are situated on the edge of a heavy forest. Their mustard and wheat crops are guarded at night from deer and pigs by watchers, who stand on a platform fifteen or twenty feet above the ground. A bamboo grove contained the drongo, the minivet, and the wood-shrike. Numerous red jungle fowl came out of the forest into the edge of cultivation. Groups of small birds passed through the tops of the trees in the forest.

Patia: Altitude about 920 feet, January 6, 1953

This village is a cluster of houses surrounded by open fields. We went on about half a mile to the edge of a stream. Here red

jungle fowl were numerous. A tall silk-cotton tree had the usual barbet-drongo-mina population. A gray-winged blackbird flew up from the ground; it is a dirty feeder.

Emelie: Altitude 900 feet, January 5, 1953

A small village with a heavy *sal* forest on one side and fields and a mango grove on the other. Several oxcart roads through the forest converge about a mile and a half southeast of Emelie. Unfortunately (or fortunately) I took the wrong forest road and at twilight came out of the forest at Dhakka. Villagers were afraid to show me the road to Emelie at night (about 5 miles distant) for fear of wild animals. The people at Dhakka, who were Hindi-speaking Taroos (a tribe noted for their immunity to malaria), had never before seen a European in their village. They brought uncooked food and dishes for boiling water, potatoes and rice, a straw mat, and two blankets for a bed in front of a log fire on the porch of one of their homes. With my boot for a pillow and a large black village dog for a bed-fellow I was quite comfortable.

In the forest were spotted deer and blue-bull, favorite food of both panther and tiger. The emerald dove flew up from the forest path. Parties of minivets, shrike-babblers and woodpeckers were in the higher trees. In the mango grove were parakeets, flycatchers and willow-warblers, and we got a jacana from a neighboring pond.

Bilauri: Altitude 900 feet, December 30, 1952–January 5, 1953

Bilauri is the capital of Kanchanpur District. The population may be as much as 900 to 1,000 people. It has two or three main streets and well-constructed brick houses. Other dwellings are up on stilts, as the nearby lakes often overflow in wet weather. Light forests lie to the east, tall grasslands to the north, and open fields in other directions. The extensive fields of mustard were yellow with flowers.

We were offered roomy quarters in a well-constructed building but preferred to set up our tents in a mango orchard beyond the village. Because of the rains we also used the room of an almost completed temple.

A flock of cormorants was on the lake when we arrived, as well as a pair of sarus cranes, black ibis, and numbers of waders. Along the wooded stream back of our camp were the kingfisher, the white-tailed lapwing, the Indian moorhen, and others. At night we heard unearthly screams of a bird from tall old mango trees beyond the stream. It proved to be a Pallas fishing eagle. This, along with the

shrieks of swamp deer and roars of two or more tigers in tall grass not far away, rather disturbed us the first night.

We frequently heard the roars of tigers, and saw numbers of wild pig. Big game was more abundant here than at any other place we visited.

In the village and around our camp were tree sparrows, magpies, robins, flycatchers, and an owl. Beyond town over shallow ponds of water we got the pond heron, several egrets, and terns. Numbers of peafowl roosted at night in the tall trees a mile west of town, but the black partridge preferred smaller bushes along the edge of mustard fields.

Bichchua: Altitude 900 feet, December 30, 1952

A small town of one or two hundred people, in the midst of open fields, though to the west and east are extensive virgin *sal* forests. Bordering the town is a little lake with extensive grasslands beyond it, full of swamp deer. About five miles east of town is the Mohan River, the eastern boundary of the Kanchanpur District.

In the mango groves where we stayed, we collected a cuckoo, a bee-eater, a flycatcher, and several willow warblers. A short distance away, near a pond, we found the black ibis and a sarus crane. Our road to the west passed for two miles through fields and by small villages. In a fig tree we got a small barbet and a gray hornbill. A small grove had about a dozen species of common birds, including the scarlet minivet, the barred owlet, the black-breasted oriole, and green bee-eaters.

We came to an extensive stand of *sal* trees where a wood-cutting project was being conducted. Many of the larger trees, when felled, were so riddled with borers that very little good lumber could be found. Medium-sized trees were in much better condition. It looked as though no cutting had ever been done among these great trees before; useless giant *sal* occupied the space where young trees should have been growing. Beyond the forest we passed through heavy, tall grass.

Dhangarhi: Altitude 900 feet, November 28–December 9, 21–29, 1952

This is the largest town in Kailali District. It is two miles north of the Indian border and four miles east of the border of Kanchanpur District. The town has a population of about 1,000, and the official residence of the Governor and a small hospital are situated there. On clear days we could see the foothills of the Himalayas, about twenty miles to the north.

Dhangarhi is at the edge of an extensive forest which extends to the west, with open rice fields to the north and east. A scrub jungle separates the little village from the Mohan River to the south. Five main types of collecting areas surrounded Dhangarhi. Along the banks of the Mohan River we found a swallow, a stint, ring and spur-winged plover, and ruddy sheldrake. In the reedy marshes were the sarus crane, the large adjutant stork, a teal, a comb-duck, a white-tailed lapwing and many bronze-winged jacanas. In the village and mango groves were house sparrows, magpies, robins, spotted owlets, common kites, neophron vultures, common minas, flycatchers and willow warblers. The rice fields had pied and bank minas, blue-throats, the pied bush chat, the spotted munia, rose-ringed parakeets, and the courser. At the edge of the forest were the red-whiskered and red-vented bulbul and the black-headed shrike, while in the forest were several kinds of drongos, babblers and barbets, gray and pied hornbills, a large owl, an orange-headed ground-thrush, red jungle fowl, nightjars, several flycatchers, blue-bearded bee-eaters, a green pigeon and sunbirds.

H. E. Governor Dhairya Shumshere J. B. Rana looked after us very well and arranged for a trip into the foothills. His young son and his nephew were very much interested in our bird collecting and brought in a number of good specimens.

Malakheti: Altitude 950 feet, December 10, 22, 1952

A small village of two or three hundred people, surrounded by fields. To the west of town was a stream, the Machi Khali, along which we found the pied kingfisher, the Indian river tern, the shama, and a number of wagtails and peafowl. On the drier fields above the stream were wagtails, flycatchers, minas, and parakeets.

Groups of people from the hills were arriving with chickens and cattle. They had come to the lowlands for the winter and were putting up leafy lean-tos, which they would occupy for eight or ten weeks. This was a main route from Dandeldhura and Silgiri Doti farther north.

Badamachli: Altitude 1,500 feet, December 11, 21, 1952

There was no town here, only a camping site along the Machi Khali on the main road into the hills. Here we saw an osprey, a pied Himalayan kingfisher and the white-capped and plumbeous redstarts. From Malakheti we walked through heavy forests where we saw the white-eye, the gray tit, the flycatcher shrike, and fantail

flycatchers. Then for a distance we crossed the rocky stream beds at the base of the mountains and climbed up onto a well-forested plateau. We passed a shrine to Shiva hung with bells and studded with small metal tridents. The red-billed blue magpie and the black-naped woodpecker were calling. We found the small niltava and several other flycatchers, as well as the large Nepal wood shrike.

Baila: Altitude 3,000 feet, December 12, 1952

A small place with about a dozen houses scattered among fields. About seven miles below Baila we climbed out of the boulder-strewn stream bed to the right up to a plateau about 800 feet above. We passed a village or two and found the black sunbird around clusters of flowering mistletoe. In a forest near a stream we came across a party of 6 or 8 kalij pheasants. Much to our surprise a cock had the white crest of *Lophura l. hamiltoni*, which has not been collected in Nepal. We came back next morning and heard them and saw about six at a distance but didn't get one.

A steep climb of a mile took us through a forest of tall *sal* trees and an encampment of Nepalis from the north. Most of them were tailors going with their families and livestock to north India to work for the winter. At night we heard a group of 30 or 40 children singing their folk songs.

Baila was on a fairly steep hillside. A few shrikes, flycatchers, and woodpeckers were found here.

Belbahadi: Altitude 3,500 feet, December 17–20, 1952

This can scarcely be called a settlement. There are a few scattered houses in a small valley surrounded by wooded hills only about a mile above Baila. Our camp was just off the road to the east near a spring where travelers to and from the higher hills stop to get water.

There was a wealth of bird life in this place. At our camp were the white-throated laughing thrush, the bronze drongo, the large Nepal wood-shrike, the Pekin robin, and several woodpeckers, including the large yellow-naped variety. Around cultivated and neglected fields full of *Artemisia* weeds were the gray-headed and rusty-cheeked scimitar-babblers, spiny babblers, streaked laughing thrushes, a rose finch, red jungle fowl, and kalij pheasants. Among the trees a little higher were the rufous-throated hill partridge, the hawk eagle, the silver-eared mesia, ixulus, golden bush-robins, and yellow-backed sunbirds.

Sahajpur: Altitude 6,000 feet, December 13–16, 1952

A good-sized village of 50 or more houses strung over terraces on the northerly side of a ridge. The path from Belbahadi to Sahajpur is narrow and indistinct. We hired as a guide a young boy who was often uncertain which way to go. Most of the forest has been cut down but there were scrub oak trees most of the way. At one place we found some small babblers in the grass. Finally we reached our destination and pitched our tents on a terrace above the town near a ravine containing water.

We could look across the valleys northward toward the town of Silgiri Doti in the distance, and beyond that a wooded range rose to 10,000 feet and beyond again lay the snow ranges of the Himalayas.

At Sahajpur pines and oaks were common about our camp. We hunted on the top of the nearest ridge (6,000 feet) where we heard a koklas pheasant call and on the slopes where a barking deer broke out of the ferns in a ravine while minivets flitted among the pines, and part way down to a wooded valley at 3,500 feet. The first evening we located a party of 7 or 8 spiny babblers, red jungle fowl, and several species of laughing thrushes.

The collecting areas were about evenly divided between small wooded ravines and terraces below us and the pine and oak forests above (going up to about 7,000 feet). In the former was some kind of a partridge which we never managed to get. Bush chats and shrikes were in the more open areas; in the ravines we collected a malkoha, a green magpie, and a spotted forktail. We saw a small owl several times and heard its strange call at night but didn't get it. In the pine forest were a minivet and a flycatcher warbler while among the oaks higher up we saw the blue rock thrush, the sibia, and the accentor and heard a koklas pheasant crow.

FOURTH EXPEDITION: EAST NEPAL

(November 30, 1953 to January 14, 1954)

The Nepal Government had appreciated the medical aid we had given the people of that country on our first and second expeditions and now asked us to set up a permanent dispensary-hospital in west Nepal and child and maternity welfare centers in Kathmandu Valley. We accepted and were transferred from Mussoorie to Kathmandu, to head up this medical work. Before going to Kathmandu, however, we conducted a seven weeks' expedition to east

Nepal. Ripley had visited Dhankuta District east of the Arun-Kosi River in 1948, so we decided to go to Okhaldhunga, west of that river.

Chicago Natural History Museum financed this trip in part and we were able to penetrate to within 47 miles of Mount Everest. Dr. Carl W. Friedericks joined our party of three high school boys—Bob Fleming, Richard Parker, and Ray Smith—the invaluable Garhwali cook Bahadur, and myself. Bob had his Benjamin air rifle while the other boys had .22's. My 12 gauge shotgun with auxiliary barrels for .410 and .32 cartridges, plus the boys' weapons, made it possible to get both large and small specimens.

My first Nepali friend, Colonel Ishwar Shumshere J. B. Rana, whom I had met in Tansen in 1949, was now stationed at Raghunathpur, Mahotari District, east Nepal. At his invitation we left Mussoorie and traveled via Lucknow, Gorakhpur and Dharbhanga to Jaynagar on the India-Nepal border. En route we purchased seven weeks' supply of food at Lucknow. The elder son of Colonel Ishwar met us at Jaynagar and took our things over the border. In the distance we could see the snow ranges of the Everest group. We put our baggage on two hand cars, and porters pushed us and our boxes for eight miles. We passed through rice fields and saw many common birds, all of which we had already collected. At the first station we glided onto the siding just ahead of the arriving train. Mahouts met us with three elephants and took us the remaining twelve miles to Raghunathpur. Our baggage came later by oxcart. Colonel Ishwar Shumshere and his family welcomed us and directed us to comfortable quarters across the road from the Rana home. We stayed here four days while arranging for our trip into the interior.

Our host planned our route and arranged for a personal friend to accompany the government policeman. We decided to go directly north to the Sun Kosi River, through the town of Okhaldhunga to a 10,000 foot ridge directly in front of Everest. We would be gone a month. There were five Americans, the cook, and three Nepalis, one of whom, a Brahmin, was a college student who spoke excellent English. When all was ready we hired two oxcarts and traveled north seven miles to Chisapani. It took us two days to hire twelve porters for the trip from Chisapani to Okhaldhunga. We made a good start the third morning. Our porters waded the Kamala River twice and started up the foothills of the Siwaliks, often called the Churia Range. We climbed about a thousand feet

and then descended to the banks of the Kamala River at Tari. Next day, December 6, we followed a river valley to the foot of the Mahabharata Range at Bhorli. We cut through a pass at 5,500 feet, crossed streams many times and reached the broad, swift Sun Kosi River two days later. We crossed the river in boats hewn out of logs. From the river level at 1,800 feet we climbed up to 8,000 feet and then to Okhaldhunga town, a distance of 18 miles. We could only make six miles a day, for our porters could walk no faster up such a steep road, some of which lay at a 60-degree angle.

Manebhanjan and Kutikiya were two main towns along the road. Most of the area consisted of series of terraced fields. There were a few forests along the ridge facing Okhaldhunga from the south. We rested a day and a half in town, hired coolies for a day's climb northward, and covered the seven miles in the same day. At the top of the 10,000 foot ridge we found a small clearing about two miles from the village of Patale, where we put up our tents and remained eight days (December 13–20).

We were in clouds most of the time at Patale, but on the third morning it turned cold and cleared. Everest, Lotse, and Makalu towered to the north-northeast, and a great range of jagged peaks stretched eastward towards Kinchinjunga, while high peaks, unnamed on our maps, rose close to the north. Cold weather brought good birds—finches, crossbills, and spotted laughing thrushes. It was potato harvest in Patale village and we bought potatoes to roast. Ray Smith bagged a couple of Burmese goral and we had steak and more steak. The people were shy and Dr. Friedericks had almost no patients until he returned to Okhaldhunga town. Penicillin saved the lives of two sons of the Governor, who urged him to stay and open a dispensary.

We left our high Patale ridge December 21 just ahead of a cold snap which would have brought more birds but also brought two or three feet of snow. In Okhaldhunga we easily found porters for the whole trip back to the *terai*. We stopped at two or three collecting places we had noted on our way north and found good birds.

Back at Raghunathpur once more, we planned a final week's work, hired an oxcart, and went northeast along the base of the hills several miles away. We hunted through a jungle of ravines and small ridges which ran southward to the edge of rice and tobacco fields. Peafowl, jungle fowl, cats and hawks were plentiful. At the end of the tour Richard Parker and Ray Smith left for India while Dr. Friedericks and my son Bob and I went to our new home in Kathmandu.

FIG. 5. East Nepal: the area visited by the fourth expedition in 1953–54.

Description of Collecting Stations

Raghunathpur and vicinity: Altitude 900–950 feet, November 30–December 2, 1953; January 1–7, 1954

This is a good-sized town of the lowlands of more than a 1,000 population. It is about fifteen miles north of the Indian border, seven miles south of the foothills of the Himalayas, and a mile or two west of the Kamala River. It is surrounded on all sides by rice fields, mango orchards, and an occasional grove of bamboo. A mile and a half west is a reedy lake about half a mile long. In all of these habitats we collected birds.

Round about town were house sparrows, wagtails, magpies, robins, common minas, kites, and a flock of palm swifts which we failed to collect. In the mango groves we saw several kinds of hawks, flycatchers and willow warblers and the black-headed oriole, the purple sunbird, the flowerpecker, the chloropsis and the spotted owlet. The rice had just been cut and near town were flocks of munias.

The short-eared owl and the harriers hunted over the fields. In hedges were the blue throat and fan-tail warblers; in fields were rollers, drongos, and white-eyed buzzards. Along the sandbanks of the Kamala was a flock of ruddy sheldrakes, spur-winged plover, greenshank and river tern. The largest variety of bird life was found in and around the lakes west of town. There were tufted pochard, lesser whistling teal, common teal, white ibis, lesser adjutant stork, jacana, two kinds of snipe, brahminy kite, and two or three large birds of prey. We were kept busy preparing bird skins while we planned for a month's trip north into Okhaldhunga District.

Much of our time upon our return to Raghunathpur was spent in the foothills of the Siwalik Range of Saptari District, a few miles beyond the town of Mirchiya. We traveled in an oxcart which we engaged for the full time and moved around as desired. Fertile fields extended from Raghunathpur to the foothills, where we saw swallows, pied harriers, yellow-throated sparrows in a bamboo grove, lagger falcons and a pied bush chat. Close to the hills were silk-cotton trees (*Bombax*), where we saw minas, orioles, barbets, and drongos.

It was easy to lose one's way in the tangle of ravines and hills. Red jungle fowl and partridge and peafowl were common. Several species of flycatchers, woodpeckers, and babblers were there and we got a small civet.

Chisapani: Altitude 950 feet, December 3–4, 29, 1953–January 1, 1954

The main trading center for the interior is located here. It has two main streets and a population of two or three hundred. Many carts were parked on the sands of the Kamala River just below town. The chief products were potatoes and rice. We had our headquarters in the only two-storied shop in town and slept in the middle of the floor downstairs, a rather public place.

It took two days to engage twelve carriers for our journey north. We hired them for the entire journey one way and left the matter of details in the hands of our Nepalise guides. While they discussed wages and weight of baggage we collected plovers along the edge of the river; we also got an osprey, a fishing eagle, two gulls, a kingfisher and a ruddy sheldrake. In the acacia grove along the river was a shrike, a rufous woodpecker and several willow-warblers.

Just back of town were the foothills. These had numerous birds, so upon our return we went a mile below town and camped three days. The large necklaced laughing thrush in flocks of 10–20 was found in company with a racquet-tailed drongo, which acted as leader, and two or more species of woodpeckers, which were a follow-up crew. We heard the constant chatter of the chloropsis and parakeet and the white-eye's gentle "*tear tear.*" Two panthers kept leaving tracks in front of our camp each night. Hare and langur monkeys were common.

Tari: Altitude 950 feet, December 5, 28, 1953

The road led through heavy forests, up through the Siwalik hills and down to Tari, on the bank of the Kamala River. In the Siwalik hills we saw a green pigeon, a kalij pheasant, flycatchers, and laughing thrushes. We met numbers of camels carrying bags of potatoes. Each wore a tiny bell around its neck. We frequently had to cross streams.

Bhorli: Altitude 1,500 feet, December 6, 25, 27, 1953

This was a miserable little village of five or six houses at the side of the main path coming down the Mahabharata Range from the Sun Kosi River. Extensive marshes lay along the sandy river bottom, where we found a few birds that were difficult to see. The low hills close by were heavily wooded but seemed fairly empty. A deer or two made an easy get away when the dry leaves crackled loudly under our feet. A flock of about 50 green bee-eaters roosted

in a tree near camp. The scarlet minivet and the black-naped woodpecker were also close by.

Mayakhu: Altitude 4,000 feet, December 24, 1953

Just beyond the pass through the Mahabharata Range was this village of a hundred or so scattered dwellings. On the path was a loft, where we spent the night. From this point we could see the ranges of the higher Himalayas. Here the country was steep and barren except for a fine bit of forest just south of town. There we saw the red-headed trogon, the red-billed blue magpie, the lesser racquet-tailed drongo, and the maroon oriole.

Harithumke: Altitude 2,500 feet, December 7, 1953

The main village of about fifty houses was some distance above the stream-bed where we slept. There were a few nightjars and owls, and some redstarts along the water. Two pine martins made a loud, peculiar noise at dawn.

Sun Kosi River: Altitude 1,800 feet, December 7, 23, 1953

It was hot and dry on both sides of the river. We went down the steep path to the rocky bed and crossed in dugouts, paying the usual toll charge. We saw the steep hills across the river and figured we would go around behind them some way. But no! We started up the world's worst main road—3,000 feet in four miles. By the time we came to the first town we could move no farther. All we could collect was one hen for dinner.

Bahaduri: Altitude 4,800 feet, December 8, 1953

The hills were fairly barren until we came to a small woods where a few sivas and laughing thrushes hunted through bushes near a stream. We saw a kestrel and a drongo in a clump of bamboo near Manebhanjan, a town with a population about 600, through which we passed. Numbers of vultures were circling around through the air, one of which was a lammergeier. Next day before we reached Okhaldhunga we came to a heavily wooded forest several miles in breadth. Just before this was a stretch of weed-covered, fallow fields. Numbers of birds were feeding in the fields, but the growth was too thick to pass through. One species was the golden bush-robin.

On a ridge overlooking Okhaldhunga to the north we collected maroon-backed accentors, Nepal rose finches and red-headed tits. About a mile or two down through the forest we came to a valley

with a stream running through it. The kalij pheasant, flowerpeckers, and sunbirds were here. Farther up this damp valley were nutcrackers, bush-robins, finches, woodpeckers and redstarts.

Okhaldhunga: Altitude 7,500 feet, December 11–12, 22, 1953

We paid off our porters from Chisapani and hired new ones for the last day's journey. As this was a large town of a thousand or more people, the seat of government for the district was here. We wished to pay our respects to H. E. the Governor, but he was out. We had a tiny room for ourselves and all of our stuff so most of us had to sleep along the side of the street at night. We got a good start up the mountain next morning.

The last seven or eight miles lay up a very steep road; we climbed 2,500 feet in that distance. In a village along the road we found the streaked laughing thrush, the redstart and the kestrel.

As we got up among the tall oaks near the top of the ridge we found a bunting, a sibia and a hoary barwing. Fog was very heavy and we could see very little. At the top we came to broad, rolling hills covered with short grass.

Near a *chortan* (shrine), with a hammer and sickle scratched on it, we made a fire to keep warm while the boys went ahead to try to locate fir trees. They came back with a favorable report and soon we pitched camp in an open field facing the snows, though we could not see them, as the clouds were low.

Patale: Altitude 10,000 feet, December 13–21, 1953

The village was across open fields about two miles north of us. Our site was surrounded by tall conifers and oak trees below us and cultivated fields between barberry bushes and groves of rhododendrons above us. A stream of water was only 75 yards away.

The collecting areas were roughly divided into three types. On the tops of the rolling grassy ridges were the wren, the redstart, and two yellow-billed magpies chasing a tan and white owl. Cultivated fields were common. The potato harvest was on, and numbers of people were burning piles of grass and scattering the ash over their fields.

On northern exposures at 11,000 feet were groves of rhododendrons. Just below were forests of conifers and oaks. Among the rhododendrons we collected several kinds of finches and laughing thrushes. In the tops of forest trees were nutcrackers, crested brown tits, kinglets, cross-bills, tree creepers, and a nuthatch. Nearer the forest floor we found the red-headed laughing thrush,

a kalij pheasant, a bush-robin, a woodcock, and a forktail on a stream. Numbers of ferns grew in the damp soil and on the bases of moss-covered trees. Clear, cold weather followed several cloudy days and brought new birds to our ridge. We could see the Everest group of mountains only 47 miles north-northeast of our camp. Local people said that three feet of snow would soon fall but we left just before winter began.

VISITS TO NEPAL (KATHMANDU VALLEY AND VICINITY)

First Visit to Kathmandu Valley

(January 21 to February 15, 1953)

There are only two railroads in Nepal, both narrow-gauge. One is 14 miles long and the other 27 miles long. We took the latter line from Raxaul to Amalekhganj. The route led through scrub forest most of the way to the foot of the hills. There we found seats in a public bus which carried us some 25 to 30 miles farther into the hills. It was a picturesque road along streams and through a pass in the Siwalik hills up to Bhimpedi near Chisapani Garhi. En route we crossed 116 bridges and passed through a narrow tunnel. A ropeway to Kathmandu began just below Bhimpedi. There was much traffic going into Nepal but little coming out.

From Bhimpedi we had to walk the fifteen miles to Thankot. We hired men to carry our baggage and a chair for Mrs. Fleming and started up the hill by late afternoon. We climbed from 3,000 to 5,000 feet to Chisapani Garhi, where we found a comfortable rest house with running water and electricity, which we had not seen before in Nepal. Our boxes were checked by customs officials and we obtained permission to go on to Kathmandu.

Next morning we went on up the hill for another thousand feet; then the path dropped down steeply to a stream bed and followed a valley to Chitlang at the base of the heavily wooded Chandragiri Range (Mountains of the Moon). It was a very steep climb for about 2,500 feet, but by late afternoon we made the 7,200 foot pass. It began to snow, turning the path into a mass of slippery clay. In three miles the road dropped from the pass to Thankot at 4,800 feet. We slid most of the way. A jeep was waiting for us and we bumped over a very rough road to Kathmandu.

The 150 square miles of the Kathmandu Valley are rimmed around with hills. During our three weeks' stay we made several

trips to Godaveri in the southeastern corner of the Valley and climbed Phulchowk to 8,000 feet. We also got special permission from Mrs. Proud, an English ornithologist, to accompany her to Nagarjung reserved forest, northwest of Kathmandu. Later we visited Shivpuri (Sheopuri) and Sundarijal to the north. Bird life in these wooded hills was somewhat different from any that we had seen before and we added numbers of new species to our list. We gave a public lecture on the birds of Nepal just before we left. About eighty leading people of the city were present and seemed quite interested in our display of birds and ferns of the Valley. On February 15 we flew from Kathmandu to Patna and returned via Lucknow to our home in Mussoorie.

Second Visit to Kathmandu Valley

(January 16 to May 11, 1954)

Dr. Carl Friedericks, my son Bob and I, at the end of our expedition to east Nepal, took a train from Jaynagar, in Bihar, India, to Raxaul, also in Bihar. We went by jeep from Raxaul to Birganj over the border and to Bhimpedi, near Chisapani Garhi, about 60 miles farther, at the foot of the Mahabharata Range. From here we walked to Thankot—about 15 miles (Nepal Valley)—over the trail via Chisapani Garhi, Kulikhana, and Chitlang.

During the next four months I was able to do some collecting. Early in April I had four days in the *terai* (Chitwan District), and at the end of April and beginning of May, spent ten days at Phulchowk and Godaveri. On May 11 I left Kathmandu for the United States.

Collecting Areas in Kathmandu Valley and Chitwan District

(January 22 to May 11, 1954)

I visited all of the ridges surrounding Kathmandu Valley except Mahadeo Pokri, during my first four months of residence at Patan, in the valley. The main road to the south led to Pharping, eight or nine miles from Kathmandu. The road paralleled the Bagmati River and ran a few hundred feet above the river bed, then climbed along a side of a hill to about 6,500 feet and passed by Pharping, out of the valley, southward. The population in this area was quite heavy. There were oaks and pines covering the ridges above Pharping; most of the hillsides were well cultivated, bordered here and there with clumps of bamboo.

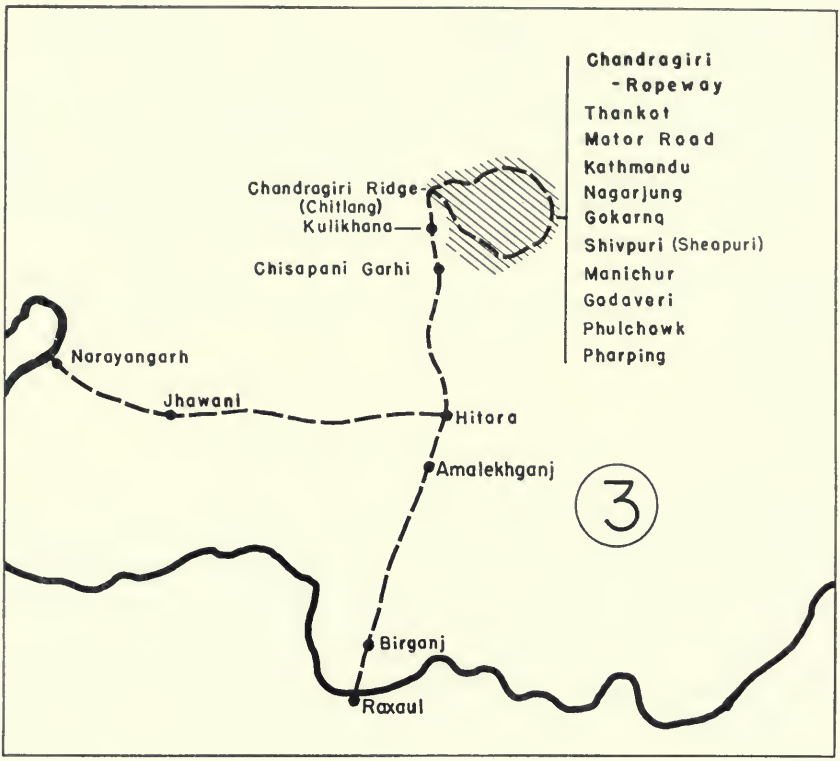

FIG. 6. Map of Kathmandu Valley and vicinity, showing areas visited from 1953 to 1954.

Chandragiri ridge and ropeway lay to the southwest of Kathmandu. We went by jeep to the beginning of the ropeway, near where the Indian military camp was located. Rice fields extended to the base of the hills at 5,000 feet. The scrub jungle immediately above the fields gradually gave way to a forest of large oaks at 7,000 and 8,000 feet. The road was fairly steep and after two or three miles we reached the crest of the ridge, beyond which the road descended to Chitlang, on the southern side of Chandragiri.

The new motor road ran west past Thankot to a low pass at 5,000 feet, then turned downward. Seventeen miles out we were among sugar cane fields at 3,500 feet. Open meadows, streams, sugar cane and cultivated fields were characteristic of this section. From here the road went up to a pass at 8,000 feet and on for 60 miles to a point just below Bhimpedi.

Nagarjung, to the northwest of Kathmandu, was a wooded ridge rising to 7,000 feet. At lower levels the southern slopes were covered with pine (*Pinus longifolia*) while higher up were oak-bamboo forests. A motor road ran some distance around the northern and western sides, through mixed forests. At places where the ground was damp the thicker vegetation provided shelter for sambhar, barking deer, and black bear. Nagarjung was a reserved forest, visited by special permission.

Gokarna reserved forest is north of the city in the valley rather than on the surrounding hills. This ridge rises only about 500 feet above the floor of the valley (4,500 feet). It is walled in on all sides and heavily wooded with tall trees, with grass and undergrowth in some more open spaces. The Bagmati River flows to the west while cultivated fields extend to the walls on the other sides of the reserve. Deer are kept here for shooting purposes.

A few miles north of Gokarna is Sheopuri (Shivpuri), a well-wooded range rising to 8,000 feet. We visited this section the year before. Beyond Sheopuri to the east is the Manichur forest, reached by a poor road from just south of Gokarna town to Sankhu, eight miles away. We drove to the foot of a steep hill and took a footpath up past three large temples. Above this we passed through scrub jungle and plowed fields up to the secondary forest growth of the higher ridge at 7,000 feet. About a mile from the top we came to a small crescent pond bordered by several temples. Lack of time prevented our going farther, although this area looked to be a good collecting ground.

We missed visiting Mahadeo Pokri, a prominent mountain northeast of Kathmandu (7,500 feet), but did get to the scrub jungle a mile or two beyond Bhadgaon. Fields lay at the base of this low ridge (5,500 feet), and several streams made suitable places for various kinds of birds such as woodpeckers, thrushes, and willow warblers.

Godaveri and Phulchowk, in the southeastern part of the valley, were very rich in bird life. Numbers of villages and private estates were located in the foothills up to 5,000 feet, but beyond them the ridges rise abruptly to almost 10,000 feet. About half of our time was spent in this area, especially among the heavily wooded valleys where leeches were already in evidence in May. A final two weeks' collecting on Phulchowk, from 8,200 to 9,800 feet, was done at the end of April and early in May, when the spring migration was still on and summer visitors had arrived for their nesting season. A long

ridge, extending for miles to the east of Phulchowk, remains to be explored.

Collecting in the Central Lowlands of Chitwan District
(April 10–18, 1954)

Mr. Paul Rose, the country director of the United States Operations Mission, invited me to join his party on a visit to the big game country of Chitwan. Because of heavy responsibilities connected with the United Medical Mission, it seemed impossible to get away but at the last minute I changed my mind and was able to visit one of the most unusual places in Nepal—the home of the Indian rhinoceros. We took a plane from Kathmandu to Simra and drove in jeeps 75 miles to the west via Hitora and Jhawani to our destination on the Narayani River at Narayangarh. We left the air field at 10 A.M. and reached our camp at midnight. It took us 14 hours to cover 75 miles of the world's worst road. The dust was a foot thick and after fifteen minutes in an open jeep we were unrecognizable.

The road north from the Simra air field paralleled the little railroad which ran from Birganjito Amalekhganj through the light forest of the *terai*. At Hitora we turned west, crossed the river several times, got stuck twice, lost our way, and finally reached Jhawani at dusk. We were warned not to venture off the road on foot toward the swamp south of town because rhinoceroses were said to be there. Darkness prevented our getting a view of them.

We hired a guide for the last 15 miles. One field looked much like another after dark and we were soon guiding the guide. We found another man who seemed to know the way a bit better. After retracing our steps several times, we finally came to the banks of the Narayani River. We threaded our way among fallen logs, along a village bamboo fence to our camp. We aroused a sleepy cook at midnight and an hour later sat down to a good meal, after a swim in the river. At 2 A.M. we went into our tent and I crawled into my sleeping bag under a mosquito net, only to hear a strange owl calling from a nearby tree. I was too tired to stir.

Three days on the Narayani River (1,000 feet) passed quickly. Mr. Rose arranged for elephants. He and Dr. Brooks went after big game while I combed the area for birds, one of the most common of which was a new flycatcher. There we got the Indian grackle, the green pigeon, the yellow-throated sparrow, and the white-browed

short-wing. One evening we hired a native boat and collected a pratincole and a nightjar along the banks of the river. At night we heard panthers calling a few hundred yards up the river and saw many tracks. No one, however, bagged any of the larger carnivores.

We stopped two or three times along the road on our return trip. While I was trying to get a yellow-breasted bunting in breeding plumage, a stray dust pellet struck the thigh of a farmer who was clad only in a loin-cloth. Had he been more fully clothed he would never have known that he had been "collected." Mr Rose called out and when I went to examine the victim I found no mark, much to my relief. The grain patch was so thick I could see no one in the direction I was shooting. The buntings perched near the top of the plants, so in order to bag one I had to shoot on the level rather than downward—a dangerous procedure in a populated area.

We stayed over night in a village a few miles north of Birganj and were able to pick up a few birds of the plains (lark, thick-billed flowerpecker, koel). Next morning we drove in a truck to the air field at Simra and saw golden orioles, which I had not yet collected in Nepal. The flight from Simra to Kathmandu was only twenty minutes. It takes two days to cover the same distance to Kathmandu over the trail.

Systematic List of Species Collected

Family **PODICIPIDIDAE**

Podiceps caspicus caspicus (Hab.). Black-necked Grebe.

Pokhara, 3,000 feet: 1 ♀; December.

Wing: 125 mm.

This bird is in winter plumage and shows no moult. It was the only one seen on the lake at Pokhara.

Podiceps cristatus cristatus (Linnaeus). Great Crested Grebe.

Pokhara, 3,000 feet: 2 ♂, 1 ♀; December, February.

Wing: ♂ 197, 205; ♀ 196 mm.

All three birds are in winter plumage, and none shows wing moult.

There are few lakes in Nepal, so there is little habitat suitable for these birds. On the lake at Pokhara—the only place where we saw this species—there were perhaps a half dozen birds. There is little marsh here, so the birds may not breed.

Family **ANHINGIDAE**

Anhinga melanogaster Pennant. Indian Darter.

Dhangarhi, Kailali District, 900 feet: 1 ♀; November.

Wing: 346 mm.

This specimen was one of several birds on a marshy lake.

Family **ARDEIDAE**

Ardea cinerea cinerea Linnaeus. Common Gray Heron.

Barmdeo Mandi, 1,000 feet: 1 ♂ ad.; January.

Raghunathpur, 900 feet: 1 ♀ imm.; January.

Wing: ♂ ad. 485 mm.

Large herons, of which two species have been recorded for Nepal, the gray and the purple heron, were seen on but few occasions and

the above were the only individuals collected. They were in the lowlands and one was at the lake at Pokhara, 3,000 feet. The great white-bellied heron (*Ardea imperialis*), known from the *terai* of Sikkim, should be looked for.

Butorides striatus javanicus (Horsfield). Indian Little Green Heron.

Pokhara, 3,000 feet: 3 ♂, 1 ♀; December, January.

Dhangarhi, 900 feet: 1 ♂; January.

Wing: ♂ 177–180; ♀ 180 mm.

This species was not common. It was solitary, inhabiting well-wooded streams and edges of lakes, from the lowlands up to 3,000 feet.

Ardeola grayii (Sykes). Indian Pond Heron.

Bichchua Kanchanpur, 900 feet: 1 ♂; December.

Tansing, 4,500 feet: 1 ♀; January.

Pokhara, 3,000 feet: 1 ♂; December.

Wing: ♂ 215, 231; ♀ 198 mm.

All three specimens are in winter plumage.

This was one of the most common herons on ponds and marshlands of the *terai*, up to 1,000 feet, but it was scarce in higher altitudes.

Bubulcus ibis coromandus (Boddaert). Cattle Egret.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: 253 mm.

The cattle egret was fairly common and was found in fields with herds of cattle, sometimes in flocks of 20 to 30 birds.

Egretta alba modesta (Gray). Eastern Large Egret.

Bilauri, 900 feet: 1 ♂; January.

Wing: 378 mm.

This species was occasionally seen standing in shallow ponds in the lowlands.

Egretta garzetta garzetta (Linnaeus). Little Egret.

Bilauri, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♀; January.

Wing: ♂ 275, 283; ♀ 276 mm.

Seen singly or in twos over shallow water at the edge of cultivations. The Pokhara bird has a few ornamental breast plumes and a few short dorsal plumes but shows no moult.

Family CICONIIDAE

Dissoura episcopus episcopus (Boddaert). White-necked Stork.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 500 mm.

This species was the most common stork from the plains up to 2,000 feet. It was usually found along river banks alone or in twos or threes, and sometimes in fields in flocks of 10 to 20 birds.

Ciconia nigra (Linnaeus). Black Stork.

Chisapani, 1,000 feet: 1 ♀; December.

Wing: 532 mm.

The above specimen was one of a group of about a dozen birds, standing along the side of a river. This species was occasionally met with from the lowlands up to 3,000 feet. The open-bill (*Anastomus oscitans*) and the black-necked stork (*Xenorhynchus asiaticus*) are also reported from the lowlands of Nepal.

Leptoptilos javanicus (Horsfield). Smaller Adjutant.

Raghunathpur, 900 feet: 1 ♂, 1 ♀; November, January.

Wing: ♂ 675; ♀ 620 mm.

The above species occurred in the lowlands of eastern Nepal. These two were in a party of five on a reedy lake. There was no evidence of breeding.

The larger adjutant stork, *Leptoptilos dubius*, is fairly common in the open country of United Provinces, India, and the bird seen near a lake at Dhangarhi may have been *L. dubius*.

Family THRESKIORNITHIDAE

Threskiornis melanocephala (Latham). White Ibis.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: 338 mm.

The white ibis was occasionally seen in the lowlands of eastern Nepal. One flock of about thirty birds fed in a shallow, reedy lake and perched on treetops at Raghunathpur.

Pseudibis papillosa (Temminck). Indian Black Ibis.

Bichchua, 900 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 396; ♀ 390 mm.

The black ibis was fairly common in open fields of the *terai*. A flock of 15 or 20 called loudly at dusk from the top of a tall tree.

Family ANATIDAE

Dendrocygna javanica (Horsfield). Lesser Whistling Teal.

Raghunathpur, 900 feet: 2 ♂; December.

Wing: 192, 196 mm.

This teal was on a small lake with several other species. It did not appear to be common.

Casarca ferruginea (Pallas). Ruddy Sheldrake.

Tari, 1,100 feet: 1 ♀; December.

Wing: 353 mm.

This species was very common on the larger rivers of the lowlands. The above was one of a flock of 75 or 80 birds.

Anas platyrhynchos platyrhynchos Linnaeus. Mallard.

Tukche, 9,000 feet: 1 ♀; November.

Wing: 267 mm.

Four ducks were together on the Kali Gandak River, and the above was one of the group. No others were seen.

Anas querquedula Linnaeus. Blue-winged Teal.

Raghunathpur, 900 feet: 1 ♂; November.

Wing: 195 mm.

This species was not very common. It was found on a reedy lake with other teal.

Anas crecca crecca Linnaeus. Common Teal.

Dhangarhi, 900 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 187, 194; ♀ 179 mm.

This species was probably the most numerous of the teals. It was found in ponds, lakes, and the larger rivers.

Cheniscus coromandelianus coromandelianus (Gmelin). Cotton Teal.

Raghunathpur, 900 feet: 1 ♀; November.

Dhangarhi, 900 feet: 1 imm. ♂; November.

Wing: ♀ ad. 162 mm.

The cotton teal is fairly common on lakes and ponds of the *terai*, where it is found near other teal.

Aythya fuligula (Linnaeus). Tufted Pochard.

Raghunathpur, 900 feet: 1 ♀; November.

Wing: 200 mm.

The tufted pochard was fairly common in the lowlands. This specimen was feeding in a shallow, reedy lake.

Family ACCIPITRIDAE

Elanus caeruleus vociferus (Latham). Black-winged Kite.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 2 ♂; December.

Raghunathpur, 900 feet: 1 ♂; December.

Wing: ♂ 263–270; ♀ 271 mm.

This was a common kite in the lowlands and seemed to be present in larger numbers in western than in eastern Nepal.

Milvus migrans govinda Sykes. Pariah Kite.

Ainthpur, 900 feet: 1 ♀; January.

Wing: 465 mm.

The pariah kite is common in the lowlands near towns and villages.

Milvus lineatus lineatus (J. E. Gray). Large Indian Kite.

Raghunathpur, 900 feet: 1 ♂, 1 sex?; January.

Wing: 503, 508 mm.

The kite was common from the *terai* up to 7,000 feet in the winter. Presumably the birds at the higher altitudes were *lineatus*, while both *lineatus* and *govinda* were collected in the *terai*.

Haliastur indus indus (Boddaert). Brahminy Kite.

Dhangarhi, 900 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♀; November.

Wing: ♂ 396; ♀ 394 mm.

This was a common kite of the lowlands and was usually found near water alone or in pairs.

Accipiter badius dussumieri (Temminck). Shikra.

Bilauri, 900 feet: 1 ♀ imm.; January.

Dhangarhi, 900 feet: 1 ♂ imm.; January.

Raghunathpur, 1,000 feet: 1 ♀, 1 ♂ juv.; January.

Wing: ♀ ad. 204; ♂ imm. 177, 178; ♀ imm. 204 mm.

This species is a common hawk throughout the *terai*.

Accipiter trivirgatus indicus (Hodgson). Northern Crested Goshawk.

Brichtanta, 4,500 feet: 1 ♀; December.

Wing: 222 mm.

The northern crested goshawk was an uncommon species. This bird flew suddenly into the midst of a party of mixed species which were flitting among trees in a heavy forest.

Accipiter nisus nisosimilis (Tickell). Asiatic Sparrow Hawk.

Tansing, 4,500 feet: 1 ♀; December.

Belawa, 3,000 feet: 1 ♀ (?); November.

Pokhara, 3,000 feet: 1 ♀; December.

This migrant sparrow hawk was occasionally seen over rice fields at 3,000 feet. One was pursuing a green heron at the edge of the lake at Pokhara.

Two of the specimens are pale, typical *nisosimilis;* the third is darker, approaching the resident subspecies, *A. n. melaschistos.* Ripley (1950a, p. 365) recorded only the resident race in Nepal.

Accipiter virgatus affinis Hodgson. Northern Besra Sparrow Hawk.

Kaski, 6,000 feet: 1 ♂; December.

Wing: 169 mm.

This bird was flying over fields and appeared to be uncommon.

Buteo buteo? subsp.

Emelie, 900 feet: 1 ♀; January.

Ghasa, 8,000 feet: 1 ♀; December.

Wing: 402, 415 mm.

These two birds are tentatively assigned here.

Butastur teesa (Franklin). White-eyed Buzzard.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: 282 mm.

This buzzard was found in the lowlands. It was occasionally seen in eastern Nepal but seldom met with in western Nepal.

Spizaetus nipalensis nipalensis (Hodgson). Hodgson's Hawk-Eagle.

Raghunathur, 900 feet: 1 ♀; January.

Wing: 440 mm.

This bird was occasionally seen in the foothills of Nepal. See Amadon (1953, p. 495) for taxonomic discussion, in which he shows that *fokiensis* is not a valid race.

Aquila clanga (Pallas). Greater Spotted Eagle.

Dhangarhi, 900 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♂(?); January.

Wing: ♂(?) 503; ♀ 516 mm.

This migrant eagle was seen several times in the lowlands, where it sat in tall trees over pools in cultivated areas.

Haliaeetus leucoryphus (Pallas). Pallas's Fishing Eagle.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: 612 mm.

Pallas's fishing eagle was occasionally seen along the larger rivers of the lowlands as well as in wooded areas near small lakes. At Bilauri this bird would scream before dawn from high mango trees: "*cuck kyuk kyuk ca-w-w-w-w-w cre-e-e-e-e-e.*" One was seen eating a snake.

Sarcogyps calvus (Scopoli). Black Vulture.

Raghunathpur, 900 feet: 1 ♀; November.

Wing: 590 mm.

Though usually solitary, this species was fairly common in the lowlands as well as the foothills.

Aegypius monachus (Linnaeus). Cinerous Vulture.

Raghunathpur, 900 feet: 1 sex?; January.

Wing: 768 mm.

The above specimen was one of several species gathered around the carcass of a dead animal. It was not as common as other species.

Gyps himalayensis Hume. Himalayan Griffon.

Raghunathpur, 900 feet: 1 sex?; January.

Wing: 800 mm.

This vulture did not seem to be as common in Nepal as it is farther west in the Himalayas, where it ranges from the base of the hills to above 8,000 feet.

Gyps indicus nudiceps Stuart Baker. Northern Long-billed Vulture.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 598 mm.

This species was one of the more common vultures around villages and open fields of the *terai*, where it perched in the tall trees. This male was in breeding condition.

Pseudogyps bengalensis (Gmelin). Indian White-backed Vulture.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: 556 mm.

The white-backed vulture was the common vulture of the lowlands.

Neophron percnopterus ginginianus (Latham). Neophron.

Dhangarhi, 900 feet: 1 imm. (sex?); November.

Wing: 456 mm.

This species was frequently seen at Dhangarhi around the village. It was fairly common in the *terai* but seldom ascended higher than 3,000 feet in western Nepal.

Circus pygargus (Linnaeus). Montagu's Harrier.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: 372 mm.

This species did not appear to be common. This specimen was flying over dry rice fields.

Circus melanoleucos (Pennant). Pied Harrier.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: 361 mm.

This bird was seen only in eastern Nepal and there it was not common. It kept to the open fields of the *terai*.

Circus aeruginosus aeruginosus (Linnaeus). Marsh Harrier.

Raghunathpur, 900 feet: 1 ♂ juv.; January.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Wing: ♂ ad. 405; ♀ 377 mm.

This bird was the most common harrier and was often seen in the lowlands skimming over rice fields and patches of grass.

Spilornis cheela cheela (Latham). Indian Crested Serpent-Eagle.

Dhangarhi, 900 feet: 1 ♂?, 1 ♀; November, December.

Butwal, 900 feet: 2 ♂; January.

Pokhara, 3,000 feet: 1 ♂; January.

Wing: ♂ 456–472; ♀ 461 mm.

This species frequented the open fields near cultivation from the lowlands up to 5,000 feet and was fairly common. It constantly occurs in Mussoorie, United Provinces, India, at 7,000 feet. The measurement of these males was not as large as that given by Ripley (1950a, p. 366), which was 495 mm.

Family **PANDIONIDAE**

Pandion haliaetus haliaetus (Linnaeus). Osprey.

Chisapani, 1,000 feet: 1 ♀; December.

Wing: 496 mm.

The osprey was occasionally seen fishing on the larger rivers in eastern and western Nepal in the lowlands.

Family **FALCONIDAE**

Microhierax caerulescens caerulescens (Linnaeus). Himalayan Red-legged Falcon.

Butwal, 1,500 feet: 1 ♀; February.

Wing: 99 mm.

This appeared to be an uncommon species in Nepal. It compares well with two Sikkim birds (wing: ♂ 101, 104 mm.).

Falco jugger J. E. Gray. Lagger Falcon.

Raghunathpur, 950 feet: 1 ♂, 1 ♀; January.

Wing: ♂ 326; ♀ 347 mm.

The above pair of lagger falcons were the only ones seen. They were a few miles from the Himalayan foothills in eastern Nepal.

Falco severus Horsfield. Hobby.

Bilauri, 900 feet: 1 ♂; January.

Wing: 220 mm.

The hobby was seen several times in the lowlands near villages. It was hunting small chickens.

Falco chicquera chicquera Daudin. Red-headed Merlin.

Raghunathpur, 900 feet: 1 ♂; November.

Wing: 198 mm.

This bird was in a large tree above a rice field. It did not appear to be common.

Falco tinnunculus tinnunculus Linnaeus. European Kestrel.

Pokhara, 3,000 feet: 2 ♂; January.

Manebhanjan, 6,000 feet: 1 ♂; December.

Chisapani, 1,000 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♂, 1 ♀; January.

Okhaldhunga, 7,500 feet: 1 ♀; December.

Wing: ♂ 240–251; ♀ 248–258 mm.

This was the common species found more often in the hills of eastern Nepal. In wing measurements and in color these birds agree with a series of *F. t. tinnunculus* from Europe.

Falco tinnunculus interstinctus Horsfield. Himalayan Kestrel.

Tansen, 4,500 feet: 1 ♀; December.

Baglung, 3,000 feet: 2 ♂; November.

Beni, 3,000 feet: 1 ♀; November.

Dana, 5,000 feet: 1 ♀; December.

Tukche, 9,000 feet: 1 ♂, 1 ♀; December.

Manebhanjan, 6,000 feet: 1 ♂; December.

This species was the commonest falcon in the hills and frequented overhanging cliffs. The amount of black markings above and below averages considerably greater than in most of our European *F. t. tinnunculus* but is only a little heavier than in most heavily marked European examples. In ground color, especially below, all these birds are very much darker, richer-colored, than any of our series of 27 European birds.

Presumably these are *F. t. interstinctus*, of which Whistler and Kinnear (1932–37, **38**: 422) consider *saturatus* and *japonicus* synonyms.

Family **PHASIANIDAE**

Lerwa lerwa (Hodgson). Snow Partridge.

Tukche, 15,000–16,000 feet: 2 ♂, 3 ♀; December.

Wing: ♂ 190, 192; ♀ 185, 186, 186 mm.

These mid-winter-taken snow partridges are in bright, fresh plumage. Though Stuart Baker (1922–30, **5**: 433) says there seems to be no sexual difference in size, a slight difference is indicated in this material. Stegmann (1938, p. 43) writes that the females are much darker than the males, especially on the upper parts. This is not apparent in the present series.

Compared with a male and female from Sikkim taken in June and very worn (wing: ♂ 199 +, ♀ 173 +), and a worn Szechwan bird (sex?; wing 190), these fresh specimens show a tremendous difference in color. The worn birds are very much blacker above, with less of the brownish and buffy tinge and with narrower, white bars. The old back feathers may be worn so that the tips with the three pale terminal bars and part of the fourth may be gone, leaving only the shaft. The basal bars of feathers tend to be narrower, and when wear exposes the basal bars the result is to give a more finely white-barred pattern. The difference in appearance of the dorsal surface is as great as that Stegmann (1938) illustrates as between *L. l. lerwa* and *L. l. callipygia*.

Tetraogallus tibetanus aquilonifer R. and A. Meinertzhagen. Tibetan Snow Cock.

Tukche, 16,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 268; ♀ 255 mm.

The male has a few dark gray feathers at the base of the throat—a tendency toward the condition in which the white throat is completely enclosed with gray. The female has the chin white and the rest of the throat and upper breast heavily patterned with brownish, blackish, and buffy mottling. The gray breast band is distinct in both.

For comparison of *aquilonifer* we have two males and a female from Sikkim. In both males the gray of the sides of the neck meets on the lower throat in a distinct band; in the female the throat, below the white chin and the upper breast are heavily mottled. On the upper parts these three Sikkim birds compare well with the Nepal birds.

Three males of *tibetanus* from Kashmir show great variability in the amount of gray in the lower throat. In one bird there is none; in another there are a few dark gray feathers as in the Nepal male; in the third the gray of the sides of the neck meet across the lower throat in a complete band almost as wide as in the Sikkim birds. Two birds have the gray breast band distinct; one has it broken and indistinct. These Kashmir birds are all considerably paler than the Nepal birds on the crown and back and on the gray breast band.

Tetraogallus himalayensis himalayensis Gray. Himalayan Snow Cock.

Tukche, 16,000 feet: 1 ♀; December.

Wing: 275 mm.

The eastern edge of the range in India is usually given as Garhwal.

For comparison we have three birds from northern Punjab and one from Kashmir. There is considerable variation in this series, and the Nepal bird falls within this variation except for having the center of the back much darker gray.

In addition to the specimen collected, the members of the expedition saw from 70 to 80 of these birds between 16,000 and 17,000 feet.

Alectoris graeca chukar (Gray). Chukar Partridge.

Tukche, 9,000 feet: 1 ♀; December.

Jomosom, 9,500 feet: 1 ♀; December.

Thinigaon, 9,100 feet: 1 ♀; December.

Jumla: 1 ♀; January (a cage bird purchased at Butwal).

Wing: 161, 163, 163, 164 mm.

At Pokhara a hundred or more chukars were seen in cages, being carried by coolies to Kathmandu.

Francolinus francolinus asiae Bonaparte. Black Partridge.

Butwal, 900 feet: 1 ♂; January.

Wing: 159 mm.

This specimen of black partridge falls within the range of variation of five males from the United Provinces.

Francolinus pondicerianus interpositus Hartert. Northern Gray Partridge.

Butwal, 900 feet: 1 ♀; February.

Wing: 141 mm.

Francolinus gularis (Temminck). Swamp Partridge.

Seti Bazaar, Kailali, 900 feet: 1 ♂; January.

Wing: 171 mm.

The swamp partridge is new to the Museum's collections. It inhabits the tall grass of the *terai* and the above bird was with others under *kutta* trees near a stream. Its call is a loud *"kaw-care."* There were at least two places in far western Nepal where coveys of this bird were found.

Perdix hodgsoniae hodgsoniae (Hodgson). Tibetan Partridge.

Jomosom: 2 ♀; December.

Wing: 157, 164 mm.

These Tibetan partridges were taken at 13,000 and 14,500 feet, in dwarf juniper. The local name for it is "rare-wah." When flushed it glides down hill like the chukar partridge, and gives a shrill call, *"chee, chee, chee, chee, chee."*

Coturnix coturnix coturnix (Linnaeus). Common Quail.

Dhangarhi, 900 feet: 2 ♂; November.

Barmdeo Mandi (Banbassa), 900 feet: 1 ♂, 2 ♀; January.

Wing: ♂ 111; ♀ 85, 86 mm.

Wing moult was present in three of the birds. These specimens were netted by local hunters.

Arborophila torqueola torqueola (Valenc.). Common Hill Partridge.

Dana, 7,000 feet: 1 ♂; December.

Jumla, 6,000 feet: 1 ♂; September.

Phulchowk, 8,000 feet: 1 ♀; April.

Wing: ♂ 155, 161 mm.

For comparison we have seven males of *A. t. torqueola* (Sikkim 5; Darjeeling, 1; Maikola Valley, east Nepal, 1) and four males of *millardi* (from Mussoorie). The four *millardi* are fairly uniform, with a pale olive-tinged gray breast and a rather dark chestnut crown, as described for this race. The abdomen is not suffused with rufous, as is said to be nearly always the case with *millardi*. The seven specimens of *torqueola* are more variable; all have the breast clearer gray and it averages darker; the crown is considerably paler and brighter rufous (except for the Darjeeling bird), and the sides of the breast and the flanks average more rufous.

The two west Nepal birds are not clearly referable to either series, standing somewhat between them.

Arborophila rufogularis rufogularis (Blyth). Rufous-throated Hill Partridge.

Belbahadi-Doti, 3,500 feet: 1 ♂, 1 ♀; December.

Marek, 3,000 feet: 1 ♂; February.

Ulleri, 6,000 feet: 1 ♂; December.

Godaveri, 5,000 feet: 1 ♀; January; 6,000 feet: 1 chick; May.

Wing: ♂ 130–137; ♀ 125, 132 mm.

These five specimens agree well with a series from Darjeeling and Sikkim, except for being slightly paler gray on the chest and having the upper parts slightly paler and less brownish olive.

The common hill partridge in the lower parts of Kathmandu Valley was this species. We seldom came across it in western Nepal.

Tragopan satyra (Linnaeus). Common Horned Pheasant.

Jumla, 7,000 feet: 2 ♂; March, April.

Wing: 260, 240 mm.

These were caged birds brought to Nepalganj "from Jumla." Their wing-tips were worn. This species was also found in the bamboo forests above Dana, west Nepal, at 9,000 feet.

Lophophorus impejanus (Latham). Impeyan Pheasant.

Ulleri, 8,500 feet: 1 ♂; December.

Wing: 296 mm.

We have also an immature male from Jumla, secured by Dr. Fleming on October 5, 1939. It is in a mixed brown and iridescent plumage.

Lophura leucomelana leucomelana (Latham). Nepal Kalij Pheasant.

Dana, 6,000 feet: 1 ♂, 2 ♀; November, December.

Baglung, 3,000 feet: 1 ♂, 1 ♀; November.

Butwal, 1,500 feet: 1 ♂, 1 ♀; February.

Tansing, 4,500 feet: 1 ♀; November.

Godaveri, 5,000 feet: 1 ♀; January.

Patale, 10,000 feet: 1 ♂; December.

Wing: ♂ 216, 222, 230; ♀ 204, 204, 206, 210, 211 mm.

This subspecies is new to our collections. We have Darjeeling and Sikkim *melanota* and Mussoorie *hamiltonii* for comparison. The all black crests of Nepal males vary from 70 to 75 mm. long. The white barring on the lower back of the three west Nepal males was about 5 mm. in width, the race thus approaching *hamiltonii* in this characteristic. The male from east Nepal (Patale) has bars of about 3 mm., agreeing with the conditions described for this race by Delacour (1951b, p. 129). The mantle of the west Nepal birds is glossier than that of *hamiltonii* and less brown, but the feathers are tipped with gray. The mantle of the east Nepal male is still more glossy, with feathers of the upper back edged with white and those of the scapulars edged with whitish vermiculations. The lanceolate breast feathers of all Nepal birds are gray like those of *hamiltonii*, but shorter.

The females have darker backs with grayer edges to the feathers than *hamiltonii*, more closely resembling *melanota*. Breast feathers are intermediate between the pale brown of *hamiltonii* and the chocolate brown of *melanota*.

Apparently there is a transition in the males, at least in Nepal, from west to east, in the decrease in the white barring on the rump, and an increase in the gloss of the mantle. Apparently the name *fockelmanni* Ghigi, 1913, was applied to the west Nepal type, and *leucomelana* could be restricted to that of eastern Nepal, but such a subdivision of this population seems unnecessary.

Lophura leucomelana hamiltonii (J. E. Gray). White-crest Kalij Pheasant.

No specimens. A flock of half a dozen birds, including males with white crests, was seen at about 3,000 feet in far western Nepal at Belawa, Doti, farther west than any of the places where we secured *L. l. leucomelana.*

Gallus gallus murghi Robinson and Kloss. Red Jungle Fowl.

Belbahadi, 3,500 feet: 1 ♂ juv.; December.

Butwal, 900 feet: 3 ♂ ad., 1 ♂ imm., 1 ♀; January, February.

Raghunathpur, 1,000 feet: 1 ♂; January.

Wing: ♂ 223, 228, 234; ♀ 183.

These were compared with three males and three females from the United Provinces.

Pucrasia macrolopha nipalensis Gould. Nepal Koklas Pheasant.

Dana, 8,000 feet: 2 ♂; December.

Tukche, 9,000 feet: 1 ♂; December.

Wing: 216, 226, 232 mm.

In addition we have two west Nepal male specimens said to come from Jumla that were purchased as cage birds in 1939, in Nepalganj, Nepal.

Catreus wallichii (Hardwicke). Cheer Pheasant.

Dana, 7,000 feet: 1 ♂; December.

Wing: 240 mm.

We have another male from Nepal, from Jumla, secured by Dr. Fleming in 1939. Wing: 250 mm.

Pavo cristatus Linnaeus. Common Peafowl.

Bilauri, 900 feet: 1 ♂; January.

Wing: 391 mm.

The peafowl was found in flocks of 7 to 20 birds from the lowlands up to 1,000 feet in the foothills.

Family **TURNICIDAE**

Turnix suscitator plumbipes (Hodgson). Himalayan Bustard Quail.

Belbahadi, 3,500 feet: 1 ♀; December.

Tansen (2 miles south), 3,000 feet: 1 ♀ ; January.

Wing: 93, 96 mm.

These birds appear to be adult. They are labeled females, and have appropriate wing measurements, but they lack the black throat, as did the single female Ripley reported on from Nepal (1950a, p. 368).

Family **GRUIDAE**

Grus antigone antigone (Linnaeus). Indian Sarus Crane.

Dhangarhi, 900 feet: 1 ♀ ; December.

Wing: 617 mm.

The sarus crane occurred in pairs and was occasionally seen in western Nepal in the vicinity of lakes.

A flock of cranes seen along a river may have been *Grus grus* or *Anthropoides virgo*, both of which have been recorded from Nepal.

Family **RALLIDAE**

Amaurornis akool akool (Sykes). Brown Crake.

Jhawani, 2,500 feet: 1 ♂; April.

Wing: 127 mm.

The brown crake was occasionally seen in the dunes and lowlands.

Amaurornis phoenicurus chinensis (Boddaert). Chinese White-breasted Water Hen.

Pokhara, 3,000 feet: 4 ♂, 1 ♀ ; December, January.

Wing: ♂ 162–174; ♀ 156 mm.

Gallinula chloropus indica Blyth. Indian Moorhen.

Bilauri, 900 feet: 1 ♀ ; January.

Dhangarhi, 900 feet: 1 ♂; December,

Butwal, 900 feet: 1 ♂, 1 ♀ ; January.

Bhorli, 1,500 feet: 1 ♂; December.

Wing: ♂ 166–172; ♀ 164, 166 mm.

The Indian moorhen was common in the swamps of the lowlands.

Fulica atra atra Linnaeus. Coot.

Baglung, 3,000 feet: 1 ♂; November.

Tukche, 9,000 feet: 1 ♂; November.

Wing: 213, 222 mm.

Both these coots were brought in alive, in cages.

Family JACANIDAE

Metopidius indicus (Latham). Bronze-winged Jacana.

Emelie, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 juv.; November.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: ♂ 148; ♀ 170 mm.

On ponds and reedy lakes this species was common throughout the *terai*.

Family CHARADRIIDAE

Chettusia leucura (Lichtenstein). White-tailed Lapwing.

Bilauri, 900 feet: 2 ♀; December, January.

Wing: 167, 176 mm.

Only in two places in the lowlands of far western Nepal was this species seen. It was solitary or with two or three others on reedy lakes or small streams. Its call was much more mellow than that of *Lobivanellus indicus indicus*.

Lobivanellus indicus indicus (Boddaert). Red-wattled Lapwing.

Pokhara, 3,000 feet: 2 ♂, 1 ♀; January.

Butwal (near), 1,500 feet: 2 ♂; January, February.

Dhangarhi, 900 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: ♂ 232, 233, 235, 238; ♀ 220, 221, 227 mm.

This bird was common along streams and ponds up to 3,500 feet.

Hoplopterus duvaucelii (Lesson). Spur-winged Plover.

Pokhara, 3,000 feet: 2 ♀; January.

Butwal, 900 feet: 1 ♂; January.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Wing: ♂ 195, 198; ♀ 194, 202 mm.

The spur-winged plover was common from the *terai* to 3,000 feet, where it frequented sand bars and rocky river beds. It bobs

its head up and down and raises its crest slightly. When a lapwing came up to one bird it thrust its wings forward in an aggressive attitude.

Charadrius dubius jerdoni (Legge). Jerdon's Little Ringed Plover.

Dhangarhi, 900 feet: 1 ♀; December.

Gokarna, 4,400 feet: 1 ♂; April.

Narayangarh, 2,500 feet: 1 ♀; April.

Wing: ♂ 105; ♀ 108, 113 mm.

This was a common species in the lowlands along the larger rivers and in the central valley in the spring. It ducked its head down like the spur-winged plover and called *"click, click;"* when it flew it gave a repeated *"teet."*

Charadrius alexandrinus alexandrinus Linnaeus. Kentish Plover.

Raghunathpur, 900 feet: 1 ♂; December.

Chisapani, 950 feet: 1 ♀; December.

Wing: ♂ 108; ♀ 111 mm.

The Kentish plover was present in small numbers in the *terai* of eastern Nepal along sandy and rocky stream banks.

Family SCOLOPACIDAE

Tringa totanus eurhinus (Oberholser). Redshank.

Pokhara, 3,000 feet: 1 ♀; December.

Wing: 158. Exposed culmen: 47.5 mm.

This is a pale gray bird in winter plumage, with a very large bill.

Tringa nebularia (Gunnerus). Greenshank.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Emelie, 900 feet: 1 ♀; January.

Pokhara, 3,000 feet: 3 ♀; December.

Chisapani, 950 feet: 1 ♀; January.

Wing: 187–196 mm.

The greenshank was found singly or in flocks along the larger rivers or lakes of the lowlands.

Tringa ochropus Linnaeus. Green Sandpiper.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♂; November.

Malakheti, 1,000 feet: 1 ♂; December.

Pokhara, 3,000 feet: 2 ♂, 2 ♀; December, January.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: 5 ♂ 141–142; 4 ♀ 136–144 mm.

The green sandpiper was often solitary. It preferred small streams in wooded areas of the lowlands.

Tringa glareola Linnaeus. Wood Sandpiper.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♀; December.

Wing: 123, 124, 128 mm.

The wood sandpiper was occasionally seen alone or in pairs at the edge of ponds in open country.

Actitis hypoleucos (Linnaeus). Common Sandpiper.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; January.

Gokarna, 4,400 feet: 1 ♀; April.

Bhorli, 1,500 feet: 1 ♀; December.

Wing: ♂ 111, 115; ♀ 104, 109, 111 mm.

This species was one of the commonest shore birds in Nepal.

Scolopax rusticola rusticola Linnaeus. Woodcock.

Godaveri, 5,000 feet: 1 ♂; January.

Patale, 9,500 feet: 1 sex?; December.

Woodcock were seen in several places in the Kathmandu Valley in wooded ravines along running streams. The specimen from Patale, taken in a deep, narrow valley, was the only one seen there.

Koelz (1954, p. 32) has resurrected the name *S. r. indicus* Hodgson for Nepal birds.

Erolia temminckii (Leisler). Temminck's Stint.

Dhangarhi, 900 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: 95, 99 mm.

This species was seen on the banks of the larger rivers of the lowlands.

Family RECURVIROSTRIDAE

Ibidorhyncha struthersii Vigors. Ibis-bill.

Twenty-five miles northeast of Tansen, 2,500 feet: 2 ♀; February.

Wing: 242, 247 mm.

Only one group, of three birds, was seen. It was along the Andhi Khola River, Nuakot 4 District. The birds had a loud, piercing cry and hid behind a sand ledge at the edge of the stream.

Family BURHINIDAE

Burhinus oedicnemus indicus (Salvadori). Indian Stone Plover.

Nautanwa, Gorakhpur District: 1 ♂; October.

Wing: 219 mm.

This was an uncommon species in the Nepal lowlands. Besides the birds collected, one pair was seen along the Narayani River, Chitwan District, in April.

Family GLAREOLIDAE

Cursorius coromandelicus (Gmelin). Indian Courser.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 147 mm.

Only seen once—a group of four on open ground in the *terai* of eastern Nepal.

Glareola lactea Temminck. Small Indian Pratincole.

Narayangarh, 2,500 feet: 3 ♂; April.

Wing: 153, 155, 155 mm.

A flock of 12 or 15 of these birds was on the stony banks of the Narayani River. This was the only time we saw them.

Family LARIDAE

Larus ichthyaetus Pallas. Great Black-headed Gull.

Chisapani, 950 feet: 1 ♀; December.

Wing: 448 mm.

This species, new to our collections, was occasionally seen along the larger rivers in the *terai*. The above bird was one of a pair.

Larus ridibundus Linnaeus. Black-headed Gull.

Chisapani, 950 feet: 1 ♂; December.

Wing: 308 mm.

The black-headed gull was occasionally seen on the rivers of the lowlands. This bird was killed by a hawk over a river. It was in juvenile plumage with a good deal of black in the primaries.

Sterna aurantia J. E. Gray. Indian River Tern.

Bilauri, 900 feet: 2 ♀; January.

Malakheti, 950 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: 272, 273, 277 mm.

The Indian river tern was a common bird in the lowlands over ponds, streams, and rivers. Three birds had the black head while one with a gray head showed wing moult.

Sterna melanogaster (Temminck). Black-bellied Tern.

Bilauri, 900 feet: 3 ♂, 1 ♀; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: 4 ♂ 223–234; ♀ 238 mm.

The black-bellied tern, new to our collections, was fairly common on ponds and rivers of the *terai*.

Family COLUMBIDAE

Sphenurus sphenurus sphenurus (Vigors). Wedge-tailed Green Pigeon.

Kathmandu Valley, 5,500 feet: 1 ♂; January.

Wing: 173 mm.

The wedge-tailed green pigeon was fairly common in the wooded Godaveri hills of Kathmandu Valley, but appeared to be absent in the hills of eastern and western Nepal in winter.

Treron curvirostra nipalensis (Hodgson). Thick-billed Green Pigeon.

Narayangarh, 2,500 feet: 1 ♂; April.

Wing: 142 mm.

Small flocks of this species were seen in fig trees in the lowlands of central Nepal. It did not appear to be common.

Treron pompadora conoveri Rand and Fleming. Conover's Green Pigeon.

Butwal, 900 feet: 2 ♂, 4 ♀; January.

Wing: ♂ 156, 157; ♀ 153, 156, 156, 164 mm.

The type locality is Butwal (original description: Fieldiana, Zool., **34**, no. 19, 1953, p. 201). Compared with *T. p. phayrei* it is a brighter form, with the yellow of the throat and the orange of the breast more intense, and the green of breast and abdomen and hind neck duller and less grayish.

These birds were seen in flocks of 4 to 15. They sat in tall trees above a stream running through a heavy forest.

Treron bicincta bicincta (Jerdon). Indian Orange-breasted Green Pigeon.

Butwal, 900 feet: 1 ♂; January.

Wing: 162 mm.

This specimen compares well with three Assam males except for being slightly darker and more vivid generally. Compared with a Ceylon bird (wing 146 mm.; *T. b. leggei*), it is very similar in color but larger.

This species was occasionally seen in the lowlands of western Nepal.

Treron phoenicoptera phoenicoptera (Latham). Bengal Green Pigeon.

Naipalganj Road, 900 feet: 1 ♂; February.

Butwal, 900 feet: 3 ♂, 2 ♀; January, February.

Wing: ♂ 189, 190, 192, 193; ♀ 181, 189 mm.

There is considerable variation in the amount of green in the base of the tail, varying from pronounced in one female to restricted to the outer edges of the rectrices in one male.

This bird was fairly common in the lowlands.

Columba livia intermedia Strickland. Indian Blue Rock Pigeon.

Marpha, 9,200 feet: 2 ♂, 1 ♀; December.

Pokhara, 3,000 feet: 1 ♂; January.

Wing: ♂ 220, 226, 237; ♀ 216 mm.

Compared with four birds from the United Provinces and three from Punjab these Nepal specimens are similar on the back, but the rump and upper tail coverts average somewhat darker, and the under parts average slightly darker.

A large flock of from 50 to 100 birds lived in the village of Marpha. A few birds lived in the rock ledges above the Seti River at Pokhara. None were seen in the lowlands where they should more likely be found.

Columba pulchricollis Blyth. Ashy Wood Pigeon.

Dana, 7,000 feet: 1 ♀; December.

Wing: 205 mm.

This pigeon was found only in a heavily wooded region of western Nepal.

Streptopelia orientalis meena (Sykes). Indian Rufous Turtle-Dove.

Tansen, 2,700 feet: 1 ♂; January.

Manichur, 7,000 feet: 1 ♀; April.

Baglung, 3,000 feet: 1 ♂ juv.; November.

Wing: ♂ 186; ♀ 184; ♂ juv. 172 mm.

Both the two adult birds have white under tail coverts. One has the abdomen mostly white; the other, with considerable white. In these characters they agree with *meena*, and in general are similar to a Punjab and a United Provinces bird.

Kashmir and Turkestan birds considered *meena*, taken in May and August, are somewhat paler on the breast and upper parts. Five Sikkim birds, *agricola*, are generally darker than the Nepal birds, with the vineous of the breast extending over the abdomen and the under tail coverts gray. Assam and Burma birds are considerably darker. Apparently there is a general darkening of the species from west to east, with a sudden change in the under tail coverts from white to gray. As one would expect, eastern Nepal birds are more like the Sikkim birds, for Ripley has recorded them as *agricola*.

Migrants from the north may complicate the picture in winter-taken birds.

Streptopelia decaocto decaocto (Frivaldszky). Indian Ring Dove.

Dhangarhi, 900 feet: 1 ♀; December.

Wing: 170 mm.

This dove was common in rice fields and acacia trees of the lowlands.

Streptopelia chinensis suratensis (Gmelin). Indian Spotted Dove.

Dhangarhi, 900 feet: 1 ♀ imm.; December.

Butwal, 900 feet: 3 ♂; January.

Phurti Ghat, 2,500 feet: 1 ♂; November.

Belawa: 1 ♀ ad., 1 ♀ imm.; November.

Pokhara, 3,000 feet: 1 ♂; January.

Wing: ♂ 139, 141, 142, 145 mm.

These compare well with two Mussoorie and three Punjab specimens. This species is common from the lowlands up to 5,000 feet.

Chalcophaps indica indica (Linnaeus). Emerald Dove.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Tansing, 4,500 feet: 1 ♀; January.

Mayakhu, 4,500 feet: 1 ♀; December.

Wing: ♂ 154; ♀ 138, 147 mm.

The emerald dove was more common in the forests of the *terai* than among the foothills. The species was usually solitary, walking about on forest roads. Its call is a low, mellow, prolonged "*oo*."

Family **PSITTACIDAE**

Psittacula eupatria nipalensis (Hodgson). Large Indian Parakeet.

Emelie, 900 feet: 2 ♂; January, February.

Butwal, 900 feet: 1 ♂; February.

Wing: 217–225. Tail: 311–346 mm.

The large Indian parakeet was fairly common in the drier, more open forests of the lowlands.

Psittacula krameri borealis (Neumann). Eastern Rose-ringed Parakeet.

Butwal, 900 feet: 4 ♂, 2 ♀; January, February.

Bilauri, 900 feet: 1 ♂, 1 ♀; January.

Emelie, 900 feet: 1 ♂, 1 ♀; January.

Wing: ♂ 166–182; ♀ 167–173. Tail: ♂ 190–249; ♀ 198–221 mm.

The colors of the lower mandible of the males varied from red streaked with black to almost all red; those of the females were black except for one with red at the base. A single female from Assam, the type locality, has the mandible almost entirely reddish.

Measurements of topotypical males of the smaller south Indian race *P. k. manillensis* are given by Whistler and Kinnear (1932–37, **37**: 752) as wing, 156.5–165 mm.

This was the commonest parakeet of the lowlands.

Psittacula alexandri fasciata (Müller). Red-breasted Parakeet.

Butwal: 1 ♂; January.

Fifteen miles north of Tansing: 2 ♀ imm.; January.

Tansing, 4,500 feet: 1 ♂; December.

Wing: ♂ ad. 171; ♀ imm. 162, 166 mm.

The adult male's wing measurement falls within the range of variation of one from Darjeeling and two from Assam.

This was the common parakeet of the foothills (4,000 to 5,000 feet). It was seen in flocks including from 50 to 200 birds.

Psittacula cyanocephala (Linnaeus). Blossom-headed Parakeet.

Butwal, 900 feet: 2 ♂, 1 ♀; January, February.

Chisapani, 900 feet: 1 ♂, 1 ♀; December, January.

Wing: 3 ♂ 137; 2 ♀ 135, 139. Tail: 3 ♂ 190–220; 2 ♀ 148, 191 mm.

This species was occasionally seen in the lowlands. These are the dark-colored birds with blue under wing and bluish rumps that Biswas (1951) has shown are a different species from *P. roseata* Biswas (*rosa* of recent authors; *bengalensis* of Stuart Baker), which has been recorded in Nepal by Stuart Baker and in the Darjeeling district of Bengal by Biswas.

Biswas' races seem finely split. He recognizes *P. c. rosa* (Bombay to Travancore) as distinct from *bengalensis* (Punjab to Bhutan, etc.) on the basis of smaller size only, but his measurements show too slight a difference to utilize in separating races; for example, wing ♂ 140–150 (144.3) vs. 135–145 (140 mm.); *rosa* must be a synonym of *bengalensis*, if indeed *bengalensis* is different from *cyanocephala*,

which is doubtful, for Whistler and Kinnear's (1932–37, **37**: 753) measurements showing that north India birds average larger than do southern ones are as follows:

Southern India: ♂ wing 131–143; tail 171–222 mm.

Northern India: ♂ wing 137.5–151.5; tail 172–234 mm.

While there is no doubt of this trend, the overlap in measurements of birds from geographical extremes makes subspecies separation on this character impractical; our Nepal birds fall within the range of variation of the southern birds.

Psittacula himalayana himalayana (Lesson). Slaty-headed Parakeet.

Sahajpur, 6,000 feet: 1 ♀; December.

Tansing, 4,500 feet: 2 ♂ imm.; January, February.

Birethanti, 4,500 feet: 1 ♂ ad. [= ♀]; December.

Nagarjung, 6,000 feet: 2 ♂; February.

Wing: ♂ 169, 174; ♀ 160 mm.

The common parakeet at 5,000–7,000 feet was this species. Nepal birds compare well with those from United Provinces and Sikkim.

Family CUCULIDAE

Cuculus sparverioides sparverioides Vigors. Large Hawk Cuckoo.

Nawakot, 6,000 feet, Pokhara District: 1 ♀; January.

Phulchowk, 8,200 feet: 1 ♂; March.

Wing: ♂ 223; ♀ 212. Tail: ♂ 190; ♀ 182 mm.

In color these birds agree well with two Bengal (Mangpu) birds, (wing ♂ 240, 246) and a series from Tonkin and Laos (ad. ♂ wing 232, 237, 245, 253; ♀ 231, 241), though the Nepal birds are considerably smaller.

Of five adult males of Chinese birds (Szechwan, wing 235, 235, 243, 243; Kweichow, 246 mm.) compared with the four Indo-Chinese adult males, four are considerably paler rufous on the chest, and with less pronounced bars; the other is very like the Indo-Chinese birds.

Cuculus varius Vahl. Common Hawk Cuckoo.

Bichchua, 900 feet: 1 ♂, 1 ♀; December.

Pokhara, 3,000 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♂ juv.; November.

This species is new to our collection. The adults as well as the male in juvenile plumage compare closely with the description of the species given by Stuart Baker, except for being slightly larger.

This species is fairly common in the lowlands.

Cuculus micropterus micropterus Gould. Indian Cuckoo.

Gokarna, 4,400 feet: 1 ♂; April.

Wing: 195 mm.

The Indian cuckoo was fairly common in the Kathmandu Valley. It was one of the earliest cuckoos to call in spring and its four notes, *"do, la, ti, so,"* could be heard even at night from the forests below 5,000 feet.

Cuculus canorus Linnaeus. European Cuckoo.

Phulchowk, 8,100 feet: 1 sex?; May.

Wing: 226 mm.

This cuckoo was occasionally heard and seen from 5,000 to 8,000 feet in the Kathmandu Valley. Its double-syllabled call, two notes apart, was *"cuck-oo"* like that of the European bird except for this individual bird, which said *"chuck-koo,"* the second note two notes lower than the first.

Cuculus saturatus saturatus Blyth. Himalayan Cuckoo.

Phulchowk, 8,200 feet: 1 ♂; May.

Wing: 187 mm.

The Himalayan cuckoo's four-note call, *"oo-cu-cu-cu,"* the first syllable two notes higher than the others, was frequently heard but the bird was seldom seen. It arrived in the Nepal Valley in April and kept to the wooded slopes of the higher hills.

Surniculus lugubris dicruroides (Hodgson). Indian Drongo-Cuckoo.

Dharan Bazaar, 900 feet: 1 ♂; May.

Wing: 141 mm.

This was a common species in the lowlands and its call was one of the most frequent sounds in that area.

Eudynamys scolopacea scolopacea (Linnaeus). Koel.

Chandragiri Ropeway, 4,600 feet: 1 ♂; May.

Wing: 187 mm.

This species was common in the lowlands and in the Kathmandu Valley by April. It was usually found in orchards.

Rhopodytes tristis tristis (Lesson). Red-billed Green Malkoha.

Sahajpur, 6,000 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♀; February.

Tansing, 4,500 feet: 1 ♀; December.

Wing: 160, 166, 168. Tail 375, 377, 400 mm.

Other specimens of this race in our collection measure as follows: Bengal (Sevoke and Mangpu): ♂ wing 163, 174; tail 391. ♀ wing 165; tail 375 mm. Assam: ♂ wing 174; tail 392 mm.

The malkoha was occasionally seen from the base of the foothills up to 6,000 feet. It was solitary and kept to trees with thick foliage, in the vicinity of cultivation. Its notes, "*ko kullie*," rise on the last syllable.

Taccocua leschenaultii infuscata Blyth. Hill Sirkeer Cuckoo.

Dhangarhi, 900 feet: 2 ♂; December.

Butwal, 900 feet: 1 ♂, 1 sex?; January and February.

Tansen: 4,500 feet: 1 ♀; January.

Raghunathpur, 900 feet: 1 ♂, 1 ♀; January.

This was a fairly common species in the scrub jungle of the *terai*.

The east Nepal birds measure: Wing: ♂ 158; ♀ 157. Tail: ♂ 238; ♀ 215. Those from west Nepal: Wing: ♂ 160, 161, 166; ♀ 157; sex? 159. Tail: ♂ 207, 233, 240; ♀ 236; sex? 241.

Ripley (1950a, p. 372) gives east Nepal specimens as wing ♂ 164, ♀ 160 mm.

Whistler and Kinnear (1932–37, **37**: 527) give *affinis* as wing 148–158 and *infuscata* as wing 160 and 163 mm., with the comment that they are poorly differentiated races, separable on size only.

The only variation in our Nepal series is an average slightly smaller size in east Nepal, and we refer them all to *infuscata*. The race *affinis*, with type locality only a little south of the east Nepal border, seems a doubtful subspecies.

Family **STRIGIDAE**

Otus spilocephalus huttoni (Hume). Western Spotted Scops Owl.

Phulchowk, 8,200 feet: 1 ♂; March.

Wing: 142 mm.

This bird was occasionally heard at night in the hills from 6,000 to 9,000 feet in the oak forests of eastern and western Nepal. Males responded to a similar two-note whistle.

The Nepal bird was compared with five *huttoni* from the United Provinces and three *spilocephalus* from Bengal and Assam. This specimen has light gray under parts like those of *huttoni*. Above, although it was more rufous than the western form, it was quite distinct from the deep rufous birds from the eastern hills. Stuart Baker (1922–30, **4**: 429) refers to Nepal birds as being somewhat intermediate and places them with the eastern form. In this series, the specimen from the Kathmandu Valley must be placed with *huttoni*.

Otus bakkamoena lettia (Hodgson). Burmese Collared Scops Owl.

Raghunathpur, 900 feet: 1 ♂; December.

Wing: 149 mm.

Nepal is the type locality. Our series of this race, including 10 birds from Assam, Siam, and Indo-China, all have bare toes and are very variable in color, as Deignan (1950, p. 194) has also pointed out for this race.

Bubo bubo bengalensis (Franklin). Great Horned Owl.

Pokhara, 3,000 feet: 1 ♀; January.

Wing: 410 mm.

This owl is recorded as being extremely variable. The Nepal specimen, three from United Provinces (wing: ♂ 370; ♀ 381, 388), one from Central Provinces (wing: ♂ 371), and one from Bombay Presidency (sex?, wing: 388) are all very similar in color except that the Nepal bird is slightly blacker on the back. However, two specimens from Sirur, Bombay Presidency (wing: ♀ 381; sex? 383), are considerably paler, whiter, and less ochraceous below than any of the other specimens. The larger size of the northernmost, the Nepal bird, is evident in these measurements.

Ketupa zeylonensis leschenault (Temm.). Brown Fish Owl.

Butwal, 900 feet: 2 ♂; January.

Raghunathpur, 950 feet: 1 ♀; January.

Wing: ♂ 401, 405; ♀ 389 mm.

United Provinces birds in our collection measure: Wing, ♂ 383, 409, 419, 428; ♀ 390, 393, 400 mm. Two from the Bombay Presidency measure: Wing, ♂ 383; ♀ 410 mm. These show little variation; all agree well in color. Their large size contrasts with that of the Ceylon bird, *K. z. zeylonensis*, for which Whistler and Kinnear (1932–37, **38**: 234) give wing measurements as 365–383 mm.

Glaucidium brodiei brodiei (Burton). Collared Pigmy Owlet.

Kathmandu Valley, 6,000–7,500 feet: 1 ♂, 1 ♀; January.

Wing: ♂ 89; ♀ 92 mm.

The pigmy owlet was not very common from 3,000 to 7,000 feet in central and western Nepal and was not met with in the eastern hills. Occasionally it was found near habitation but more often in forests.

Our specimens of this form seem to show not two color phases, but variation from a rufous to a gray extreme, with all stages of intermediates. Arranging the 15 birds in a continuous series and numbering them from 1 (grayest) to 15 (most rufous) the distribution of these color variants is as follows: China, 12, 13; Indo-China, 4, 14, 15; Sikkim, 2, 11; Nepal, 5, 10; United Provinces, 1, 3, 6, 7, 8, 9. This distribution demonstrates the prevalence of the more rufous type of coloration in the eastern part of the range.

The western birds (United Provinces) average slightly broader, paler bars on the back.

The race *tubiger* Hodgson, type locality Nepal, has been said to be darker than *brodiei*, type locality Simla. Darkness, aside from color variation, is hard to evaluate; certainly the more rufous birds from the western part of the range average considerably darker than the intermediate type from United Provinces, but of the five grayest birds, the Nepal and the Indo-China birds have darker, more blackish bars on the back.

This agrees only in part with Kinnear's (1937, p. 490) analysis of 200 specimens, but it does agree in the conclusion that the most rufous type of plumage does not occur west of Nepal.

There may be an average difference between eastern and western populations, but with the great individual variations in plumage the recognition of *tubiger* Hodgson is not practical.

Glaucidium radiatum radiatum (Tickell). Jungle Owlet.

Dhangarhi, 900 feet: 3 ♂, 1 ♀; December.

Butwal, 900 feet: 6 ♂, 1 ♀; January, February.

Chisapani, 950 feet: 2 ♂; December.

Wing: 11 ♂ 124–139; 2 ♀ 131–135 mm.

The jungle owlet was common in the forested areas of the lowlands.

Glaucidium cuculoides cuculoides (Vigors). Western Himalayan Barred Owlet.

Butwal, 900 feet: 1 ♂; February.

Tansing, 4,500 feet: 1 ♀; January.

Belawa, 3,000 feet: 1 ♀; November.

Beni, 3,500 feet: 1 ♂, 1 ♀; November.

Pokhara, 3,200 feet (near): 2 ♂, 1 ♀; January, February.

Wing: ♂ 145, 148, 149, 151; ♀ 146, 147, 153, 156.

There is only slight variation in this series, from more brownish to more blackish in general tone. For comparison we have three birds from Mussoorie in the United Provinces. One of these is dark, but rather more reddish brown than the more brownish of the Nepal birds. The other two differ rather sharply in being paler and grayer above, and having more white below, with the brown paler and grayer, compared with the warmer-toned Nepal birds. Though dimorphism is said not to be marked in this species (Ripley, 1948b, p. 200), that it may occur is indicated by the Mussoorie birds. Ripley (l.c.) united North Punjab and Nepal birds in his review of the species, which we follow despite the above-mentioned differences between Mussoorie and Nepal birds. The race to the east, *austerum* Ripley, is much darker and more rufous.

This owlet was the most common species in the foothills.

Ninox scutulata lugubris (Tickell). Indian Brown Hawk-Owl.

Butwal, 900 feet: 1 ♂; February.

Narayangarh, 2,500 feet: 1 ♂; April.

Wing: 215, 221 mm.

The hawk-owl was fairly common in the lowlands and foothills. One was seen in a garden in the center of Kathmandu. Its call was "*oh-wek*," with the accent on the second syllable, sometimes repeated for several minutes.

Compared with five Siamese, two Cooch Behar and two United Province birds, the wing measurements were: *N. s. burmanica:* Siam, ♂ 225, 217, 217, 207, ♀ 207, *N. s. lugubris:* Cooch Behar, ♂ 217, ♀ 214; central Nepal, ♂ 216; west Nepal, ♂ 221; United Provinces, ♂ 214, ♀ 215.

The series showed a gradual cline in general darkness above from west to east, the west Nepal bird being closer to those from United Provinces and the central Nepal bird like those from Cooch Behar. The Siamese birds are the darkest.

However, the birds from United Provinces to Cooch Bihar have the gray tail bars all pale, contrasting with the darker conditions in Siamese birds. Also, the Siamese birds differ from the rest of the series in having fewer and more restricted white markings on the inner secondaries and scapulars.

Athene brama indica (Franklin). Northern Spotted Owlet.

Kathmandu, 4,200 feet: 2 ♂; February.

Dhangarhi, 900 feet: 2 ♀; December.

Emelie, 900 feet: 1 ♀; January.

Raghunathpur, 900 feet: 1 ♀; December.

Tari, 1,000 feet: 1 ♀; December.

Wing: ♂ 158, 170; ♀ 159, 163, 164, 171, 172 mm.

The spotted owlet was fairly common from the lowlands to the higher valleys. It nests in the eaves of palaces in Kathmandu.

Asio flammeus flammeus (Pontoppidan). Short-eared Owl.

Raghunathpur, 900 feet: 1 ♂; December.

Wing: 316 mm.

This bird was seen about twilight on several occasions in the lowlands of eastern Nepal, where it flew over rice fields.

Family **CAPRIMULGIDAE**

Caprimulgus indicus hazarae Whistler and Kinnear. Jungle Nightjar.

Birethanti, 4,500 feet: 1 ♂; December.

Wing: 199 mm.

Of this race we have also a female from Sikkim, wing 197 mm., and two Indo-Chinese birds (Laos and Annam), wing ♂ 203, ♀ 198. Compared with three Japanese examples of *jakata*, wing ♂ 218, 220, ♀ 214, these Indian and Indo-Chinese birds differ as described in their warmer, more buffy under parts, more heavily patterned upper parts, pronounced barring on the under tail coverts, and, in addition, in their smaller size.

Caprimulgus macrurus albonotatus Tickell. Long-tailed Nightjar.

Butwal, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♀; December.

Chisapani, 950 feet: 1 ♀; December.

Gokarna, 4,400 feet: 1 ♂; April.

Narayangarh, 2,500 feet: 2 ♂; April.

Wing: 4 ♂ 207–217; 2 ♀ 208, 218.

This was the commonest nightjar from the lowlands up to 5,000 feet. During the day it remained in the forest but at night it was found near villages and on the banks of rivers.

Caprimulgus monticolus subsp. Franklin's Nightjar.

Butwal, 900 feet: 1 ♂; February.

Narayangarh, 2,500 feet: 2 ♂; April.

Wing: ♂ 198; ♂ 195, 196 mm.

We have three birds from the Nepal *terai*. The bird from Butwal approaches *C. m. burmanicus* in its darker color below and slightly larger size.

The other two birds are closer to the description of *C. m. monticolus*, with less fulvous on secondary and upper wing coverts, wider and paler brown bars on the lower breast and abdomen, more gray and paler fulvous on abdomen and flanks.

The type locality for *C. m. burmanicus* is upper Burma and the range is usually given as east to Sikkim. The type locality for *C. m. monticolus* is the Ganges west of Calcutta. Both of these subspecies may intergrade in the Nepal *terai*. Until we have further comparable material it is better not to assign these birds to subspecies.

The call of the bird from the Narayani River was a piercing "*chait chait chait*," repeated several times at short intervals as it flew at night over the river.

Family APODIDAE

Apus affinis nipalensis (Hodgson). Indian House-Swift.

Kathmandu, 4,200 feet: 1 ♂; March.

Wing: 133 mm.

This swift arrived in Kathmandu the last of February and after about three weeks began to enter holes in buildings.

Family HEMIPROCNIDAE

Hemiprocne longipennis coronata (Tickell). Indian Crested Swift.

Barmdeo Mandi, 950 feet: 2 ♀; January.

Wing: 162, 163 mm.

The crested swift was only seen in some numbers along the Sarda River in the southwest corner of Nepal. It was a strong flier and had a call, *"clee-chee."*

Family TROGONIDAE

Harpactes erythrocephalus erythrocephalus (Gould). Red-headed Trogon.

Butwal (near), 1,500 feet: 2 ♂; January, February.

Mayakhu, 4,000 feet: 1 ♂; December.

Wing: 153, 156, 163 mm.

These birds compare well with males of this race from Assam (1) and Bengal (2).

Family ALCEDINIDAE

Ceryle lugubris guttulata Stejneger. Himalayan Pied Kingfisher.

Badamachli, 1,000 feet: 1 ♀; December.

Wing: 192 mm.

This large kingfisher was occasionally seen along the larger streams of the foothills.

Ceryle rudis leucomelanura Reichenbach. Pied Kingfisher.

Malakheti, 950 feet: 1 ♂; December.

Bilauri, 900 feet: 1 ♀; January.

Chisapani, 900 feet: 1 ♀; December.

Wing: ♂ 148; ♀ 137, 143 mm.

The pied kingfisher was fairly common along streams and ponds of the lowlands.

Alcedo atthis bengalensis Gmelin. Common Kingfisher.

Pokhara: 1 ♂, 1 ♀; January.

Tansen, 2,500 feet: 1 sex?; December.

Dhangarhi, 900 feet: 1 sex?; December.

Wing: ♂ 72; ♀ 72; sex? 69, 71 mm.

Compared with specimens from United Provinces and from Assam.

The common kingfisher was seen along open streams of the *terai* and lower foothills.

Pelargopsis capensis gurial (Pearson). Brown-headed Stork-billed Kingfisher.

Badamachli, 1,000 feet: 1 ♂; December.

Butwal: 1 ♂; February.

Wing: 157, 162 mm.

These birds have the faint barring or freckling of the under parts and the greenish blue of the upper parts associated with immaturity.

This kingfisher was occasionally seen from the lowlands to 2,500 feet. It was a sluggish bird, found in open country near water.

Halcyon smyrnensis smyrnensis (Linnaeus). White-breasted Kingfisher.

Dhangarhi, 900 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♂; December.

Wing: 116, 120 mm.

Ripley (1950a, p. 374) recorded Nepal birds as *fusca*. However, Whistler and Kinnear (1932–37, **37**: 762) showed that *fusca* (with *generosa* a synonym) was restricted to Ceylon and extreme south-west India and that the rest of India was occupied by a bird with paler brown color, and, in the north at least, of larger size, that they referred to *smyrnensis*. Peters (1945, **5**: 196) accepted this in part, but also included the birds from Burma to Siam and the Malay Peninsula in *fusca*, giving it a divided range. Deignan (1945, p. 202)

has separated the birds of the Indo-Chinese–Malay area as *perpulchra* von Madarasz (1904).

We have from Ceylon three adults of *fusca* that measure: wing ♂ 114, 115; ♀ 113 (2 ♀ imm., 112, 112 mm.). Stuart Baker (1922–30, 4: 270) gives the wing measurements of *generosa* from Ceylon and southern India as 108–117 mm. From the rest of India we have the following adults of *smyrnensis:* Central Provinces, ♂ 118 mm. Gujarat, ♂ 117, 121, 122, 123; ♀ 116, 118 mm. Sirur, sex?, 119, 119, 121, 121, 123, 124 mm. United Provinces, ♂ 118, 120, 120, 123 mm. Punjab, ♂ 119, 129 mm.

On size, the central and north India birds, *smyrnensis,* are barely separable from *fusca.* In color, the blue seems to be equally variable in the Sirur-United Provinces and the Ceylon birds, though one United Province bird is somewhat bluer on the back than any other of the series. The three Ceylon birds have the brown dark, as described; the others average considerably paler, but an occasional Sirur specimen approaches them in darkness.

Our specimens of *perpulchra* measure as follows: Siam, ♀ 118, 121, 121, 121. Indo-China, ♂ (11) 119–126 (av. 122); ♀ 120, 122, 126, 126, 128, 128 mm. Thus they agree in size with our Indian *smyrnensis.* In their dark brown of head and under parts they agree better with our Indian *fusca.* However, in the upper parts, averaging considerably bluer, less greenish, they differ from our material of both *smyrnensis* and *fusca.*

Our Nepal specimens have the brown of head and under parts rather dark, but the color of upper parts is distinctly greenish blue, matching the average of Sirur specimens, so we refer them to *smyrnensis.*

Family CORACIIDAE

Coracias benghalensis benghalensis (Linnaeus). Indian Roller.

Dhangarhi, 900 feet: 1 ♀; December.

Butwal, 900 feet: 2 ♂; January.

Belawa, 3,000 feet: 1 ♀; November.

Pokhara, 3,000 feet: 1 ♂, 4 ♀; December, January, February.

Raghunathpur, 900 feet: 2 ♂; December, January.

Wing: ♂ 187, 202; ♀ 183, 184, 185, 196 mm.

The amount of variation in these specimens is only moderate. They average somewhat darker on the back and on the throat and breast than *benghalensis* from Central Provinces. In one bird from

Pokhara and two from eastern Nepal the chestnut nape band is so reduced as to be only indicated. Both birds from east Nepal are darker on the throat, breast, and abdomen than the other Nepal birds. Compared with *affinis* from Siam and Tonkin, the present series differs much more and is best called *C. b. benghalensis*, with a tendency toward *affinis*. The area of pronounced intergradation, or hybridization, with *affinis* evidently lies farther east than Nepal.

Family **UPUPIDAE**

Upupa epops subsp.? Hoopoe.

Bilauri, 900 feet: 1 ♀; January.

Bichchua, 900 feet: 1 ♂; December.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ 128, 137, 146, 152; ♀ 129, 140 mm.

Hoopoes were fairly common in the open country of the lowlands of eastern and western Nepal.

In view of the different opinions expressed about the races of these birds in India, and our insufficient comparative material, we hesitate to allocate these birds to subspecies. Presumably the smaller specimens could be considered *ceylonensis* (or *orientalis* if valid), and the larger ones the migrant *U. e. epops*.

Family **MEROPIDAE**

Merops orientalis orientalis Latham. Green Bee-Eater.

Bilauri, 900 feet: 1 ♂; December.

Dhangarhi, 900 feet: 1 ♂; December.

Malakheti, 950 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂, 1 ♀; January.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: ♂ 92, 93, 99; ♀ 90, 94, 94 mm.

This bird was frequently seen in cultivated areas of the *terai*.

Nyctyornis athertoni athertoni (Jardine and Selby). Blue-bearded Bee-Eater.

Barmdeo Mandi, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 2 ♂; December.

Godaveri, 5,000 feet: 1 ♂; February.

Wing: ♂ 133, 135; ♀ 139 mm.

This large bee-eater was not common. It was seen two or three times in forest of the western lowlands as well as Kathmandu Valley. It snapped its bill on insects and had a repeated note: *"kawk."*

Koelz (1954, p. 25) calls north India birds *N. a. nipalensis* Hodgson.

Family BUCEROTIDAE

Tockus birostris (Scopoli). Gray Hornbill.

Dhangarhi, 900 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♀; December.

Wing: ♂ 220; ♀ 199 mm.

This bird was occasionally found in forests of the *terai*, whenever figs were ripe.

Anthracoceros malabaricus malabaricus (Gmelin). Pied Hornbill.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 1 ♂ imm.; January.

Bilauri, 900 feet: 1 ♀; December.

Wing: ♂ ad. 312; ♂ imm. 291; ♀ 296 mm.

The pied hornbill was fairly common. Flocks of five to ten birds gathered in fig trees. Their rapid, piercing *"kak-kak, kak-kak"* could be heard some distance away.

Family CAPITONIDAE

Megalaima virens magnifica Baker. Assam Great Barbet.

Tansing, 4,500 feet: 4 ♂, 2 ♀; December, January.

Dana, 7,000 feet: 1 ♂, 1 ♀; December.

Pokhara: 1 ♂; January.

Wing: ♂ 138, 138, 138, 140, 144, 145; ♀ 135, 142, 144 mm.

Stuart Baker (1922–30, 4: 106) extends the range of *marshallorum* east to Nepal and Sikkim, with the remark that birds from these localities are somewhat intermediate. Ripley (1950a, p. 375) records *magnifica* in eastern Nepal and lists intermediates from central Nepal under *marshallorum*.

For comparison we have three skins of *marshallorum* from Mussoorie (wing: ♂ 144, 150, 154), and two of *magnifica* from Manipur (wing: ♂ 147, ♀ 151), as well as two from northern Bengal Presidency (wing: ♂ 142, 149). Size seems of little value in separating these races. In color, the present central Nepal birds are very similar to the Assam-Bengal birds in the deeper brown of the back, the richer, more yellowish streaks on the back of the neck, and the more richly colored under parts—especially evident in the richer yellow of the sides of the breast and flanks. Without hesitation, they are here referred, on present comparative material, to *magnifica*.

Megalaima zeylanica

We have 20 birds from Nepal which represent the three forms recorded by Ripley (1950b, p. 101). The naked lores used to divide the *zeylanica* group from the *hodgsoni* group is not a clear distinction, being rather an average character. On the basis of color these two groups are sharply separable.

The *hodgsoni* group has been assumed to replace the *zeylanica* group in Nepal. Though our specimens are winter-taken, this still holds in general, but members of each group (*caniceps* and *rana*) were taken at Dhangarhi, Ainthpur, and Barmdeo Mandi. Since these are winter birds, too much importance can not be attached to their occurrence together at this place. But it is significant that no intergrades between *rana* and *caniceps* were found, nor any tendency toward intergradation. It is probable that field studies will show that the *hodgsoni* group and the *zeylanica* group are not conspecific.

Megalaima zeylanica caniceps (Franklin). Northern Green Barbet.

Dhangarhi, 900 feet: 4 ♂; November, December.

Wing: ♂ 119, 119, 125, 125 mm.

This bird was fairly common in the fig trees of the forests in western Nepal *terai*.

For comparison we have three Ceylon birds, *M. z. zeylanica* (wing: 1 ♂ 114; 2 ♀ 113, 114 mm.), which are much darker below and smaller than our Nepal birds, and nine other Indian birds, with wing measurements as follows: Central Provinces (1 ♂ 119; 1 ♀ 121 mm.); Punjab (1 ♂ 122; 1 ♀ 126 mm.); and United Provinces (2 ♂ 121, 126; 3 ♀ 119, 122, 125 mm.).

The two birds from central India are somewhat darker than the north India birds, apparently part of the transition in color from *zeylanica* to *caniceps*. Punjab, United Province, and Nepal birds agree in color.

The larger size of the northern bird, the character on which *kangrae* Whistler, 1934, was based, is shown to be so slight that we agree with Ripley (1950b, p. 101) that it is best included in *caniceps*.

Megalaima zeylanica hodgsoni (Bonaparte). Eastern Lineated Barbet.

Butwal, 900 feet: 3 ♂, 3 ♀; January, February.

Chisapani, 900 feet: 2 ♀; December.

Wing: ♂ 127, 132, 132; ♀ 133, 133, 134, 135, 137 mm.

For comparison we have ten adult birds of *M. z. hodgsoni* with the following wing measurements: Bengal (3 ♀, 128, 128, 133 mm.); Assam (1 ♂, 131; 1 ♀, 134 mm.); Siam (1 ♂, 141; 1 ♀, 127 mm.); and Indo-China (1 ♂, 127; 2 ♀, 135, 140 mm.).

Megalaima zeylanica rana Ripley. Rana's Lineated Barbet.

Marek, 3,000 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♀; December.

Badamachli, 1,000 feet: 3 ♀; December.

Barmdeo Mandi, 950 feet: 2 ♂; January.

Ainthpur, 900 feet: 1 ♂; January.

Wing: ♂ 131, 134, 135, 135; ♀ 132, 133, 135, 142 mm.

This series confirms *rana* as a good race, as Ripley characterized it. It is much closer to *hodgsoni* than to *caniceps*, and as mentioned above two species are probably involved.

These birds are all from western Nepal. The bird from Marek, 3,000 feet, was taken ten miles north of Butwal, 900 feet, where we found *M. z. hodgsoni*. Evidently it ranges eastward, above the range of *hodgsoni*. At the extreme western boundary of Nepal, the hills came down to the banks of the Sarda River and *M. z. rana* was occasionally seen in this area.

We have one bird from Dehra Dun District, United Provinces (wing, 134 mm.), which belongs to *rana*. This is an extension of the range westward from Nepal.

Megalaima franklinii franklinii (Blyth). Golden-throated Barbet.

Kathmandu Valley, 5,500–8,000 feet: 2 ♂, 1 ♀; January, May.

Wing: ♂ 100, 104; ♀ 104 mm.

This bird was fairly common in the wooded foothills surrounding Kathmandu. In May as two of these birds were coming into breeding condition their call, *"whelp,"* was repeated continuously at short intervals. Nearby the call was a *"tuk-koo-wel."*

Our Nepal birds compare well with a series of seven birds from Sikkim both in wing measurements (Sikkim: 6 ♂, 102, 102, 102, 103, 104, 105; 1 ♀, 102 mm.) and in color.

Megalaima asiatica asiatica (Latham). Blue-throated Barbet.

Sahajpur, 6,000 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♀; January.

Tansing, 4,500 feet: 2 ♂, 2 ♀; December, January, and February.

Pokhara, 3,000 feet: 1 ♂, 2 ♀, 1 sex?; December, January.

Kathmandu Valley, 5,500 feet: 3 ♂, 1 ♀; January, February.

Wing: 6 ♂ 104–108; 7 ♀ 101–109; 1 sex? 110 mm.

Our Bengal specimens measure: ♂ (5), 101–105; ♀ (4), 101–105; a Mussoorie ♂, 104; an Assam ♀, 108 mm. Ripley (1950a, p. 376) has suggested that birds from the western part of the range are slightly larger. Our birds give slight support to that view. Birds from western Nepal measure: ♂, 106, 107, 108; ♀, 101, 102, 105, 105, 109 mm. Those from the Kathmandu Valley measure: ♂, 104, 107; ♀, 102, 105, 105 mm.

Megalaima asiatica "rubescens" (Stuart Baker). Ruddy Barbet.

Marek, 3,000 feet: 1 ♂; February.

Wing: 105 mm.

This specimen agrees very closely with specimens of *M. a. asiatica* except for the red in the plumage. In this the distribution of the red on both upper and under parts compares with that in the plate shown by Stuart Baker (1922–30, **4**, pl. 3) but the red is duller than that depicted in the plate. This specimen of *M. a. "rubescens"* is probably an erythristic example of *M. a. asiatica*.

Megalaima haemacephala indica (Latham). Crimson-throated Barbet.

Pokhara, 3,000 feet: 3 ♂, 1 ♀; December, January.

Dhangarhi, 900 feet: 2 ♂; December.

Raghunathpur, 900 feet: 1 ♀; November.

Wing: ♂ 78, 81, 83, 85, 86; ♀ 84, 85 mm.

This barbet was fairly common from the lowlands up to 6,000 feet, where it was found in orchards or light forest.

Family PICIDAE

Jynx torquilla torquilla Linnaeus. European Wryneck.

Malakheti, 950 feet: 1 ♂; December.

Emelie, 900 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: 84, 84, 88 mm.

The two birds from western Nepal *terai* are somewhat paler than the eastern specimen. Compared with a series of eleven *J. t. chinensis* all three are less rufous above and below, being closer to birds from Turkestan and Europe.

Picumnus innominatus innominatus Burton. Spotted Piculet.

Dhangarhi, 900 feet: 2 ♀; December.

Belbahadi, 950 feet: 1 ♂; December.

Tansen, 4,500 feet: 2 ♂, 5 ♀; December, January.

Kathmandu Valley, 5,000 feet: 2 ♂, 1 ♀; January, February.

Wing: ♂ 59, 58, 58, 57; ♀ 61, 60, 59, 59, 59, 59, 58 mm.

Ticehurst (1933, Bull. Br. Orn. Cl., **54**: 20) has separated the birds of the Himalayas into a larger western race with paler, less yellow under parts, *simlaensis*, from Murree to Dehra Dun, wing 59–62.5, and a smaller eastern race, *innominatus*, Nepal to Assam, wing 54–59 mm. Peters (1931–51, **6**: 97) accepts this. Ripley (1950a, p. 376) had only two Central Valley birds (wing ♂ 57; ♀ 59 mm.).

Material in Chicago Natural History Museum gives wing measurements as follows: Assam, ♂ 57. Bengal (Mangpu and Sevoke), ♀ 57, 58, 59. Nepal: central, ♂ 57, 57, ♀ 61; western, ♂ 58, 58, 59, ♀ 58, 59, 59, 59, sex? 58, 60. Mussoorie, ♂ 59, 60 mm.

The tendency for western birds to be larger, as recorded, is too slight to be worthy of nomenclatural recognition. Our material shows no variation in intensity of the yellow under parts correlated with geography. It seems that *simlaensis* should be a synonym of *innominatus*.

Micropternus brachyurus phaioceps (Blyth). Northern Rufous Woodpecker.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♀; December.

Badamachli, 950 feet: 1 ♂; December.

Butwal, 900 feet: 1 ♂, 1 ♀; November, January.

Wing: ♂ 133, 134; ♀ 127, 128, 128, 129 mm.

We have in addition a small series from Bengal, Cooch Behar, Sikkim and Assam (wing: ♂ 117, 123, 127, 127; ♀ 120, 120, 126 mm.).

This bird was fairly common in the *sal* forests (*Shorea robusta*) of the central and western *terai*.

Picus xanthopygaeus (Gray and Gray). Small Scaly-bellied Woodpecker.

Emelie, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♂, 3 ♀; December.

Butwal, 900 feet: 1 ♀; November.

Wing: ♂ 132, 134; ♀ 133, 134, 135, 136 mm.

There is considerable variation in color in the specimens from Nepal and Madras (2), Cooch Behar (1), Siam (1), and Indo-China (1) in our collections.

The bird was occasionally seen in the more open forests of the western *terai*.

Picus canus sanguiniceps $\gtrless$ **gyldenstolpei.** Black-naped Woodpecker.

Badamachli, 950 feet: 1 ♀; December.

Sahajpur, 6,000 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂, 1 ♀; January.

Tansing, 5,000 feet (10 miles north): 2 ♂, 3 ♀; January and February.

Belawa, 3,000 feet: 1 ♀; November.

Chandragiri, 6,000 feet: 1 ♂; January.

Chisapani, 1,000 feet: 1 ♂; December.

Bhorli, 2,000 feet: 1 ♂; December.

Harithumke, 5,000 feet: 1 ♂; December.

Wing: ♂ 144, 147, 148, 148, 150, 150, 151; ♀ 145, 146, 148, 149, 150, 158, 161 mm.

As Ripley (1950a, p. 377) found for his central Nepal birds, these specimens are intermediate between *gyldenstolpei* from Assam, Bengal, and Sikkim (of which we have seven; wing, ♂ 141, 142, 143; ♀ 142, 142, 143, 146 mm.) and *sanguiniceps* from Mussoorie (of which we have one; wing, ♀ 150 mm.) in the amount of yellowish golden wash of the upper parts. The largest specimens come from western Nepal, as one would expect.

Picus flavinucha flavinucha Gould. Greater Yellow-naped Woodpecker.

Belbahadi, 3,500 feet: 1 ♂, 1 ♀; December.

Dhangarhi, 900 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂; February.

Pokhara, 3,000 feet: 1 ♂; January.

Nagarjung, 6,500 feet: 1 ♂; February.

Wing: ♂ 168, 174, 174, 177; ♀ 178, 180 mm.

Picus chlorolophus simlae Meinertzhagen. Western Small Yellow-naped Woodpecker.

Butwal, 900 feet: 1 ♀; January.

Tansen, 3,000 feet: 1 ♂, 2 ♀; February, December.

Kathmandu Valley, 5,000 feet: 1 ♂; January.

Wing: ♂ 140, 144; ♀ 137, 141, 141 mm.

The specimens of this species from Nepal indicate a gradual change in characters from *simlae* of Mussoorie to the darker *chlorolophus* of Bengal, Sikkim, and eastward.

The west Nepal birds, while differing slightly from Mussoorie birds in the deeper yellow nape and the slightly warmer green of the back, are closest to *simlae* and best included with it. A Kathmandu bird, while still farther along the cline, is also best included here.

Picus chlorolophus chlorolophus Vieillot. Small Yellow-naped Woodpecker.

Chisapani, 1,000 feet: 2 ♀; December.

Wing: 142, 145 mm.

Two birds from east Nepal compared with five specimens from Bengal have less orange in the nape, are slightly darker green above, and are somewhat grayer below. They differ more from west Nepal birds in being darker green above, more orange yellow on the nape, and darker green on the breast. These two birds are closer to *P. c. chlorolophus*.

Dinopium benghalense benghalense (Linnaeus). Northern Golden-backed Woodpecker.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Ainthpur, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 2 ♂, 1 ♀; December.

Raghunathpur, 900 feet: 3 ♀; November, January.

Wing: ♂ 153, 155, 157; ♀ 143, 143, 146, 149, 152 mm.

This species was one of the common woodpeckers of the Nepal lowlands.

Dinopium shorii shorii (Vigors). Himalayan Golden-backed Tree-toed Woodpecker.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 1 ♂, 2 ♀; November, January, February.

Chisapani, 900 feet: 1 ♂; December.

Wing: ♂ 157, 161, 165; ♀ 159, 159, 160 mm.

Ripley (1950b, p. 102) has described a western race from Burma, *augusta*, with the reddish wash of the upper parts confined to the lower back and rump. We have not seen it, but in the present specimens the male especially has all the upper back brilliantly washed with reddish.

These birds were found in the lowlands of western Nepal in the heavier forests, usually in company with other species of woodpecker.

Mulleripicus pulverulentus mohun Ripley. Great Gray Woodpecker.

Butwal, 900 feet: 2 ♂, 1 ♀; February.

Wing: ♂ 240, 249; ♀ 237 mm.

This subspecies was included in *harterti* until Ripley named it in 1950. Our series supports its distinctiveness.

The bills and heads of the Nepal birds were stained with a dark sap.

This species was seen only once. In the heavy forest south of Butwal in the lowlands there was a party of five birds, two of which made a loud tattooing as they drilled into hollow trees. There were several calls: a loud *"we-kuk-kuk-chee,"* a soft *"shaw-shaw-shaw,"* and a low note which went up on the second syllable, *"mow-ah,"* and sounded like an owl's cry.

Dendrocopos darjellensis darjellensis (Blyth). Darjeeling Pied Woodpecker.

Tukche, 9,500 feet: 1 ♀; December.

Ulleri, 8,000 feet: 2 ♂; December.

Phulchowk, 9,000 feet: 2 ♂, 1 ♀; February.

Wing: ♂ 125, 129, 131, 134; ♀ 127, 131 mm.

Other examples of this subspecies in our collections are from Sikkim (wing: ♂ 126, 127, 130; ♀ 127, 129).

Dendrocopos cathpharius cathpharius (Blyth). Himalayan Lesser Pied Woodpecker.

Patale, 10,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 103; ♀ 99 mm.

This woodpecker was not common and was only seen in the scrub rhododendron forests at 10,000 feet.

Dendrocopos hyperythrus hyperythrus (Vigors). Eastern Rufous-bellied Woodpecker.

Ulleri, 8,000 feet: 1 ♂; December.

Sheopuri, 7,000 feet: 1 ♂; January.

Phulchowk, 9,000 feet: 1 ♂, 1 ♀; February.

Wing: ♂ 119, 119, 121; ♀ 122 mm.

These specimens have the small size of this race, as do two Sikkim birds in our collection (wing: ♂ 120; ♀ 117 mm.).

This bird was fairly common among oaks of the higher hills surrounding Kathmandu Valley.

Dendrocopos auriceps auriceps (Vigors). Western Brown-fronted Pied Woodpecker.

Baila, 3,500 feet: 1 ♀; December.

Sahajpur, 6,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 114; ♀ 112, 112 mm.

We have seven males and seven females from Mussoorie, United Provinces, with wing measurements as follows: ♂ 114, 115, 115, 116, 116, 118, 119; ♀ 109, 111, 113, 114, 114, 115, 115 mm.

Our three far western Nepal birds average slightly smaller than Mussoorie birds but the females have the brownish forecrown and yellowish brown nape of *D. a. auriceps*. The male bird compares well with the Mussoorie birds.

Dendrocopos auriceps conoveri Rand and Fleming. Eastern Brown-fronted Pied Woodpecker.

Dana, 6,000 feet: 1♂, 1 ♀; December.

Tansen, 5,000 feet: 2 ♂, 2 ♀; January.

Nagarjung, 6,500 feet: 2 ♂; February.

Godaveri, 5,000 feet: 1 ♀; February.

Wing: ♂ 105, 109, 111, 112, 115; ♀ 107, 109, 110, 111 mm.

The females of this subspecies have a golden yellow nape; also, there is, in both male and female, a more fulvous, less brownish forecrown, very slightly darker and more conspicuous streaking on the breast, and average slightly smaller size (see Rand and Fleming, 1956, p. 1). The type locality is 15 miles west of Tansen, west Nepal, 5,500 feet altitude.

Dendrocopos macei westermani (Blyth). Western Fulvous-breasted Pied Woodpecker.

Barmdeo Mandi, 950 feet: 2 ♂, 1 sex?; January.

Belbahadi, 3,500 feet: 1 ♀; December.

Baila, 3,000 feet: 2 ♂; December.

Tansen, 4,500 feet: 1 ♂, 2 ♀; December, January.

Pokhara, 3,000 feet: 3 ♀; December, January.

Kathmandu Valley, 5,000 feet: 1 ♂; January.

Wing: ♂ 112, 112, 113, 114, 114, 115; ♀ 108, 110, 111, 112, 112, 113 mm.

Peters (1931–51, **6**: 194) questioned *D. m. westermani*, and Ripley (1950a, p. 379) refers his central Nepal birds to *macei*. However, whether or not one recognizes these two subspecies, there is a difference in size and a slight difference in color as stated by Whistler and Kinnear (1932–37, **37**: 288).

Comparative material in Chicago Natural History Museum includes 11 birds from Assam, Bengal, and Sikkim, and 5 from United Provinces. Wing measurements: Assam: ♂ 102, 103, 106 mm. Bengal: ♂ 101, 103, 106; ♀ 104, 105, 106, 107 mm. Sikkim: ♀ 108 mm. United Provinces: ♂ 113, 115; ♀ 110, 114 mm.

On the basis of wing measurement our western Nepal population may be assigned to *D. m. westermani.*

A single bird from east Nepal, because of its size (wing, 104 mm.) and color (lighter fulvous below and more black on the neck) belongs to the eastern *D. m. macei.*

Dendrocopos macei macei (Vieillot). Eastern Fulvous-breasted Pied Woodpecker.

Mayakhu, 4,000 feet: 1 ♀; December.

Wing: 104 mm.

This specimen was taken in the heavier forests south of the Sun Kosi River. It is discussed under the preceding species, *D. m. westermani.*

Dendrocopos mahrattensis aurocristatus (Tickell). Northern Yellow-fronted Pied Woodpecker.

Emelie, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂; February.

Wing: ♂ 103; ♀ 104, 106 mm.

Peters (1931–51, **6**: 194) recognizes two races of *D. mahrattensis,* but Ripley (1950a, p. 378) assigns all his Nepal birds to *D. m. mahrattensis.* Because of lack of comparative material, we follow Peters in assigning Nepal birds to *D. m. aurocristatus.*

This species was occasionally seen throughout the lowlands of western Nepal.

Dendrocopos canicapillus mitchellii (Malherbe). Nepal Pigmy Woodpecker.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Badamachli, 950 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 3 ♂, 1 ♀; November, January, February.

Tansen, 4,500 feet: 1 ♀; December.

Chisapani, 950 feet: 1 ♂?; December.

Wing: ♂ 87, 88, 89, 89, 90, 91; ♀ 88, 88, 93 mm.

This most northwestern subspecies is new to our collection. Of the next race to the east, *semicoronatus*, we have three specimens from Bengal (Sevoke, Mangpu; wing: ♂ 81, 85; ♀ 89 mm.). The Nepal specimens, including the male from east Nepal, differ strikingly in the male in having the red of each side of the nape reduced to hardly noticeable marks, instead of forming a nearly complete band across the nape. There is no apparent difference in the amount of white in the back.

Dendrocopos moluccensis nanus (Vigors). North Indian Pigmy Woodpecker.

Bilauri, 900 feet: 1 ♂; December.

Dhangarhi, 900 feet: 2 ♂, 2 ♀; December.

Butwal, 900 feet: 2 ♂, 2 ♀; January, February.

Wing: ♂ 76, 77, 77, 79, 79; ♀ 75, 78, 80 mm.

For comparison we have three others of this subspecies from the Central Provinces (wing: ♂ 77, 78 mm.) and Dehra Dun, United Provinces (wing: ♀ 81 mm.).

Blythipicus pyrrhotis pyrrhotis (Hodgson). Red-eared Bay Woodpecker.

Dana, 6,000 feet: 1 ♀; December.

Wing: 150 mm.

Of this race we have in addition from Sikkim one ♂ (wing 149 mm.) and two ♀ (wing 143, 150 mm.), and from Assam one ♂ (wing 151 mm.) and one ♂ (wing 144 mm.).

Chrysocolaptes lucidus sultaneus (Hodgson). Golden-backed Woodpecker.

Butwal, 900 feet: 2 ♂ ad., 1 ♂ imm., 3 ♀; January, February.

Wing: ♂ ad. 173, 185; ♂ imm. 175; ♀ 165, 180, 183 mm.

Our series of six Nepal birds varies considerably in wing measurement. There is a size difference between the smaller eastern birds (our comparative material gives: Sikkim, ♂ 175; Assam, ♀ 166; Bengal, ♂ 175, ♀ 168 mm.) and the larger western race (Mussoorie, ♂ 186 mm.).

The type localities for *C. l. sultaneus* (Simra, central Nepal) and for *C. l. guttachristatus* (Borahhum, west Bengal) are unfortunately close together.

The range of size in our Nepal birds, all from one locality, is greater than that of the Nepal birds Ripley assigned to both races (*sultaneus* 181, 182.5; *guttachristatus* 171, 171).

On average size, all this population is here referred to the larger *C. l. sultaneus*.

Family EURYLAIMIDAE

Psarisomus dalhousiae dalhousiae (Jameson). Long-tailed Broad-Bill.

Butwal, 2,500 feet (near): 2 ♀; January.

Wing: 103, 106 mm.

We also have a series of this race from Bengal (wing: ♂ 99, 100, 101, 105 mm.).

Family PITTIDAE

Pitta nipalensis nipalensis (Hodgson). Nepal Pitta.

Godaveri, 5,000 feet: 1 ♂, 2 ♀; February.

Wing: ♂ 122; ♀ 117, 122 mm.

These are topotypical. None has any black markings on the back.

Family ALAUDIDAE

Alauda gulgula. Skylark.

Dhangarhi, 900 feet: 1 ♀; December.

Gokarna, 4,400 feet: 1 ♀; April.

Manebhanjan, 6,000 feet: 1 ♂; December.

Wing: ♂ 108; ♀ 93, 94 mm.

Recent revisions of *Alauda* have been made by Meinertzhagen (1950) and by Vaurie (1951b). Meinertzhagen includes *A. gulgula* in *A. arvensis* but Vaurie keeps them as two species. Ripley (1950a, p. 380) records *guttata* (=*lhamarum* Meinertzhagen, 1926) from Nepal, and Meinertzhagen gives this race a range from Kashmir and Nepal to Sikkim. Vaurie (1951b, p. 518) restricts its range to the western Himalayas, and his only Nepal record is a migrant *inopinata*.

Vaurie (1951b, p. 504) has no breeding record of this species from Nepal, where the species surely nests, but maps the range of the following six forms as nearly if not quite touching the borders of Nepal: *lhamarum* (of authors) to the northwest; *inconspicua* to the southwest; *gulgula* to the south; *vernayi* to the east; *inopinata* to the northeast; subspecies? to the north.

Presumably, Nepal would be occupied by intergrading populations.

The Dhangarhi bird was in a grassy, open field. The bird in the Kathmandu Valley was in a field near the Bagmati River. The Manebhanjan bird was with a flock which circled through the air and seldom landed.

Calandrella raytal raytal (Blyth). Ganges Sand Lark.

Chisapani, 950 feet: 1 ♂; December.

Wing: 82 mm.

This specimen is referred to this race on the basis of geographical distribution (Vaurie, 1951b, p. 480).

Mirafra assamica assamica Horsfield. Bengal Bush Lark.

Dhangarhi, 900 feet: 4 ♂, 1 ♀; November, December.

Birganj, 900 feet: 1 ♂; April.

Wing: ♂ 79, 81, 82, 85, 87; ♀ 81 mm.

This was a common bird of the lowland. It frequented open fields, usually in pairs, and fluttered straight upward off to a nearby field. Its call is a rapid *"uic-uic-uic."*

Galerida cristata chendoola (Franklin). Franklin's Crested Lark.

Birganj, 900 feet: 1 ♂; April.

Wing: 95 mm.

This lark was not uncommon in open, dry fields of the outer *terai*.

Eremopterix grisea (Scopoli). Ashy-crowned Finch-Lark.

Bichchua, 900 feet: 2 ♂, 1 ♀; December.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: ♂ 73, 75, 76; ♀ 74 mm.

Small flocks of 8 to 15 birds of this species were seen in dry, open fields of the *terai*.

Family HIRUNDINIDAE

Hirundo rustica rustica Linnaeus. Common Swallow.

Tansing, 4,500 feet: 4 ♂, 3 ♀; December, January.

Pokhara, 3,000 feet: 1 ♂; January.

Wing: ♂ 121, 123, 123, 124, 127; ♀ 119, 120, 122 mm.

These specimens compare well with paler examples of European birds, on the depth of color of the under parts and the pectoral band.

For comments on Nepal birds collected by Koelz and the curiously interrupted distribution of the breeding range of this race, see Vaurie (1951a, pp. 19 ff.), who also records *H. r. gutturalis* for Nepal in July.

Hirundo daurica nipalensis Hodgson. Hodgson's Striated Swallow.

Tansen, 4,500 feet: 1 ♂, 2 ♀; December.

Nuakot, 4,000–6,500 feet: 1 ♀; January.

Pokhara, 3,000 feet: 1 ♀; January.

Bilauri, 900 feet: 1 ♀; January.

Seventeen miles west of Kathmandu, 3,000 feet: 1 ♀; January.

Wing: ♂ 117; ♀ 107, 112, 115, 115, 118, 118 mm.

This swallow was common over fields in the foothills and was occasionally seen in the *terai*.

Hirundo rupestris Scopoli. Crag Martin.

Pokhara, 3,000 feet: 1 ♂; December.

Wing: ♂ 136 mm.

Flocks of several of these birds were observed on crests of ridges where they flew swiftly over a given route.

Riparia paludicola chinensis (Gray). Indian Sand Martin.

Barmdeo Mandi, 950 feet: 1 ♂, 1 ♀; January.

Riri Bazaar (near), 3,000 feet: 1 ♀; November.

Pokhara, 3,000 feet: 1 ♂, 1 ♀?; January.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: ♂ ad. 94, 96; ♀ ad. 94, 94 mm.

Ripley (1950a, p. 380) uses the name *R. p. brevicaudata* Horsfield for Nepal birds. However, Vaurie (1951a, p. 9) is unable to separate

birds from the foothills of the Himalayas in India from birds as far east as Yunnan and Formosa, and he includes them all under the oldest valid name, *chinensis*.

Colonies of these birds were nesting in sandbanks of the low foothills which join the *terai*. The two Pokhara birds were in juvenile plumage.

Family CAMPEPHAGIDAE

Pericrocotus flammeus speciosus (Latham). Scarlet Minivet.

Malakheti, 950 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂, 2 ♀; February.

Tansing, 4,500 feet: 8 ♂, 4 ♀; December, January.

Baglung, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♀; December.

Kathmandu, 4,200 feet: 1 ♂, 1 ♀; February.

Raghunathpur, 900 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♀; December.

Wing: 12 ♂ 103–108; 10 ♀ 97–105 mm.

We have for comparison a series of Bengal birds, and several from Sikkim. For a review of the species see Deignan (1946b).

Pericrocotus brevirostris? (Vigors). Short-billed Minivet.

Beni (near): 1 ♂ imm.; November.

Wing: 85. Tail: 87+ mm.

The most westerly specimens Mayr (1940) had in writing his revision of this species were from Sikkim. Ripley (1950a, p. 381) wrote that he did not find it in Nepal. We somewhat doubtfully refer this single bird, a poor skin and labeled an immature male and in the yellow female plumage, to *brevirostris* rather than the closely similar *ethologus*, because of the relative shortness of the tail, though worn and broken off at the tip; and because, compared with two female *brevirostris* from Bengal, identified by Mayr, it agrees in having the yellow extending from the forehead up to the level of the eyes; in having the throat all deep golden yellow like the breast; in having the yellow extending as a wash onto the ear coverts; and in having feathers about the eyes strongly yellow. If differs from them in apparently having less yellow in the second innermost tail

feather (tips worn and broken) and in having the gray of the upper parts washed greenish.

Pericrocotus ethologus favillaceus Bangs and Phillips. Western Long-tailed Minivet.

Sahajpur, 6,000 feet: 1 ♂; December.

Tansing, 4,500 feet: 5 ♂, 4 ♀; December, January.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; December, January.

Okhaldhunga, 7,500 feet: 1 ♀; December.

Wing: 7 ♂ 88–95; 6 ♀ 85–91 mm.

For comparison we have four females of *P. e. laetus*, including one from the type locality, Sikkim, and four females of *P. e. favillaceus*, from Mussoorie. Our six females from eastern and western Nepal compare well with the Mussoorie specimens, for the forehead is yellow and the back is grayish. Thus, they definitely belong to *P. e. favillaceus*.

This bird was associated with oak (*Quercus incana*) and pine (*Pinus longifolia*) in the foothills of Nepal, where it was common. Its call is a *"tig-tig - per - wa - lee."*

Pericrocotus peregrinus vividus Baker. Burmese Small Minivet.

Barmdeo Mandi, 950 feet: 1 ♂, 1 ♀; January.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♂ juv.; February.

Wing: ♂ 67, 67, 70; ♀ 67, 70 mm.

For comparison we have two adult males of *P. p. peregrinus* from Ambala District (topotype) and Baroda, and three males of *P. p. vividus* from Behar, Goalpara, and Burma.

Though Ripley (1950a, p. 382) called his Nepal birds intermediates, our two birds from far western Nepal are definitely like *vividus*, darker gray above and orange below, not yellowish orange like *P. p. peregrinus*.

The small minivet passed through more open forests of the *terai* in a mixed company of wood shrikes and others.

Hemipus picatus capitalis (McClelland). Brown-backed Pied Shrike.

Belbahadi, 3,500 feet: 1 ♂; December.

Tansing, 4,600 feet: 1 ♂, 2 sex?, 2 ♀; December, January, February.

Marek, 3,000 feet: 1 ♂; December.

Chandragiri, 6,000 feet: 1 ♀; May.

Wing: ♂, 62, 63; ♀ 62, 64, 67 mm.

Tephrodornis pondiceriana pondiceriana (Gmelin). Common Wood Shrike.

Badamachli, 1,500 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 4 ♂, 1 ♀; January, February.

Bhorli, 1,500 feet: 1 ♂; December.

Wing: ♂ 87, 88, 88, 90; ♀ 88 mm.

These specimens are somewhat darker above than a Punjab specimen and two United Provinces birds (wing: ♂ 88, 93 mm.) of *pallida* that we have for comparison.

Tephrodornis gularis pelvica (Hodgson). Nepal Wood Shrike.

Butwal, 900 feet: 1 ♂ imm., 2 ♀; January.

Belbahadi, 3,500 feet: 1 ♀?; December.

Barmdeo Mandi, 950 feet: 3 ♂, 3 ♀; January.

Chisapani, 950 feet: 1 ♀; December.

Wing: ad. ♂ 119, 122, 124; ♀ 116, 117, 118, 118, 120, 122, 122 mm.

Five 20-year-old Bengal birds in similar plumage are slightly paler and more brownish above, probably the result of foxing.

The Nepal wood shrikes were found in parties of 10 to 30 birds in the more open, dry forests of the lowland and in the foothills to 3,500 feet. Their call was a mellow *"thul, thull"* and *"tra-a-a."*

Coracina melaschistos melaschistos (Hodgson). Dark Gray Cuckoo Shrike.

Marek, 3,000 feet: 1 ♂; January.

Nagarjung, 5,500 feet: 1 ♂; March.

Wing: 119, 121 mm.

We have specimens of this subspecies from Sikkim (wing: ♂ 118; January 7), Bengal, Mangpu and Sevoke (wing: ♂ 123, ♀ 118, 120; November 1–December 30), and Assam (wing: ♀ 119, 120). For review of the group see Delacour (1951a), who shows that these

birds are best placed in *Coracina*, and that *fimbriata* and *melaschistos* cannot be included in the same species.

In the Kathmandu Valley the bird was not common. It began calling about mid-March and had a descending three-note song, "*do, la, fa.*"

Coracina novaehollandiae nipalensis (Hodgson). Large Himalayan Cuckoo Shrike.

Pokhara, 3,000 feet: 1 ♀; January.

Tansing, 4,500 feet: 1 ♂, 1 ♀; January.

Sahajpur, 6,000 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♀; January.

Godaveri, 5,000 feet: 1 ♂; May.

Wing: ♂ 182, 182, 185; ♀ 177, 178, 184 mm.

There has been some confusion as to the characters of this race, though Whistler and Kinnear (1932–37, **36**: 346) have already pointed out the color characters. The adult male has no barring below; the adult female has the throat and upper breast gray and unbarred, and the lower breast and abdomen whitish and lightly barred, the bars becoming faint posteriorly. Thus this race contrasts with the race to the south in having the most heavily barred sex (the female) like the most lightly barred sex (the male) of *macei*, of which we have two (wing: ♂ 172; ♀ 167) from the Central Provinces for comparison. In the race to the east, *siamensis*, the adults of both sexes are unbarred.

For a discussion of the limits of the species *Coracina novaehollandiae* see Ripley (1941) and Voous and Van Marle (1949).

This bird was occasionally seen alone or in pairs. It was rather shy and kept to the tops of trees. Flight was deliberate. The call note was a clear "*per-ree.*"

Family **DICRURIDAE**

Dicrurus macrocercus albirictus (Hodgson). Black Drongo.

Butwal, 900 feet: 2 ♂; January.

Tansing, 4,600 feet: 3 ♂, 2 ♀; December, January.

Belawa, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 2 ♂, 1 ♀; December, January.

Mirchiya, 950 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♀; November.

Wing: ♂ 144, 151, 155, 155, 155, 157, 158, 159; ♀ 140, 142, 144, 151 mm.

One of the December males is immature, with whitish feathers still scattered through the under parts.

Though the white rictal spot can be found in each of the specimens, it is not distinct in some and only careful search can locate the few tiny white feathers.

This king crow was common from the lowlands to 3,500 feet.

Dicrurus leucophaeus beavani Vaurie. Ashy-bellied Drongo.

Dana, 5,000 feet: 1 ♂; December.

Godaveri, 5,000 feet: 1 ♀; May.

Wing: ♂ 148; ♀ 136 mm.

The female, in breeding condition, was one of a pair in the orchards of Kathmandu Valley.

Dicrurus caerulescens caerulescens (Linnaeus). White-bellied Drongo.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 2 ♂, 2 ♀; January.

Wing: ♂ 132, 132, 137; ♀ 125, 128 mm.

For comparison we have from the Central Provinces a male (wing 126) and from the United Provinces two females (wing 122, 128 mm.). Except for the smaller size of the southern bird, they are very similar.

This bird was occasionally found in the more open forests of the western *terai*.

Dicrurus aeneus aeneus Vieillot. Bronze Drongo.

Belbahadi, 3,500 feet: 2 ♀; December.

Marek, 3,000 feet: 1 ♂, ♂?, 1 ♀; January, February.

Wing: ♂ 131, ♂? 124; ♀ 122, 123, 124 mm.

As might be expected, this measurement for these birds from the north of the range is the maximum for those of the male and above average (120.5 mm.) for those of the female as given by Vaurie (1949c) for this subspecies.

The bronze drongo occurred in small flocks of five to ten birds in the foothills but was not often seen.

Dicrurus remifer tectirostris (Hodgson). Lesser Racquet-tailed Drongo.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Kathmandu Valley, 4,600 feet: 1 ♂; January.

Wing: 141, 145 mm.

This drongo was occasionally seen in the open forests of the *terai* and the scrub-jungles in Kathmandu Valley. It had a whistle: "*why-tu-tu-why.*"

Dicrurus hottentottus hottentotus (Linnaeus). Hair-crested Drongo.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 3 ♂, 1 ♀; November, January, February.

Tansen, 3,000 feet: 1 ♂; February.

Riri Bazaar, 3,000 feet: 1 ♀; November.

Pokhara, 3,000 feet: 4 ♂, 2 ♀; December, January, February.

Nagarjung, 5,000 feet: 1 ♂ juv.; February.

Raghunathpur, 900 feet: 1 ♀? juv.; January.

Wing: ♂ ad. 165, 169, 170, 172, 172, 173, 176, 178, 181; ♀ ad. 158, 169, 174 mm.

Vaurie (1955a) has shown that nomenclatural treatment of the size clines in India is not practical.

This bird was the commonest drongo in Pokhara Valley at 3,000 feet but was less common in the lowlands.

Dicrurus paradiseus grandis (Gould). Large Racquet-tailed Drongo.

Barmdeo Mandi, 1,500 feet: 1 ♂; January.

Dhangarhi, 900 feet: 2 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♂, 1 ♀; January.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: ad. ♂ 177; ad. ♀ 177. Outer tail feathers: ♂ 420; ♀ 390. Crest: 57, 49 mm. (Wing: 4 juv. ♂ 162, 166, 166, 171; 1 juv. ♀ 171 mm.).

This Nepal population (topotypical *grandis*) from near the northwestern extremity of the range of the species is evidently not the largest of the species. Ripley (1950a, p. 414) gives the wing of Nepal birds (♂ 164.5, 168.5; ♀ 159 mm.), and comments on their small size. For specimens from Nepal and vicinity Vaurie (1949c,

p. 328) gives: ♂ 173, 175, 177 mm. For the larger birds from the north Burma area Vaurie gives: wing 175–185 mm. (av. 181.25).

That the birds from the central part of India can be separated from the Nepal birds (as *rangoonensis*) on smaller size seems doubtful. Vaurie gives their measurements as 165, 168, 175 mm. We have five birds from Central Provinces (Baihar vicinity, Balaghat District, January, 1949), of which two males are certainly adult, with magnificent crests and tails, and no white on the under tail coverts. They measure: wing 174, 179; crest 57, 58 mm. (both have white tips to the axillaries, which we do not consider a character of immaturity). The other three birds, subadults, with white tipping to the under tail coverts, have wing ♂ 170; ♀ 164, 167; crest ♂ 42; ♀ 48, 53 mm.

Vaurie gives three races for peninsular India: *grandis*, for the north; *rangoonensis* for central India; and *paradiseus* for south of the Godavari River with wings of 153–167.5 (av. 160.25 mm.) for adult males. It seems doubtful if the range of the race *rangoonensis* (if admitted as a valid intermediate race, which Vaurie questions) should be extended to peninsular India. Rather the treatment of Stuart Baker (1922–30, **2**: 381) of a larger northern (*grandis*) and a smaller southern race (*paradiseus*) seems preferable.

Family **ORIOLIDAE**

Oriolus traillii traillii (Vigors). Maroon Oriole.

Dana, 8,000 feet: 1 ♀; December.

Kathmandu Valley, 6,000 feet: 1 ♀; February.

Wing: 147, 153 mm.

We have two females from Bengal (Mangpu and Sangsir, wing 141, 142 mm.) and compared with them the Nepal birds are larger; we have also one female from United Provinces (wing 147) which is similar to the Nepal birds. Five females of this race from Indo-China in our collection (wing 135, 139, 140, 140, 141 mm.) agree well with the Bengal birds.

The maroon oriole in winter was fairly common in the heavier forests of the lower Himalayas at 4,000 to 7,000 feet. It has a warbling note as well as a piercing *"ko-kay-wa."*

Oriolus xanthornus xanthornus (Linnaeus). Black-headed Oriole.

Butwal, 900 feet: 5 ♂ ad., 1 ♂ imm., 3 ♀; January, February.

Tansen, 4,500 feet: 1 ♀; December.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ ad. 138, 139, 143, 143, 144; ♀ 137, 139, 140, 140 mm.

These adults compare well with two Bengal (Haldibari) adults, except that the latter are slightly smaller (wing: ♂ 136; ♀ 135). Four United Province birds (wing: ♂ 139; ♀ 136, 138, 141) are closer in size to our Nepal series than Bengal birds.

Of the two Nepal immatures, one has a broad yellow band on the forehead and some yellow edgings to the black crown feathers; the other, in fresh plumage, has a narrow, incomplete yellow band on the forehead, and no yellow edgings to the black feathers of the crown, being very similar to a Ceylon immature in this.

Ceylon birds certainly average smaller than northern birds, with less yellow on inner secondaries, enabling *O. x. ceylonensis* to be recognized. Our Ceylon adult specimens (wing: ♂ 128, 132, 132; ♀ 127) are definitely small, but in the amount of yellow on the secondaries there is overlap with the Nepal birds. The advisability of recognizing a third race, *maderaspatanus*, for the intermediate birds of peninsular India is questionable.

Oriolus chinensis tenuirostris Blyth. Black-naped Oriole.

Raghunathpur, 900 feet: 1 ♂; December.

Wing: 155 mm.

This bird was feeding in a tall silk cotton tree (*Bombax*) with *D. x. xanthornus*. It was not common.

Family **CORVIDAE**

Corvus macrorhynchos intermedius Adams. Himalayan Jungle Crow.

Patale, 10,000 feet: 1 ♂; December.

Tukche, 9,000 feet: 1 ♂; November.

Bilauri, 900 feet: 1 ♂; December.

Wing: 310, 313, 326. Culmen: 56, 60, 62.

We have one topotypical female (wing 338, culmen 58 mm.) from Kashmir (Sind Valley) that Hellmayr (1929, p. 31) found to agree with Kashmir specimens in the British Museum and the United States National Museum. Our two high altitude Nepal males agree well with the Kashmir female in having little general gloss on the

hind neck and under parts, in having the slight gloss of the under parts greenish, in having pronounced white bases to the feathers of the hind neck, and in a similarly shaped bill. The male from 900 feet altitude is generally blacker, with more gloss on head and neck, and has grayish bases to the feathers of the hind neck. In size the Nepal males are in the lower part of the range of measurements given by Whistler and Kinnear (1932–37, **35**: 512) for males of this race.

We also have six birds of this species from Sikkim. They measure: wing: ♂ 344, 366; ♂ 307, 310+, 323, 338; culmen: ♂ 63, 65; ♀ 56, 57, 58, 59 mm. Compared with the single Kashmir and the Nepal birds of *intermedius* they are similar in bill shape. Two of the Sikkim females have the bases of the nape (and throat) feathers white, the other two have them gray, and the two males have them grayish white. In general color they are blacker and slightly more glossy than the Kashmir and two of the Nepal birds. Without comparative material we can only point out that these birds are tending in color toward the more blackish eastern races and that Vaurie refers Sikkim birds to *tibetosinensis*. In bill size they do not approach the birds from Assam and north Burma which Ali and Ripley (1948, p. 36) recognize as *tibetosinensis* on the basis of large size and big bill (wing: ♂ 342, ♀ 297, 322, 345; culmen: ♂ 71, ♀ 63, 65, 67 mm.). For further comments on this question see Vaurie, (1954b, p. 17).

Corvus splendens splendens Vieillot. Indian House Crow.

Tansen, 4,500 feet: 1 ♀; January.

Wing: 264 mm.

This bird was common around villages from the lowlands up to 5,000 feet.

Kitta erythrorhyncha occipitalis (Blyth). Red-billed Blue Magpie.

Butwal, 2,000 feet: 1 ♂; February.

Pokhara, 3,000 feet: 3 ♂; January, February.

Nagarjung, 5,000 feet: 1 ♀; March.

Raghunathpur, 950 feet: 1 ♀; January.

Chisapani, 950 feet: 1 ♀; December.

Harithumke, 3,000 feet: 1 ♀; December.

Wing: ♂ 199, 202, 204, 207; ♀ 187, 189, 196, 199 mm.

This bird was fairly common in villages as well as forests from the base of the foothills up to 6,000 feet. It has a piercing call: "*guirer-pig, pig.*"

Kitta chinensis chinensis (Boddaert). Green Magpie.

Belbahadi, 3,500 feet: 1 ♀ ; December.

Butwal, 1,500 feet: 1 ♀ ; February.

Wing: 140, 141 mm.

The post-mortem change due to age in these skins, which are 20 years old, is startling; they have changed to pale blue birds with brown wings. For a discussion of the effects of light on this bird's plumage see the three articles in the *Ibis* for 1938.

The green magpie inhabited the dense forest of the foothills, often in company with *Garralax l. leucolophus.*

Kitta flavirostris cucullata (Gould). Yellow-billed Magpie.

Dana, 7,000 feet: 1 ♀ ; November.

Ghasa, 8,000 feet: 1 ♂, 2 ♀ ; December.

Patale, 10,000 feet: 1 ♀ ; December.

Wing: ♂ 187; ♀ 176, 180, 182, 188 mm.

Ripley (1950a, p. 415) recorded *K. f. flavirostris* for eastern Nepal. The bird from western Nepal is usually given as *K. f. cucullata,* distinguished by being paler, especially below, with scarcely a tinge of lilac on the breast. Compared with four specimens of *flavirostris* from Sikkim, present material shows little difference on the upper side but on the under side is very much paler. These pale under parts are tinged creamy, as described for *cucullata.* These Nepal birds agree well with a Punjab specimen of *cucullata* except that the Punjab specimen, taken 1944, lacks the creamy tinge. It is a type of color that one would expect to fade and disappear in museum specimens.

Crypsirina vagabunda vagabunda (Latham). Bengal Tree Pie.

Riri Bazaar, 3,000 feet: 1 ♂, 1 ♀ ; November.

Butwal, 900 feet: 1 ♂, 1 ♀ ; January, February.

Tansen, 4,500 feet: 1 ♀ ; January.

Raghunathpur, 900 feet: 1 ♂, 1 ♀ ; December.

Wing: ♂ 157, 161, 162; ♀ 148, 149, 150, 152 mm.

We have another Nepal specimen from Bhikna Thoree collected January 20, 1926.

Crypsirina formosae himalayensis (Blyth). Himalayan Tree Pie.

Tansen, 4,500 feet: 3 ♂, 5 ♀; December–January.

Belawa, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♂; January.

Wing: ♂ 136, 140, 143, 144, 147; ♀ 134, 137, 137, 140, 143. Culmen: ♂ 30, 30, 30, 33, 36; ♀ 28, 29, 30, 30, 31 mm.

Of topotypes or near-topotypes we have one Sikkim bird (wing: ♂ 149) and four Bengal (Mangpu) specimens (wing: ♂ 143, 145; ♀ 136, 141). The larger west Himalayan race *occidentalis* shows a slight overlap with *himalayensis* in wing measurements as given in the original description: ♂ 145–160, ♀ 150–157 compared with 136–146 mm.

The Himalayan Tree Pie was very common in forests of the foothills.

Nucifraga caryocatactes hemispila Vigors. Himalayan Nutcracker.

Jomosom, 9,200 feet: 1 ♂; December.

Tukche, 9,200 feet: 1 ♂, 4 ♀; November, December.

Lete, 8,500 feet: 1 ♂; December.

Patale, 10,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 205, 212, 214, 221; ♀ 205, 209, 209, 210, 221 mm.

We also have one adult and three immatures from Sikkim, taken in May and June. The May immatures retain nestling plumage; the adult (June) is worn and faded, and very pale on the back.

Pyrrhocorax pyrrhocorax himalayanus (Gould). Red-billed Chough.

Tukche, 9,000 feet: 2 ♂, 1 ♀; November, December.

Jomosom, 9,200 feet: 1 ♂; December.

Wing: ♂ 297, 316, 319; ♀ 300 mm. Bill: ♂ 60, 55, 62; ♀ 55 mm. Tarsus: ♂ 58, 54, 58; ♀ 57 mm.

The choughs of the Himalayas from Kashmir to Szechman have been considered to represent one form, *himalayanus* of Gould, with

a type locality as Himalaya, restricted to Kumaon by Meinertzhagen (1927, p. 372).

There is considerable variation in length and thickness of bill, but the material in Chicago Natural History Museum indicates that there is constant size variation in these populations only in regard to the length of the tarsus, as is shown in the following figures:

Ladak	Wing	Bill	Tarsus
♂	293+	55	50
♂	306	57	50.5
♂	304	56	47
♂	318	55	50
Sikkim			
♂	305	56	58
♂	310	58	54
♂	324	58	59
♀	290	55	53
♀	305	55	54
♀	317	60	57
♀	322	57	58
Szechwan			
♂	314	60	57
♂	326	60	57
Yunnan			
♂	308	59	57
♂	311	61	55
♂	316	60	58
♂	318	59	57
♀	298	51	53
♀	299	58	55
♀	301	56	55

Meinertzhagen's measurements (1927, p. 372) also support this:

Ladak	Wing	Culmen	Tarsus
♂	315–340	57–61	47, 51, 53, 53, 56
♀	291	54	49
Sikkim			
♂	330, 332	57–60	59, 61
♀	309	55	59

Sharpe (1877, p. 147) recorded the tarsi of two Kashmir males as 2.0 and 2.05 inches (50–51 mm.), indicating that the Kashmir birds, like Ladak birds, have small tarsi, as one would expect.

To summarize the tarsal lengths:

Kashmir-Ladek
♂ (11) ..... 47–53, one 56 (aver. 50.8)
♀ (1) 49

Nepal-Yunnan
♂ (14) ..... 54–61 (aver. 57.3)
♀ (8) ..... 53–59 (aver. 55.5)

In these measurements of 25 males and 9 females, comparing them sex for sex, the presence of only one measurement, the 56 mm. of a Ladak bird, causes overlap of the two series.

There is no doubt that two subspecies are represented. The name *himalayanus* Gould, with the type from Kumaon, Sharpe (1877, pp. 147, 148) applies to the big-footed form, for the tarsus of the type measured 2¼ inches according to Gould, and 2.4 inches according to Sharpe (i.e. 57, 61 mm.), which thus gives this form a range from Kumaon and Nepal to Yunnan and Szechwan.

The small-footed form is related to *centralis* Stres. of the Tian Shan Mountains, and *brachypus* Swinhoe, of northern China. For comparison we have three specimens of *centralis* from the Tian Shan. Their measurements are: wing ♂ 311, sex? 305, 312; tail ♂ 163, sex? 161, 165; culmen ♂ 55, sex? 46, 57; tarsus ♂ 49, sex? 48, 48; distance between the tip of fifth and sixth primaries, ♂ 22, sex? 28, 23 mm.

Hellmayr (1929, p. 37) has compared our Ladak birds, which he referred to *himalayanus* (obviously overlooking the difference in tarsus size), with our Tian Shan birds, which he considered *centralis*. Their color and measurements he found the same, but he separated them because of the longer wing tip and the narrower primaries and rectrices of our *centralis*. It is true that the Ladak birds have a shorter wing tip, 16 and 18 mm. being the distance between the tips of the fifth and sixth primaries in the two specimens in which it can be measured. In the width of remiges and rectrices the Ladak birds seem intermediate between Tian Shan and Nepal-Yunnan birds.

These small-footed birds from Kashmir-Ladak may perhaps be separable from *centralis* on the basis of shorter wing tip and wider primaries, but on present material only, it seems advisable to unite them with *centralis*, which thus ranges south over Kashmir and Ladak at high altitudes. That it also may occur at lower altitudes in winter is shown by a specimen taken by Fleming at 5,500 feet in northern Punjab in February, 1944. It (sex?) measured: wing 294, tail 153, bill 51, tarsus 47, distance between fifth and sixth primary tips, 16 mm. It was one of a flock of about 200 choughs.

For a review of geographical variation in the chough see Vaurie (1954a and 1955b).

Garrulus lanceolatus Vigors. Black-throated Jay.

Sahajpur, 6,000 feet: 1 ♂; December.

Wing: 158 mm.

Compared with four adult birds from Mussoorie, Punjab (wing: ♂ 150, 155, 155; ♀ 149 mm.) our Nepal bird has a large wing, as reported by Ripley (1950a, p. 416).

This jay was occasionally seen in the oak forests (*Quercus incana*) at 6,000 feet.

Garrulus glandarius bispecularis Vigors. Himalayan Jay.

Chandragiri Ropeway, 7,000 feet: 1 ♂; April.

Phulchowk, 8,000 feet: 2 ♂; March.

Wing: 155, 162, 162 mm.

The Himalayan jay was occasionally seen in the oak forests at 7,000–8,000 feet. Its call has three syllables: "*ko-kaw-lee.*"

Family **PARIDAE**

Parus major nepalensis Hodgson. Nepal Gray Tit.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 2 ♂; December.

Tansing, 4,500 feet: 4 ♂, 2 ♀; December, January.

Belawa, 3,000 feet: 1 ♂; November.

Chisapani, 950 feet: 1 sex?; December.

Wing: ♂ 64, 66, 66, 67, 69, 69, 71; ♀ 63, 65, 66 mm. Three males from Mussoorie measured 67, 69, 70 mm.

Vaurie (1950b), in his review of the Indian forms of this species, had 13 Nepal birds. For a review of the species see Delacour and Vaurie (1950).

The gray tit was a common bird of the lowlands, especially in groves of acacias.

Parus monticola lepcharum Meinertzhagen. Green-backed Tit.

Sahajpur, 6,000 feet: 1 ♂; December.

Maildhap, 6,000 feet: 1 ♂; January.

Tansen, 4,500 feet: 1 sex?; January.

Dana, 6,000 feet: 1 ♂; November.

Tukche, 9,000 feet: 2 ♂, 1 ♀; November.

Kathmandu, 5,000 feet: 1 ♂; January.

Phulchowk, 8,000 feet: 1 ♂; April.

Okhaldhunga, 7,000 feet: 1 ♀; December.

Patale, 10,000 feet: 1 ♀; December.

Wing: ♂ 65, 67, 67, 68, 68, 69, 70; ♀ 66, 67, 68 mm.

Lacking adequate Simla birds (topotypical *monticolus*) we are following Vaurie (1950b, p. 37) in recognizing *lepcharum* as different from *monticolus*. We do have a series of specimens from Sikkim and vicinity, a series from Szechwan, and four birds from Yunnan (*yunnanensis*). Vaurie has pointed out there is a gradual increase in pigment from west to east, and that extreme variants in his Nepal-Sikkim-Darjeeling series approach the condition in both *monticola* and *yunnanensis*.

Our Nepal birds are very similar to our series from the Sikkim area, and a single Mussoorie bird is not very different. The west Nepal and Mussoorie birds may be slightly the palest. Compared with *yunnanensis* the latter average darker but the difference is not very great; the impression is that all these races are very similar and probably a name at each end of the cline will prove adequate.

The green-backed tit was common in forests from 4,000 to 10,000 feet.

Parus ater aemodius Blyth. Hodgson's Cole Tit.

Tukche, 9,500 feet: 1 ♂; November.

Patale, 10,000 feet: 1 ♀; December.

Wing: ♂ 61; ♀ 57 mm. Crest: ♂ 18; ♀ 20 mm.

We have four Sikkim birds in more or less worn plumage (wing: ♂ 60, 61; ♀ 58; sex? 59 mm.; crest: ♂ 16, 19; ♀ 16 mm.) that are usually referred to this race.

Parus xanthogenys xanthogenys Vigors. Yellow-cheeked Tit.

Tansing, 4,600 feet: 3 ♂, 2 ♀; December, January.

Godaveri, 5,000 feet: 1 ♂, 1 ♀; January, February.

Manebhanjan, 5,000 feet: 1 ♂; December.

Wing: ♂ 68, 68, 68, 70, 71; ♀ 65, 70, 72 mm.

We have two male specimens from near Mussoorie, near the type locality in northern United Provinces (wing: 72, 73 mm.), and our Nepal specimens agree well with them.

Parus rubidiventris rubidiventris Blyth. Rufous-bellied Crested Tit.

Tukche, 9,200 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 70; ♀ 66 mm.

These two specimens have the rufous belly and breast as described for this form. Vaurie (1950b, p. 41) includes this form with *rufonuchalis* in one species. However, a single specimen of *P. rufonuchalis* was also taken at Tukche (see next form). Vaurie has kindly checked the identification of these specimens.

Parus rubidiventris rufonuchalis Blyth. Simla Black Tit.

Tukche, 9,200 feet: 1 ♀; December.

Wing: 71 mm.

This is a surprising specimen. Compared with the two *rubidiventris* taken at Tukche two days earlier it is noteworthy in being slightly larger than the female; in having a strong patch of ochraceous at the base of the white nuchal spot, although it is otherwise similar above; and in having the breast and belly slate gray, not rufous.

Ripley (1950a, p. 407) and Vaurie (1950b, pp. 41 ff.) have both recorded the very different *Parus rufinuchalis beavani* from extreme eastern Nepal. We have a series of 11 *beavani* from Sikkim. Compared with them the Nepal bird is grayer, less buff-tinged on the belly, very much paler gray, slightly olive-tinged on the back (in this like *rubidiventris*), and with pronounced ochraceous in the nuchal patch. From the descriptions it seems to be closer to the western *P. r. rufonuchalis*.

Dr. Vaurie has kindly examined this specimen and compared it with his material in New York. He writes that it is in every way identical with specimens of *rufonuchalis* from Rampur in northern Punjab. Too much should not be read into the occurrence of a single specimen of *rufonuchalis*, in winter, in the range of *rubidiventris*. Until better evidence to the contrary is found it seems advisable to consider them conspecific.

Parus dichrous dichrous Blyth. Brown Crested Tit.

Tukche, 12,000 feet: 2 ♂; December.

Patale, 9,500 feet: 3 ♂, 3 ♀; December.

Wing: ♂ 65, 69, 69, 69, 71; ♀ 67, 67, 68 mm.

These two specimens can be considered topotypical. They are in fresh plumage and are deep buff, almost ochraceous below. Sikkim birds are usually referred to *dichrous*. The four Sikkim birds we have (wing: ♂ 69, 70, 73; ♀ 68 mm.), taken March to May, are very much paler below. Presumably this difference is the result of wear and fading.

Sylviparus modestus modestus Burton. Yellow-browed Tit.

Kathmandu Valley, 5,500–8,200 feet: 2 ♂, 2 ♀; January, February, and April.

Wing: ♂ 61, 61; ♀ 62, 62 mm.

We have for comparison three Sikkim birds (wing: ♂ 58; ♀ 55, 60 mm.), which are similar to our topotypical birds. For review of the species see Vaurie (1950b, pp. 49–51).

This was not a common species. Its call is a weak, high-pitched "*psit.*"

Aegithalos concinnus rubricapillus (Ticehurst). Sikkim Red-headed Tit.

Sahajpur, 6,000 feet: 1 ♀; December.

Tansing, 4,500 feet: 1 ♀, 1 sex?; December, January.

Godaveri, 5,000 feet: 1 ♂, 2 ♀; January, March.

Phulchowk, 8,800 feet: 1 ♀; April.

Okhaldhunga, 7,000 feet: 1 ♀; December.

Wing: ♂ 50; ♀ 49, 49, 50, 50, 50, 51; 1 sex? 51 mm.

There is a gradual change from west to east in this group between the larger, lighter birds of United Provinces and the smaller darker birds of Sikkim. We have, for comparison, four Mussoorie birds (wing: ♂ 54, 55, 57; ♀ 52 mm.) and six Sikkim birds (wing: ♂ 50, 51, 51, 52; ♀ 46, 48 mm.). This difference is great enough to show that *rubricapillus* and *iredalei* should be recognized as did Ripley (1950a, p. 407) and *contra* Vaurie (1950b, p. 65).

The Nepal birds from west to east exhibit, as might be expected, a graded series based on color. Wing measurements show little: Far west, ♀ 49; west, ♀ 50, 51; central, ♂ 50, ♀ 50, 50, 49; east, ♀ 51.

Possibly eastern birds should be referred to *rubricapillus* and the west Nepal birds to *iredalei*, but all the birds as a series are closer to Sikkim birds and we refer them all to *A. c. rubricapillus*.

Aegithaliscus ioschistos (Blyth). Rufous-fronted Tit.

Patale, 10,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 58; ♀ 55 mm.

This bird is new to our collections.

Several rufous-fronted tits were in the fir forests in a group of mixed species including other Paridae. Ripley (1950a, p. 408) thought that this bird would not be found west of the Arun Kosi, but it extends westward at least to Okhaldhunga District.

Family SITTIDAE

Sitta himalayensis himalayensis Jardine and Selby. Himalayan Nuthatch.

Dana, 6,000 feet: 1 ♂, 1 ♀, 1 sex?; November, December.

Tansen, 6,000 feet: 1 ♂, 1 ♀, 1 sex?; December, January.

Patale, 10,000 feet: 1 ♂, 1 ♀?; December.

Okhaldhunga, 7,500 feet: 1 ♀; December.

Godaveri, 6,000 feet: 1 ♀?; January.

Wing: ♂ 72, 75, 77; ♀ 71, 71, 72, 72, 74; sex? 72, 72 mm. Culmen: ♂ 16, 16, 15; ♀ 15, 15, 15, 16, 17; sex? 16, 16 mm.

A series from Sikkim in our collection measures: wing ♂ (8) 71–76 (av. 72.8), ♀ 69, 79; culmen ♂ 16–17.5; ♀ 16–17.5 mm. Four Mussoorie birds measure: wing ♂ 75, 77; ♀ 74, 73; culmen ♂ 16, 16; ♀ 15, 15 mm.

For a discussion of the west to east cline of decreasing size, in this species, see Vaurie (1950a, p. 10).

Sitta europaea almorae Kinnear and Whistler. Chestnut-bellied Nuthatch.

Butwal, 900 feet: 1 ♀; November.

Belawa, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 4 ♀; December, January, February.

Tansing, 4,600 feet: 4 ♂, 1 ♀; December, January.

Kathmandu, 4,800 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ 81, 83, 83, 84, 84, 85, 85; ♀ 78, 79, 79, 81, 81, 82 mm.

Ripley (1950a, p. 408) referred Nepal hill specimens to *cinnamoventris* of the eastern Himalayas, but Vaurie (1950a, p. 6), while pointing out that Nepal specimens are intermediate between *cinnamoventris* and the paler western Himalaya form *almorae*, referred his series to the latter. Without adequate comparative material, we are following Vaurie. As a number of recent authors have pointed out, it seems advisable to include the forms often referred to as the species *castanea* in *S. europaea*.

This common bird was usually in pairs. Its call was a loud *"bzirp."*

Sitta frontalis frontalis Swainson. Velvet-fronted Nuthatch.

Barmdeo Mandi, 950 feet: 1 ♂, 1 ♀; January.

Tansen, 4,600 feet: 2 ♂, 6 ♀; December, January.

Riri Bazaar, 3,000 feet: 1 ♂, 1 ♀; November.

Pokhara, 3,000 feet: 1 ♂; January.

Kathmandu Valley: 2 ♂; January.

Tari, 1,000 feet: 1 ♀; December.

Wing: ♂ 71, 72, 73, 73, 74, 76; ♀ 69, 69, 70, 70, 71, 72, 72, 72, 73 mm.

This species is interesting in having the northern populations, in north India, smaller rather than larger in size compared with birds from southern India. If *corallina* Hodgson 1836 were valid, the present specimens, being topotypical, would be that form. Though widely recognized in recent years, Vaurie (1950a, p. 11) finds that the amount and pattern of variation in size in India make it unsatisfactory to separate races there. An additional hazard in taxonomy in this species is the darkening of the lilac under parts with museum age.

This bird was common in the *terai* and lower foothills where it was usually in twos with other species. Its call is a *"chip chip chee chee chee chee."*

Family CERTHIIDAE

Certhia familiaris mandellii Brooks. Nepal Tree Creeper.

Tukche, 12,000 feet: 2 ♂, 1 ♀; November, December.

Patale, 10,000 feet: 1 ♀, 1 sex?; December.

Wing: ♂ 64, 70; ♀ 63, 69; sex? 67 mm.

Ripley (1950a, p. 409) considered this subspecies an eastern form, extending westward only to eastern Nepal, but Vaurie (1950a, p. 35) recorded it as far west as southern Punjab.

We have six slightly worn Sikkim birds, topotypes of *mandellii*, taken in March, for comparison. The Nepal birds are very similar, except that they are whiter below, possibly the result of being fresher, and have the flanks slightly more buffy-ferruginous.

Certhia discolor discolor Blyth. Sikkim Tree Creeper.

Dana, 6,000 feet: 1 ♀; December.

Beni, 3,500 feet: 1 ♂; November.

Badamachli, 1,000 feet: 1 sex?; December.

Phulchowk, 6,000 feet: ♀?, February.

Godaveri, 5,000 feet: 1 ♀; February.

Wing: ♂ 70; ♀ 66, 67, 68; sex? 70 mm.

Compared with two near topotypes (from Mangpu, northern Bengal) these Nepal specimens are slightly lighter and more buffy below, and slightly duller above. Vaurie (1950a, p. 38), in comparing a Nepal specimen with Sikkim-Darjeeling birds, did not note these differences in his very worn specimen but comments that the Nepal specimen has a paler crown, not apparent in our material.

Certhia nipalensis Blyth. Blyth's Tree Creeper.

Ulleri, 8,000 feet: 1 ♂; December.

Patale, 10,000 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 69, 71, 73; ♀ 66 mm.

This central Nepal specimen seems to be the most westerly record of the species, which Ripley (1950a, p. 409) suggested might find the western limit of its range in eastern Nepal.

This specimen, compared with two Sikkim birds (wing: ♂ 75, March 23, fairly fresh plumage; ♀ 78, May 14, worn plumage), is somewhat richer below, with the buffy wash extending onto the throat, and above has wider fulvous crown stripes and less black, more brown, hind neck. Mayr (1940–41, pt. III, p. 214) has recorded that Burma birds are slightly colder in coloration than Sikkim birds. Perhaps when more extreme western material becomes available it may be necessary to separate a richer-colored western and a colder-colored eastern race.

Certhia himalayana infirma Ripley. Dark Himalayan Tree Creeper.

Baila, 3,500 feet: 1 ♂; December.

Sahajpur, 6,000 feet: 3 ♂; December.

Wing: 67, 69, 69, 70 mm.

We have three Mussoorie birds (wing: ♂ 68; ♀ 66; sex? 64 mm.) for comparison. The Nepal birds are darker on the flanks, back, and tail, supporting Ripley's descriptions for *C. h. infirma*.

Tichodroma muraria nepalensis Bonaparte. Himalayan Wall Creeper.

Riri Bazaar, 3,000 feet: 1 ♀; November.

Baglung, 3,000 feet: 1 ♂; November.

Tukche, 9,000 feet: 1 ♂, 1 ♀; December.

Tansen, 4,500 feet: 1 ♂, 1 ♀; December.

Sun Kosi, 1,800 feet: 1 ♂, 1 ♀[= ♂]; December.

Seventeen miles west of Kathmandu, 3,500 feet: 1 ♀; January.

Wing: ♂ 100, 105, 106, 108; ♀ 92, 97, 98, 99 mm. Bill from nostril: ♂ 19, 18.5, 18, 18; ♀ 18.5, 18, 20, 19.5 mm.

The measurements place this bird with the short-billed, long-winged eastern race that is said to be slightly darker. For a discussion of these races see Vaurie (1950a, p. 29).

Family **TIMALIIDAE**

Pellorneum ruficeps mandellii Blanford. Mandelli's Spotted Babbler.

Marek, 3,000 feet: 1 ♀; January.

Tansing, 4,600 feet: 6 ♂, 2 ♀, 1 sex?; December, January.

Pokhara, 3,000 feet: 1 ♀; December.

Narayangarh, 1,500 feet: 1 ♀; April.

Nagarjung, 5,500 feet: 1 ♀; March.

Raghunathpur, 950 feet: 1 ♂, 1 ♀; January.

Sun Kosi, 1,800 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 71, 72, 72, 73, 73, 73, 73; ♀ 68, 68, 68, 69, 69, 69, 72 mm.

These birds compare well with two specimens in our collection from near the type locality, one from Darjeeling and one from Sevoke in Bengal.

This babbler was one of the most common birds of the foothill forests.

Pomatorhinus ruficollis ruficollis Hodgson. Nepal Rufous-necked Scimitar Babbler.

Tansen, 6,000 feet: 2 ♂, 3 ♀; January.

Lumpek, 6,000 feet: 1 ♀; November.

Godaveri, 5,000 feet: 2 ♂, 1 ♀; January, February.

Phulchowk, 6,000 feet: 1 ♂, 1 juv.; March, April.

Okhaldhunga, 7,500 feet: 2 ♀; December.

Wing: ♂ ad. 75, 79, 82, 82, 83; ♀ ad. 73, 74, 76, 78, 79, 80, 82.

This bird was not uncommon in the forested foothills of Nepal. It kept to thick bushes near the ground. Its call is a *"pra---pre-deeeed."*

Pomatorhinus montanus schisticeps Hodgson. Slaty-headed Scimitar Babbler.

Butwal, 1,500 feet: 1 ♀; January.

Pokhara, 3,000 feet: 3 ♂; January, February.

Dhangarhi, 1,500 feet: 1 ♀; December.

Belbahadi, 3,500 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 99, 100, 100, 101, 107; ♀ 95, 96, 98 mm.

Two males and a female have the iris recorded as yellow or golden.

Pomatorhinus erythrogenys ferrugilatus Hodgson. Hodgson's Rusty-cheeked Scimitar Babbler.

Marek, 3,000 feet: 1 ♂; January.

Tansing, 4,600 feet: 1 ♂, 9 ♀; December, January.

Lumpek, 6,000 feet: 1 ♀; November.

Pokhara, 3,000 feet: 2 ♀; December, January.

Baila, 3,000 feet: 1 ♀; December.

Belbahadi, 3,500 feet: 1 ♂; December.

Sahajpur, 6,000 feet: 2 ♀; December.

Godaveri, 5,000 feet: 1 ♂, 1 ♀; February.

Okhaldhunga, 7,500 feet: 1 ♀; December.

Wing: ♂ 96, 97, 98, 101; ♀ (15) 90–96 (av. 92.3 mm.).

Ripley (1950a, p. 391) recognizes three races: *erythrogenys* (northwest Himalayas); *ferrugilatus* (Nepal) and *haringtoni* (Sikkim and Darjeeling). The present Nepal series is a variable intermediate group.

Compared with five specimens of *erythrogenys* from Mussoorie, the Nepal birds are all darker below, as Ripley found, with darker flanks and heavier gray markings on the throat.

We also have a specimen of *haringtoni* from Mangpu, Bengal (nearly topotypical; ♀ wing 90 mm.), which has a heavily gray-streaked throat. Our two birds from eastern Nepal and a few from western Nepal have almost as much gray on the throats as the Bengal specimen, but the whole series of Nepal birds average less gray on the throat.

Pnoepyga albiventer pallidior Kinnear. Western Scaly-breasted Wren Babbler.

Belbahadi, 3,500 feet: 1 ♀; December.

Lumpek, 6,000 feet: 1 ♀; November.

Dana, 6,500 feet: 1 ♀; November.

Phulchowk, 9,000 feet: 1 ♂, 1 sex?; April.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Wing: ♂ 57, 62; ♀ 59, 60, 60; sex? 57 mm.

Our material supports Kinnear's (1937, p. 255) conclusions that the species is dimorphic. Of these Nepal female specimens one is in the rust-colored, the others in the white under parts phase. Of four Sikkim birds, all in the rust-colored phase, two are males and two females, while a female from Mangpu, Bengal, is in the white phase with "correctly sexed" penciled on the back of the label.

For comparison we have the above Sikkim and Bengal birds and a single Mussoorie bird in rusty plumage. Our Nepal and Mussoorie birds in rusty plumage fall within the considerable range of variation on the under parts of the Sikkim-Bengal birds; however, on the upper parts all the Nepal-Mussoorie birds agree in being olive brown, and contrast with the Sikkim-Bengal series, which are darker, richer umber brown.

Kinnear (1924, p. 10) separated the western Himalayan birds as *pallidior* (type locality Dharmsala; range Dharmsala to Garwhal) and the eastern birds as *albiventer* Hodgson, 1837 (type locality Nepal, range Nepal eastward with *squamata* Gould, type locality Cachar), a synonym.

P. a. pallidior was characterized as like *albiventer* but dark olive, not dark umber above, and paler below in the rufous phase.

It appears that the paler western bird ranges eastward over much of Nepal. Ripley (1950a, p. 391) has already referred his single west Nepal bird to the pale western form.

As Hodgson's types of *albiventer* in the British Museum from "Nepal" are the dark eastern bird according to Kinnear, evidently some restriction of the type locality to eastern Nepal is in order.

Pnoepyga pusilla Hodgson. Lesser Wren Babbler.

Ainthpur, 900 feet: 1 ♂; January.

Godaveri, 5,800 feet: 1 ♂; February.

Phulchowk, 7,400 feet: 1 ♂; April.

Wing: 49, 51, 54 mm.

Two of our Nepal specimens are albescent and the other is in the rusty phase.

Stachyris pyrrhops Blyth. Red-billed Babbler.

Dana, 5,000 feet: 1 ♀; November.

Ghasa, 8,000 feet: 1 ♀; November.

Barmdeo Mandi, 1,000 feet: 1 ♂; January.

Sahajpur, 6,000 feet: 1 ♀; December.

Tansing, 4,600 feet: 1 ♂, 2 ♀; December, January.

Nagarjung, 6,000 feet: 1 ♀; March.

Godaveri, 5,500 feet: 1 ♂; March.

Wing: ♂ 53, 53.5, 55; ♀ 52, 52, 53, 53, 53, 54 mm.

Calls of this species include *"phir - dee - dee," "chur - de - du,"* and when disturbed, a slow *"peer - ve - ve."*

Stachyris nigriceps nigriceps (Hodgson). Black-throated Babbler.

Ranibas, 2,500 feet: 1 ♂, 2 ♀; January, February.

Godaveri, 5,000 feet: 1 ♂; January.

Wing: ♂ 59, 60; ♀ 59, 63 mm.

This series is topotypical. Two birds from Bengal (wing: sex? 61; ♀ 58 mm.) compare closely with the Nepal birds.

This babbler inhabited the heavy forests of the foothills, often moving near the ground in groups of 5 to 20 birds, frequently in company with other species.

Dumetia hyperythra hyperythra (Franklin). Rufous-bellied Babbler.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 54.5 mm.

A single specimen was taken in a forest from a flock of eight or ten birds.

Macronus gularis rubricapilla (Tickell). Yellow-breasted Babbler.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Ainthpur, 950 feet: 1 ♂; January.

Malakheti, 1,000 feet: 1 ♂; December.

Tansen (10 miles south), 2,500 feet: 1 ♂, 1 ♀; February.

Narayangarh, 1,500 feet: 1 ♀, 1 sex?; April.

Raghunathpur, 950 feet: 1 ♂, 1 ♀, 1 sex?; January.

Tari, 1,000 feet: 1 ♂; December.

Wing: ♂ 59, 60.5, 61, 62, 62; ♀, 56, 58, 58, 58 mm.

This babbler was one of the commonest throughout the Nepal *terai* in east and west Nepal and in the foothills up to 3,000 feet, although it has not been recorded before from central or west Nepal. It was found in light and heavy forests in groups of 10–20, among bushes and undergrowth. Along with this species were gray tits, willow warblers and flycatcher-shrikes. The call was of three syllables: *"bizz-chir-chur."*

Timalia pileata bengalensis Godwin-Austin. Bengal Red-capped Babbler.

Barmdeo Mandi, 950 feet: 2 ♂, 1 ♀; January.

Bilauri, 900 feet: 1 ♂; December.

Wing: ♂ 60, 61, 61; ♀ 58 mm.

The Bengal red-capped babblers were found by us only occasionally in west Nepal, where they frequented open scrub areas in groups of three or four. They kept up a quiet inter-communication: *"tit, tit."*

Chrysomma sinense sinense (Gmelin). Yellow-eyed Babbler.

Dhangarhi, 900 feet: 3 ♂; November, December.

Wing: 65, 66, 66 mm.

Five birds from United Provinces, *C. s. hypoleucus* (Ticehurst) (wing: ♂ 68, 68, 68, 69; ♀ 66 mm.), are lighter both above and below than the Nepal specimens.

This species was fairly common in the *terai* of west Nepal, where it occurred in parties of 5 to 15 in dry grass and low bushes along the side of roads. Its usual call was a faint *"tip, tip"* but when the bird was disturbed the note was a *"churrrrr churrrrr."*

Paradoxornis nipalensis (Hodgson). Ashy-eared Suthora.

Phulchowk, 8,900 feet: 1 ♂, 2 ♀, 1 sex?; April, May.

Wing: ♂ 52; ♀ 48, 51; sex? 51 mm.

Small parties of 3 to 10 birds worked through *ringal* bamboo forests in mixed flocks with species of *Aegithaliscus* and *Fulvetta.*

Turdoides earlii (Blyth). Striated Babbler.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 94 mm.

This species was not common and our single bird was found in tall, dry grass.

Turdoides nipalensis (Hodgson). Spiny Babbler.

Belbahadi, 3,500 feet: 3 ♂, 4 ♀; December.

Tansen, 4,700 feet: 1 ♂, 2 ♀; December.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 79, 84, 85, 85, 86; ♀ 81, 82, 82, 83, 83, 85, 87 mm. Tail: ♂ 106, 113, 115, 116, 117; ♀ 107, 109, 110, 111, 111, 113, 117 mm. Exposed culmen: ♂ 21, 22, 22, 23, 23; ♀ 20, 21, 22, 22, 22, 24, 26 mm. Tarsus: ♂ 30, 30, 31, 32, 32; ♀ 30, 31, 31, 31, 31, 33, 33 mm.

Ripley (1950a, p. 393), who collected one specimen, has sketched the scant history of this species. He was able to locate only four other skins extant in museum collections, three in London and one in New York.

Ripley maintains the genus *Acanthoptila* Blyth 1855 for this single species. Earlier, Delacour (1946, pp. 20, 26) had merged this genus with *Turdoides,* with little comment. Ripley maintains that *Acanthoptila* is a link between *Garrulax* and *Turdoides* and lists as generic characters distinctive spiny shafts of plumage, and reduced rictal bristles, which are more prominent, however, than in *Turdoides.*

In shape of bill, nostrils, under wing coverts and legs Ripley says the species is typical *Garrulax*. However, on these characters it seems to agree well also with more or less streaked *Turdoides* species such as *caudata*, *earlei*, *malcolmi*, and *squamiceps*, with which Delacour associated it. The increased prominence of the rictal bristles is not very great. We are left with the single character of spiny plumage. This has evidently appeared more than once in this group—incipient on the head of *earlei* and somewhat developed in the African *rubiginosa*, for example. The African *jardinei* has a still more specialized plumage with scale-like tips of the breast and neck feathers. It seems inadvisable to use this as a generic character.

Ripley's argument that *Acanthoptila* should be recognized as a link between *Garrulax* and *Turdoides* loses much of its force when taken with his earlier statement (1946, p. 223) that *Turdoides* is "a rather poorly defined group, transitional in some ways between the laughing thrushes to which they are closely allied, and the smaller scimitar babblers."

In general appearance, the short curved wings are rather striking, but it seems advisable to treat this bird, as Delacour has done, as one of the primitive, streaked *Turdoides*.

The amount of white on the throat varies considerably and to the same extent in both males and females, and in one or two specimens the throat is mostly brown, with only a little white mottling, a little white mixed in ear coverts and below eye, and white eye ring; another, also a female, has throat, side of face, including auriculars, and lores completely white.

The spiny babblers gather in groups of 3 to 10, often in company with the scimitar babbler, *Pomatorhinus erythrogenys ferrugilatus*, and they search through leaves on the ground near cultivations or in fields of *Artemisia*. They work a small area thoroughly; if slightly disturbed they disappear, only to come creeping out a minute or two later. Spiny babblers, when frightened, give a low "*churrrrr, churrrr*" and get up with a whir of wings, following each other across an open field to the shelter of low or medium-sized trees, where they move from branch to branch. The usual call is a clear "*el-el-el-ele*."

Turdoides somervillei terricolor (Hodgson). Jungle Babbler.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 2 ♂; January.

Tansen, 2,500 feet: 1 ♂, 1 ♀; January.

Raghunathpur, 900 feet: 1 ♂, 2 ♀; December, January.

Wing: ♂ ad. 107, 108, 109, 111; ♀ ad. 99, 107 mm.

The jungle babbler was common in the lowlands of Nepal and ranged upward to the lower valleys in the foothills.

Garrulax albogularis albogularis (Gould). White-throated Laughing Thrush.

Baila, 3,000 feet: 3 ♀; December.

Belbahadi, 3,500 feet: 1 ♀; December.

Dana, 7,000 feet: 1 ♂; November.

Ulleri, 7,500 feet: 1 ♂; December.

Shivpuri, 6,500 feet: 1 ♂; January.

Godaveri, 6,000 feet: 1 ♀; January.

Wing: ♂ 131, 133, 135; ♀ 122, 131, 132, 132, 134 mm.

These are richly colored specimens and a series from Sikkim (wing: ♂ 130, 135, 136, 136; ♀ 130, 130, 130, 132 mm.) agrees well with them, as would be expected. The distinctness of *G. a. whistleri* (type locality Simla) has been questioned by Berlioz (1930, p. 135). This race was described as paler above and below, and larger. We have five specimens from United Provinces and the Punjab (wing: 5 ♂ 136, 137, 138, 139, 140 mm. In size there is a slight difference; the upper parts may be very slightly paler, but on the under parts the Punjab-United Provinces specimens are considerably paler than the Nepal-Sikkim birds. Presumably *whistleri* can be separated on the characters.

The pattern of variation in this species is interesting: Nepal-Sikkim is inhabited by a race with richly colored under parts; the widely separated western Himalayas area and the China and Indo-China area have different populations of paler birds that are very similar, and in Yunnan is a bird described as still paler.

This species is found in parties from 15 to 40. They are rather noisy birds, chattering continually in a musical "*chip, chip, chip, chip.*" When disturbed they raise an alarm—"*qoik, tsueeeeeee*"—and fly through the trees. Much time is spent bouncing around on the ground and pecking for food while one or more watch from an elevation. One bird flew to a stump with a morsel and pecked at it for some time but none of the others near by attempted to rob him. Kalij pheasants occasionally feed nearby.

Garrulax moniligera moniligera (Hodgson). Indian Necklaced Laughing Thrush.

Marek, 3,000 feet: 1 ♂, 1 ♀; January.

Pokhara, 3,000 feet: 1 ♀; January.

Narayangarh, 1,500 feet: 1 ♂, 1 ♀; April.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ 119, 121, 126; ♀ 116, 118, 122 mm.

We also have a Bengal (Sangsir) specimen of this race that agrees well with the Nepal specimens. Stuart Baker says that in this race the ear coverts are black and white, varying much individually. In these three birds it is fairly uniform, the ear coverts being more than half black in each case. We have two specimens of Ripley's recently described *G. m. badius*, 1948, from Margherita, Assam, taken in 1901. This race was contrasted with *G. m. moniligera* as darker, more saturated with rufous, particularly in the nuchal collar and the under parts; white on ear coverts much reduced. Our Margherita specimens, compared with Nepal-Bengal birds, are considerably more rufous generally above, possibly the result of foxing. On the under parts the rufous is not darker, but may be, on the average, slightly more extensive; one bird has as much white in the ear coverts as our Nepal birds, the other very little.

Garrulax pectoralis pectoralis (Gould). Indian Black-gorgetted Laughing Thrush.

Chisapani, 950 feet: 4 ♂, 3 ♀; December.

Tari, 950 feet: 1 ♂; December.

Raghunathpur (11 miles northeast): 1 ♀; January.

Wing: ♂ 144, 147, 147, 149; ♀ 139, 141, 141, 143 mm.

This species was one of the commonest babblers in the eastern *terai* around Chisapani. Parties of from 10 to 25 fed on the forest floor much like white-crested laughing thrushes. A racquet-tailed drongo almost invariably attached itself to the party and, from a vantage point in the trees above, seemed to act as leader and watchman. In its wake followed from one to four species of woodpeckers. These laughing thrushes were bold and when frightened flew through trees for a short distance and again descended to the ground.

Garrulax striatus vibex Ripley. Nepal Striated Laughing Thrush.

Ulleri, 7,500 feet: 1 ♂; December.

Godaveri, 6,000 feet: 2 ♂, 2 ♀; January, February.

Wing: ♂ 142, 144, 146; ♀ 138, 139 mm.

For comparison, we have one *striatus* from Mussoorie (wing: sex? 153) and four *sikkimensis* from Sikkim, Darjeeling and nearby Mangpu in Bengal (wing: ♂ 132, 136, 140, 146 mm.). My observations on these birds agree with those of Ticehurst, who wrote that the Nepal birds are small like *sikkimensis*, but in color are closer to *striatus*. Thus, *vibex* Ripley 1950 is not an intermediate in each of a set of characters, but is in their summation. The advisability of naming intermediate populations is generally troublesome and in this species is pointed up by the situation in Bhutan, where Kinnear (1937, p. 34) records intermediate birds, specimens like *sikkimensis*, and a specimen approaching *austeni* of farther east.

These laughing thrushes were common at Godaveri in heavily wooded valleys, where they went about in twos and threes. We seldom saw the bird in western Nepal.

Garrulax leucolophus leucolophus (Hardwicke). White-crested Laughing Thrush.

Butwal, 1,500 feet: 1 ♂, 1 ♀; November.

Tansen, 4,500 feet: 2 ♂; December, January.

Pokhara, 3,000 feet: 1 ♂, 2 ♀; January, February.

Wing: ♂ 124, 126, 129, 132; ♀ 129, 132 mm.

We have a single western Himalayan specimen (Dehra Dun) for comparison. Three birds from Bengal (Mangpu and Sangsir) are slightly richer colored below, perhaps an approach to the more eastern *hardwickii* Ticehurst 1926. They measure: wing ♂ 124, 126; ♀ 130 mm.

White-crested laughing thrushes are found in parties of 10–20 in well-wooded areas in the lower valleys of the foothills. They have a wild laugh which they give as a whole group. It sounds like: "*Bobby's shirt tail's out, chou, chou, chou, ha, ha, ha!*" Much of their time is spent on the ground, where they are occasionally accompanied by the red jungle fowl, green magpies, or other babblers.

Garrulax variegatus variegatus (Vigors). Variegated Laughing Thrush.

Tukche, 9,000 feet: 3 ♀; November.

Lete, 8,500 feet: 1 ♂; December.

Wing: ♂ 109; ♀ 98, 99, 100 mm.

These three Nepal birds show some variation in the amount of ferruginous tinge to the plumage, the male having the least. Berlioz (1930, pp. 24, 25) does not recognize a western race from Kashmir, saying that the lack of a golden olive tinge on the wings and tail quills as described for *simile* is not restricted geographically but is a type of coloration that appears throughout the range of the species. Our four Nepal birds all have this golden olive pronounced on wing and tail quills.

Of birds often referred to *simile* we have six from Mussoorie and one from Simla. The Mussoorie birds (wing: ♂ 101, 101, 102, 105; ♀ 102, 103 mm.) are similar in color to the Nepal birds; the Simla specimen differs in having the golden olive of remiges and rectrices replaced by a pale brownish buff (not slate blue as described for *simile*). These we also include in *variegatus*.

Garrulax rufogularis rufogularis (Gould). Rufous-chinned Laughing Thrush.

Pharping, 6,000 feet: 1 ♂; February.

Nagarjung, 5,500 feet: 1 ♂; March.

Wing: 94, 96 mm.

Garrulax rufogularis grosvenori Ripley

Pokhara, 3,000 feet: 2 ♀; January.

Wing: 88, 89 mm.

This species was found in parties of two to three birds in scrub jungle areas where the birds keep fairly close to the ground.

Garrulax ocellatus ocellatus (Vigors). White-spotted Laughing Thrush.

Patale, 10,000 feet: 6 ♂, 2 ♀; December.

Wing: ♂ 122, 124, 126, 133, 134, 135; ♀ 124, 128 mm.

This bird appeared after cold weather at our camp (10,000 feet) at Patale. There were from five to eight in a party, which worked through thick rhododendron shrubs. The common sound was a subdued *"pie, pie, pie, pie."* At times one would perch on the top of a shrub and in clear, ringing notes call *"Q - twe - twe - tweee, koi-koi."*

Garrulax caerulatus caerulatus (Hodgson). Gray-sided Laughing Thrush.

Godaveri, 5,500 feet: 1 ♀?; January.

Phulchowk, 8,400 feet: 1 ♂, 2 ♀; March.

We also have two Sikkim birds (wing: ♂ 109; ♀ 107 mm.).

This species was found in small groups of three to six. They were quiet and timid in winter, passing quickly out of sight through low bushes. In spring we found them in taller trees and much bolder. A variety of loud call notes included: *"ovik-chorrr," "brain fever,"* and *"new jericho" (do, te, fa, la).*

Garrulax lineatus lineatus (Vigors). Nepal Streaked Laughing Thrush.

Tukche, 9,000 feet: 3 ♂, 3 ♀; November, December.

Belbahadi, 3,500 feet: 1 ♀; December.

Patale, 9,000 feet: 1 ♀; December.

Okhaldhunga, 8,000 feet: 1 ♀; December.

Wing: ♂ 77, 77, 79; ♀ 72, 74, 77, 78, 80, 80 mm.

Our Nepal birds show some variation. The darker ones are from east Nepal. This population differs from the next race farther west, *G. l. griseicentior,* of which we have five birds from Mussoorie (wing: ♂ 71, 77, 81; ♀ 78, 82 mm.), in being less gray on the head and mantle and darker on the flanks and abdomen, with more black in the tail. A single bird from far western Nepal (Belbahadi, Doti) begins to approach the Mussoorie birds but better belongs with *G. l. lineatus.*

This species was not common in Nepal. Parties numbering from two to six kept close to the ground in low bushes. The far western bird was in company with spiny babblers at the edge of cultivations.

Garrulax affinis affinis Blyth

Dana: 1 ♀; December.

Ulleri: 1 ♀; December.

Lete: 1 ♀; December.

Tukche: 2 ♀; November.

Wing: 98, 98, 104, 108 mm.

All these birds come from the Kali Gandak River and Mrs. B. P. Hall of the British Museum writes me that central Nepal birds also belong here.

G. a. flemingi Rand 1953, type locality Lete, is a synonym and the type locality of *P. a. affinis* should be restricted to central Nepal (see Rand and Fleming, 1956, p. 3).

Garrulax affinis bethelae Rand and Fleming

Patale: 4 ♂, 4 ♀; December.

Wing: ♂ 104, 107, 110; ♀ 102, 103, 104, 110 mm.

The type locality is Thangii (or Tangii), Sikkim. We have nine specimens from Sikkim; these and twelve specimens from Mangalbare in extreme eastern Nepal lent by Dr. Dillon Ripley are clearly separable from our five west Nepal birds (*G. a. affinis*). However, the Patale series is somewhat intermediate. Two of the males taken by themselves could be referred to *affinis* while several of the other six show a tendency toward the paler edgings of the breast feathers, though otherwise most like *bethelae*.

This laughing thrush was common among the rhododendron bushes and scrub oaks at 10,000 feet. It would perch on or near the top of a shrub and use a variety of clear calls: "*You weary,*" "*wheeooo,*" "*eee-rrr,*" and "*kay-luck.*"

Garrulax erythrocephalus nigrimentus Hodgson. Sikkim Red-headed Laughing Thrush.

Patale, 9,500 feet: 1 ♀; December.

Wing: 107 mm.

For discussion see following summary (p. 134, D).

Garrulax erythrocephalus kali Vaurie. Kali Red-headed Laughing Thrush.

Dana, 5,000 feet: 2 ♀; December.

Lumpek, 6,500 feet: 2 ♂, 1 ♀; November.

Lete, 8,500 feet: 1 ♂; December.

Godaveri, 6,000 feet: 1 ♂; January.

Phulchowk, 8,000 feet: 1 ♂, 4 ♀; February, March, April.

Wing: ♂ 100, 101, 101, 102, 105; ♀ 92, 98, 99, 100, 100, 104, 105 mm.

The red-headed laughing thrush is fairly common. It is found in small parties on the ground or in tall trees. It flecks its wings and bounces as it moves up the branches of a tree. There are several calls: a subdued "*to-reaper,*" a loud "*to-real-year; you reap,*" and, when the bird is disturbed, a warning "*m-u-r-r-r-r.*"

Our Nepal and closely related material of this species falls into five groups.

A. Three skins of *G. e. erythrocephalus* (wing: ♂ 106, 102; sex? 106 mm.) from Mussoorie are the palest both above and below.

B. Six skins (wing: ♂ 101, 102, 105; ♀ 99, 100, 104 mm.) from Dana, Lete and Lumpek, west Nepal, 500 miles east of Mussoorie, are darker than the Mussoorie birds. Vaurie described this population as *G. e. kali*. Actually this includes two populations: a slightly paler one from Dana and Lete, at the base of the higher Himalayas; and a slightly darker, richer one from Lumpek in the Mahabharata range, 50 miles to the south, both at about the same altitude.

C. Six skins (wing: ♂ 100, 101; ♀ 92, 98, 100, 105 mm.) from Kathmandu Valley, 120 miles east of Lete, west Nepal, are as much darker above and below as is the *G. e. kali* population of Lete and Dana compared to *G. e. erythrocephalus*. However, these Kathmandu Valley birds are only slightly darker on the average than Lumpek birds. Further, two of these six red-headed birds have traces of dusky apparent in the sides of the crown, adumbrating the condition in the next population.

D. A single skin (wing 107 mm.) of a bird from east Nepal, Okhaldhunga District, about 100 miles east of Kathmandu, is again slightly darker and richer above and below than is C. Further, a new character is pronounced: the central and hind crown, sides of nape, and aurical area have become gray (replacing rufous).

E. Thirteen skins of *G. e. nigrimentus* (wing: ♂ 97, 99, 102, 103, 103; ♀ 94, 95, 95, 98, 100, 102, 102, 103 mm.) from Sikkim, 250 miles eastward, compared with D are somewhat darker, more ruddy on the back and conspicuously darker and more rufous on the under parts.

A gradual east-west cline is indicated. The suggested names are as follows:

G. e. erythrocephalus for the pale part of the cline with red-headed birds (A) only; Vaurie has also grouped the intermediate Kumaon birds here.

G. e. kali for the darker part of the cline with red-headed birds (B and C). Unfortunately the name *kali* was applied to birds near the center of the cline, but they are closer to the darker bird, and the name must be used.

G. e. subsp. for the pale gray-headed birds (D). If additional specimens confirm this paleness (compared with E) these birds will need to be named. Until then it is perhaps advisable to list them as *nigrimentus* to call attention to the presence of a gray-headed bird in Nepal.

Almost surely, in the 100 miles between the localities from which C and D come, an intermediate red-headed ≷ gray-headed population will be found.

G. e. nigrimentus for the dark gray-headed birds (E).

Leiothrix argentauris argentauris (Hodgson). Silver-eared Mesia.

Belbahadi, 4,000 feet: 1 ♂, 1 ♀; December.

Maildhap, 6,000 feet: 1 sex?; January.

Wing: ♂ 78; ♀ 75.

The mesia was seen twice in small flocks of 3 to 15 birds. They were found in forested areas and when disturbed flew swiftly down hill.

Leiothrix lutea callipyga (Hodgson). Pekin Robin.

Tansen, 4,600 feet: 5 ♂, 2 ♀; December.

Pokhara, 3,000 feet: 2 ♂, 3 ♀; December, January, February.

Pharping, 6,500 feet: 1 sex?; February.

Godaveri, 5,500 feet: 1 ♀; January.

Wing: ♂ 67, 68, 69, 69, 70, 71; ♀ 66, 66, 67, 68, 68, 70 mm.

This species was common in the cut-over forest areas of western and central Nepal.

Cutia nipalensis nipalensis Hodgson. Nepal Cutia.

Phulchowk, 7,500 feet: 3 ♂, 3 ♀; February.

Wing: ♂ 93, 95, 95; ♀ 83, 85, 90 mm.

We have also four males (wing: 88, 91, 94, 95 mm.) and three females (wing: 86, 87, 89 mm.) from Sikkim. Parties of three to eight birds were found in the heavy oak forests in company with red-winged shrike babblers. They were clinging to the trunks of oak trees, some 20 feet above the ground, apparently drinking sap.

Pteruthius erythropterus (Vigors). Red-winged Shrike Babbler.

Badamachli, 1,000 feet: 1 ♂; December.

Dana, 7,000 feet: 2 ♂; December.

Shivpuri, 7,000 feet: 1 ♂; January.

Phulchowk, 7,000 feet: 1 ♂, 1 ♀; March.

Wing: ♂ 79, 80, 81, 82, 82; ♀ 81 mm.

This species usually moved in pairs among the tall trees of the heavier forests.

Pteruthius xanthochloris xanthochloris Hodgson. Green Shrike Babbler.

Patale, 10,000 feet: 1 ♂?, 1 ♀; December.

Shivpuri, 7,000 feet: 1 ♀; January.

Wing: ♂? 61; ♀ 60, 62 mm.

We also have three birds from Sikkim (wing: ♂ 63, 64; ♀ 63 mm.) presumably of this race and four specimens from Mussoorie of the paler western race, *P. x. occidentalis.*

The green shrike babblers were found in groups of two or three with mixed parties of tits in oak forests and kept to the tops of the trees.

Pteruthius melanotis melanotis (Hodgson). Chestnut-throated Shrike Babbler.

Godaveri, 5,500 feet: 2 ♀? [= ♂]; January, March.

We also have three males (wing: 59, 60, 62 mm.) and two females (wing: 58, 59 mm.) of this race from Sikkim.

This shrike babbler was found occasionally in mixed parties of willow warblers and tits, hunting through the forest in the lower ravines of Kathmandu Valley.

Actinodura nipalensis nipalensis (Hodgson). Hoary Barwing.

Lumpek, 7,000 feet: 1 ♂; November.

Chandragiri Ropeway, 6,500 feet: 1 ♀; May.

Phulchowk, 8,000 feet: 5 ♂, 5 ♀; February, March, April.

Wing: ♂ 90, 93, 93, 94, 96; ♀ 83, 87, 88, 89, 94, 97 mm.

A series of birds from Sikkim collected in 1931 (wing: ♂ 88, 89, 89, 90, 92; ♀ 86, 88, 93) compared with these topotypes are slightly smaller, have the top of the head somewhat browner, and the back slightly more rusty. These color differences are of the sort to be expected in "foxed" specimens. Ripley (1950b, p. 104) has described the eastern Nepal-Bhutan birds (type locality Mangalbare, east Nepal) as *vinctura,* differing in the deeper black band on the upper surface of the tail and the wider black bars on wings and tail. Present material indicates that the heavier barring on wings and tail of *vinctura* is a poor characteristic. The wider black band on the

terminal upper surface of the tail, however, is diagnostic. Of our twelve birds from central and western Nepal, only two show a complete overlap with the blacker tail of *vinctura* while ten birds lack it. Of the eight Sikkim and two east Nepal birds, two Sikkim specimens, a male and a female, resemble *A. n. nipalensis*, while the six other birds and our two from Okhaldhunga District have the black tip of the tail of *vinctura*.

Flocks of these birds (from two to ten) were associated with mixed parties of yuhinas, sivas and sibias in the large oaks at 7,000–9,000 feet. This species was common in Kathmandu Valley, less common in the eastern part of the country, and seldom seen in west Nepal. Its call is a loud, rapid "*je, je,*" repeated eight or ten times.

Actinodura nipalensis vinctura Ripley. Eastern Hoary Barwing.

Patale, 9,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 92; ♀ 88 mm.

For discussion see previous account.

Siva ignotincta (Hodgson). Red-tailed Minla.

Shivpuri, 8,400 feet: 1 ♂; April.

Manebhanjan, 5,500 feet: 1 ♂; December.

Okhaldhunga, 7,500 feet: 1 ♂, 2 ♀; December.

Wing: ♂ 65, 66, 70; ♀ 62, 65 mm.

We also have seven males and four females from Sikkim (wing: ♂ 64; ♀ 61 mm.) and Bengal (wing: ♂ 63, 64, 64, 65, 65, 67; ♀ 59, 63, 64 mm.). The Nepal males and females are similar above, while in both sexes the four birds from eastern Nepal have the lower parts a surprisingly bright yellowish. The bird from Kathmandu Valley is much more like the Bengal bird.

The minla was occasionally found in central and eastern Nepal in small parties along with the euphornis, sunbirds and tits, which worked through mixed forests at 7,000–8,000 feet.

Siva strigula strigula (Hodgson). Stripe-throated Siva.

Lumpek, 7,000 feet: 1 ♂, 1 ♀; November.

Tukche, 9,000 feet: 1 ♂, 1 ♀; November.

Shivpuri, 7,000 feet: 1 ♀; January.

Phulchowk, 7,000 feet: 1 ♂, 1 ♀; February, March.

Bahaduri, 6,000 feet: 1 ♂; December.

Manebhanjan, 6,500 feet: 1 ♂; December.

Okhaldhunga, 7,500 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 67, 68, 69, 71, 72, 72, 76; ♀ 63, 67, 67, 67, 68 mm.

For comparison we have eleven birds from Sikkim and ten birds from Mussoorie. These populations show a gradual cline from the slightly darker birds in the east to the lighter ones in the west. Our Nepal specimens are similar to Sikkim birds. Compared with Mussoorie birds (*S. s. simlaensis*) the Nepal-Sikkim birds are darker on the crown and back and the maroon of the central tail feathers is more defined.

A common and widespread bird, this siva was usually in undergrowth near the ground or passed through trees of medium height, in company with other species. Its call was a mellow *"peera-tzip"* or a louder *"pe-eo."*

Siva cyanouroptera cyanouroptera Hodgson. Blue-winged Siva.

Belbahadi, 3,500 feet: 1 ♀; December.

Tansen, 4,600 feet: 2 ♂, 4 ♀; December, January.

Ulleri, 7,500 feet: 1 ♂; December.

Brichtanta, 5,000 feet: 1 ♀; December.

Godaveri, 5,500 feet: 1 ♂, 2 ♀; January, March.

Wing: ♂ 63–69; ♀ 63–66 mm.

We also have a large series of this race from Sikkim and northern Bengal.

The blue-winged siva frequents the wooded valleys in parties of 5 to 15 along with Nepal babblers and ixuluses. It moves through the tops of trees with tit-like actions. It is a widely spread species and one of the commonest in western and central Nepal.

Yuhina flavicollis flavicollis Hodgson. Yellow-headed Ixulus.

Belbahadi, 3,500 feet: 1 ♀?; December.

Baglung, 3,000 feet: 1 ♀; November.

Beni, 3,500 feet: 1 sex?; November.

Dana, 5,500 feet: 1 ♂, 2 ♀; November, December.

Tukche, 9,000 feet: 1 ♂; November.

Chandragiri, 7,000 feet: 1 ♀; January.

Godaveri, 5,500 feet: 2 ♂, 2 ♀; January, February.

Phulchowk, 6,500 feet: 1 sex?; April.

Wing: ♂ 61, 63, 63, 63, 63; ♀ 60, 61, 61, 62, 63, 63, 64.

Kinnear (1937, p. 42) has pointed out the darkening of the upper parts and the loss of yellow in the under parts in this species, due to museum age. We have also, of this race, a series of 16 specimens from Sikkim and northern Bengal, collected in 1930 and 1931. They compare well with these Nepal birds, except for averaging slightly darker above (wing: ♂ 59–63; ♀ 60–62 mm.).

The race to the west, *albicollis* Ticehurst, 1926, type locality Dharmsala, was described as ranging to western Nepal. We have six adult specimens of this race, from Mussoorie, collected in 1947–53 (wing: ♂ 65, 67, 67, 68, 68; ♀ 67 mm.). When these birds are compared with our Nepal birds the larger size is evident. There seems little difference in the upper parts, but on the under parts the greater extent of the white, with less olive in the flanks, makes this a well-marked race.

Yuhina gularis gularis Hodgson. Stripe-throated Yuhina.

Lumpek, 7,000 feet: 1 ♂; November.

Dana, 7,000 feet: 3 ♂, 1 ♀; November.

Shivpuri, 7,500 feet: 1 ♂; January.

Phulchowk, 7,500 feet: 2 ♀; February.

Patale, 10,000 feet: 3 ♂, 2 ♀; December.

Wing: ♂ 72, 72, 72, 73, 74, 75, 76, 76; ♀ 71, 72, 73 mm.

We also have a series of eight Sikkim birds (wing: ♂ 72–77; ♀ 73, 75 mm.) and three birds from Mussoorie (March and June) (wing: ♂ 74, 74; ♀? 74 mm.).

These specimens indicate a slight and gradual darkening in general color from west to east, the Sikkim birds being darker and richer in tone than the worn Mussoorie specimens (*Y. g. vivax* of Koelz).

This was a very common species in the oak forests from 5,000 to 8,000 feet.

Yuhina occipitalis occipitalis (Hodgson). Chestnut-headed Ixulus.

Ulleri, 7,500 feet: 1 ♀; December.

Godaveri, 6,000 feet: 1 ♂, 1 ♀, 3 sex?; January.

Wing: ♂ 65; ♀ 62, 63 mm.

Our series of twelve birds of this subspecies from Sikkim agrees well with the Nepal specimens.

These birds were very common in the lower valleys around Godaveri, where groups of 10 to 15 worked noisily through the tree-tops in company with the Nepal babbler, the blue-winged siva, and willow warblers.

Yuhina xantholeuca xantholeuca (Hodgson). White-bellied Euphornis.

Marek, 3,000 feet: 1 sex?; January.

Phulchowk, 5,500 feet: 1 ♂; March.

Okhaldhunga, 7,500 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 66, 67, 71; ♀ 65 mm.

We have a series of nine birds from northern Bengal (wing: ♂ 62, 64, 67, 68; ♀ 61, 62, 64, 64, 64 mm.), collected in 1930. These are slightly warmer, more golden green above than the Nepal birds, the sort of difference one might expect from foxing.

Deignan (1945, p. 373) writes that of the four continental races he can recognize, only *canescens* (Cambodia) can be recognized on color characters; the other three are separable on size of wing and bill, forming a cline from north to south in the Indo-Chinese area. Deignan uses *tyrannula* (type locality Hainan) for the northern bird; *xantholeuca* for the intermediate bird, including those from northern Siam; and *interposita* (type locality Temangok, Upper Perak) for the southern birds.

We have 28 specimens of this species from Tonkin and Laos, collected in 1929–32. These measure: wing: Tonkin ♂ 65, 66, 66, 67; ♀ 60, 65; Laos ♂ 66–69; ♀ 64–67 mm. Thus, they are of the size of *xantholeuca* from the Nepal-Bengal area. But in color there is a difference. On the upper parts the nine Nepal-Bengal birds are paler and brighter yellow green, compared with the Tonkin-Laos birds. In series this difference is conspicuous; individually most specimens can be separated. This difference is not due to age of skins or to difference in season. Mayr (1938, p. 290) has commented that Burma birds are more greenish above, less golden citrine than Assam-Sikkim birds.

It seems that the name *Y. x. xantholeuca* should be restricted to these brighter, more citrine birds from Nepal to Assam. Whether or not it is necessary to designate by name the medium-sized darker and more greenish birds from northern Indo-China, Siam and

Burma, or consider them intermediates between *tyrannula* and *interposita* is debatable. We incline to the latter view.

These birds did not appear to be common. At Nagarjung two or three were in company with tits. In east Nepal several were feeding with minlas near the tops of rhododendron trees.

Alcippe castaneiceps castaneiceps (Hodgson). Chestnut-headed Babbler.

Godaveri, 6,500 feet: 1 ♂, 1 sex?; January.

Phulchowk, 8,100–8,800 feet: 4 ♂, 1 sex?; February, March, April, May.

Wing: 56, 57, 58, 58, 61 mm.

Thirteen skins from Sikkim measure: wing: 6 ♂ 56, 58, 58, 58, 58, 59; 7 ♀ 54, 55, 55, 56, 56, 57, 57 mm. Our Nepal birds, compared with those from Sikkim, are paler on the crown and flanks. For discussion see Ripley (1950a, p. 398).

This species was occasionally seen in mixed parties with yuhinas, yellow-brown tits and others, eating sap from the large oaks.

Alcippe vinipectus vinipectus (Hodgson). Hodgson's Fulvetta.

Dana, 5,000 feet: 1 ♂; November.

Ghasa, 8,000 feet: 2 ♂, 1 ♀; November.

Tukche, 9,000 feet: 2 ♂, 2 ♀; November, December.

Wing: ♂ 54, 58, 58, 59, 59; ♀ 54, 57, 57 mm.

All of these birds have a pure white, immaculate throat. In this they contrast sharply with our fifteen specimens of *chumbiensis* Kinnear 1939, from east Nepal and Sikkim, all except one of which have the streaked throat and the darker plumage as described (Ripley, 1950a, p. 398). We also have three birds from Mussoorie (wing: ♂ 61; ♀ 55, 57 mm.) taken in June. Their worn condition may account for their paler appearance compared with that of birds from west Nepal.

Parties of 10 to 20 were common in low bushes along clearings and roadsides. Numbers were seen on Phulchowk but none was collected.

Alcippe vinipectus chumbiensis (Kinnear). Eastern Fulvetta.

Patale, 10,000 feet: 7 ♂, 2 ♀; December.

Okhaldhunga, 7,000 feet: 1 ♂; December.

Wing: ♂ 57, 59, 59, 62, 62, 62, 63, 65; ♀ 56, 60 mm.

We also have four birds from Sikkim (wing: ♂ 60, 62, 63; ♀ 59 mm.) with which the above Nepal birds, with one exception, compare favorably.

The single male (wing 57, tail 49, culmen 11, tarsus 22 mm.) from south of Okhaldhunga has the pure white throat and small wing of *A. v. vinipectus* from Kathmandu Valley, 100 miles farther west.

This was a common bird in parties of 10 to 12, in low bushes. It flicked its tail up and its head forward and gave a faint "*chit-it-it-or-key.*"

Alcippe nipalensis nipalensis (Hodgson). Nepal Quaker Babbler.

Maildhap, 5,500 feet: 3 ♂, 1 ♀; January.

Tansen, 3,000 feet: 1 ♂, 1 ♀; January.

Ranibas, 2,500 feet: 1 ♀, 1 sex?; February.

Godaveri, 5,500 feet: 2 ♂, 4 ♀; January, March.

Wing: ♂ 61, 61, 61, 62, 62, 62; ♀ 58, 59, 59, 59, 60, 61, 61 mm.

Our Nepal birds compare well with three birds from Bengal (wing: ♂ 58, 60; ♀ 60 mm.

This babbler is common in Kathmandu Valley. Its call is a "*p-p-p-p-jet.*"

Heterophasia capistrata capistrata (Vigors). Black-capped Sibia.

Okhaldhunga, 7,500 feet: 2 ♂, 2 ♀; December.

Patale, 9,000 feet: 1 ♂; December.

Wing: ♂ 96, 97, 98; ♀ 89, 93 mm.

For discussion see following account.

Heterophasia capistrata nigriceps (Hodgson). Black-headed Sibia.

Lumpek, 7,000 feet: 1 ♀; November.

Dana, 7,000 feet: 1 ♂, 1 ♀; November.

Maildhap, 6,000 feet: 1 ♂; January.

Sahajpur, 6,000 feet: 1 ♂; December.

Belbahadi, 3,500 feet: 1 ♂; December.

Godaveri, 5,500 feet: 1 ♀; March.

Wing: ♂ 96, 98, 98, 100; ♀ 90, 91, 92 mm.

The material in Chicago Natural History Museum fits well into the three well-characterized western races that Ripley (1950a, p. 399) recognized. Our material is as follows: *pallida:* Simla, wing, ♀ 100; Mussoorie, wing, ♂ 95, 95, 102, 102, 108, 108; ♀ 100; *nigriceps:* see above; *capistrata:* Sikkim, wing, ♂ 91, 95, 96, 97; ♀ 91, 93; Bengal (Sangsir), wing, ♂ 99. Deignan (1945, p. 366) and Delacour (1946, p. 22) agree that the eastern forms, *gracilis, melanoleuca* and *desgodinsi,* are conspecific with *capistrata.*

This western and central Nepal population is darker and smaller than our six skins from Mussoorie (*H. c. pallida*). Compared with five birds from Okhaldhunga District, East Nepal, they are more ruddy above and average only slightly larger than east Nepal birds (wing: ♂ 96, 97, 98; ♀ 89, 93). The east Nepal birds, though somewhat intermediate between *nigriceps* and *capistrata,* have the grayer back of the Sikkim birds and are placed with *capistrata.*

The sibia was common in the oak forests at 6,000–8,000 feet. One call is a loud, rapid *"chi, chi."* The bird has also a four-note song: *"tee-tee-tu-rie"* (*do te te la*).

Family **PYCNONOTIDAE**

Aegithina tiphia tiphia (Linnaeus). Iora.

Bilauri, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 3 ♂, 2 ♀; November, January, February.

Tansen, 4,600 feet: 1 ♂, 1 ♀; December.

Pokhara, 3,000 feet: 1 ♀; January.

Narayangarh, 1,500 feet: 1 ♂; April.

Nagarjung, 5,500 feet: 1 ♀; March.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: ♂ 63, 63, 64, 64, 64, 66, 66; ♀ 63, 64, 64, 64, 64, 65 mm.

This was a widely spread species encountered in small numbers with other species, particularly willow warblers, in acacia trees. Two birds in breeding condition were much brighter-colored. The call was a *"chee-chit-chit-chit."*

Chloropsis hardwickii hardwickii Jardine and Selby. Orange-bellied Chloropsis.

Marek, 3,000 feet: 4 ♂; January.

Tansen, 4,500 feet: 2 ♂, 2 ♀; December, January.

Chandragiri Ropeway, 5,000 feet: 1 ♀; March.

Nagarjung, 5,500 feet: 1 ♂; February.

Godaveri, 5,500 feet: 1 ♀; January.

Manebhanjan, 5,000 feet: 1 ♀; December.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Wing: ♂ 93, 93, 95, 95, 96, 97, 97, 98; ♀ 91, 92, 92, 93, 94 mm.

These birds were perhaps the commonest species at 2,500 feet. Their vocabulary is remarkable in their ability to mimic and vary their own notes.

Chloropsis aurifrons aurifrons (Temminck). Golden-fronted Chloropsis.

Butwal, 900 feet: 3 ♂, 4 ♀, 1 sex?; November, December, January, February.

Chisapani, 950 feet: 1 imm. ♂; January.

Raghunathpur (near), 950 feet: 2 ♂, 2 ♀; January.

Wing: ♂ ad. 95, 96, 97, 97, 98; ♀ 91, 91, 91, 92, 92, 94 mm. Culmen: ♂ 24, 24, 24.5, 25, 26; ♀ 24, 24.5, 25, 25, 25 mm.

One male from Dehra Dun District measures: wing 97; culmen 25 mm.; four Bengal males, wing 96, 96, 97, 99; culmen 25, 26, 26, 26 mm.; one Sikkim female, wing 94; and three Assam birds, Margherita, male, wing 96; Sylket, male, wing 93; culmen 22; Cachar, female, wing 93, culmen 22 mm.

These measurements strengthen the suggestion put forward by Deignan (1946a, p. 3) that Himalayan are larger than topotypical (Cachar) *aurifrons* and may have to be separated as *Chloropsis aurifrons hodgsoni* Gould 1861, type locality Nepal (restricted by Deignan). On present material, two of the three Assam birds have the forehead deep rich orange, while in only four of seventeen United Provinces-Bengal-Sikkim-Nepal birds is this the case, the others having it much paler.

This bird was common in the forests of the *terai* in trees where mistletoe was in flower. Its calls were a *"chup-chaw"* and a repeated *"tzik."*

Pycnonotus flaviventris flaviventris (Tickell). Black-headed Yellow Bulbul.

Dhangarhi, 900 feet: 1 ♂; November.

Belbahadi, 3,500 feet: 1 ♀; December.

Butwal, 900 feet (near): 3 ♂, 3 ♀, 1 sex?; November, January, February.

Marek, 3,000 feet: 1 ♀; January.

Tansen, 3,000 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♂; January.

Raghunathpur, 950 feet: 1 ♂, 1 ♀; December, January.

Wing: ♂ 90, 90, 92, 92, 93, 93, 94, 95; ♂ 85, 86, 87, 87, 89 mm.

For a discussion as to whether this should be considered conspecific with *P. dispar* see Delacour (1943b, p. 21) and Ripley (1950a, p. 384).

Pycnonotus leucogenys leucogenys (Gray). White-cheeked Bulbul.

Butwal, 900 feet: 1 ♀; November.

Ulleri, 8,000 feet: 1 ♂?; December.

Wing: ♂? 84; ♀ 86 mm.

These compare well with three specimens from northern Bengal (Mangpu) near the Darjeeling border.

Pycnonotus jocosus emeria (Linnaeus). Bengal Red-whiskered Bulbul.

Bilauri, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 4 ♀; November, December.

Narayangarh, 1,500 feet: 1 ♀; April.

Raghunathpur, 950 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; January.

Wing: ♂ 84, 85; ♀ 80, 81, 82, 82, 83 mm.

Two birds from Bengal (wing: ♂ 83, 87) compare well with our Nepal population.

This species was fairly common in the *terai* where flocks of three to ten birds mixed with other bulbuls in the open grassland and scrub jungle.

Pycnonotus cafer bengalensis Blyth. Bengal Red-vented Bulbul.

Barmdeo Mandi, 950 feet: 3 ♂; January.

Baila, 3,000 feet: 1 ♀; December.

Dhangarhi, 900 feet: 2 ♂; November.

Tansen, 3,000 feet: 3 ♂, 2 ♀; December.

Pokhara, 3,000 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♂; January.

Sun Kosi, 1,800 feet: 1 ♀; December.

Wing: ♂ 95, 96, 97, 100, 100, 101, 102, 104, 105; ♀ 95, 95, 96, 96, 102 mm.

These specimens compare well with four specimens from northern Bengal (Mangpu, Sangsir), wing ♂ 99, 105, 106; sex? 102 mm.

Ripley (1950a, p. 384) follows Deignan (1949) in using *pygaeus* Hodgson 1844, a *nomen nudum* with type locality Nepal, rather than the long-used *bengalensis* Blyth, 1845, for this subspecies.

Alcurus striatus striatus (Blyth). Striated Green Bulbul.

Godaveri, 6,000 feet: 2 ♂, 3 ♀; February.

Wing: ♂ 109, 111; ♀ 105, 107, 107 mm.

This bulbul was not at all common. We found it in parties of 10 to 20 among the gray oaks (*Quercus incana*) above Godaveri.

Microscelis macclellandi macclellandi (Horsfield). Rufous-bellied Bulbul.

Belbahadi, 3,500 feet: 1 ♀; December.

Maildhap, 6,500 feet: 1 ♂, 3 ♀; January.

Tansing, 4,600 feet: 2 ♂, 1 ♀; December, January.

Godaveri, 5,500 feet: 1 ♂, 1 ♀; January.

Wing: ♂ 105, 107, 112, 113; ♀ 104, 104, 105, 105, 106, 108 mm.

Of this race we have two specimens from Bengal (Mangpu, wing, ♂ 107, 107), one from Sikkim (♀ 100), and two from Assam (♂ 114, ♀ 105 mm.) for comparison. All agree fairly well, and no peculiarity of the throat coloration, mentioned by Ripley for his Nepal bird, is apparent. From this material, "*Ixos*" *m. vargus* (Koelz, 1954) for Nepal birds does not seem necessary.

This is one of the most common bulbuls of the foothills. The call is a loud "*cheep-har-lee.*"

Microscelis flavalus flavalus (Hodgson). Brown-eared Bulbul.

Barmdeo Mandi, 1,000 feet: 1 ♀; January.

Baila, 3,000 feet: 1 ♂; December.

Belbahadi, 3,500 feet: 1 ♀; December.

Marek, 3,000 feet: 1 ♂; January.

Tansen, 2,500 feet: 5 ♂, 2 ♀; December, January.

Wing: ♂ 96, 97, 98, 99, 100, 102, 105; ♀ 93, 95, 97, 98 mm.

Of this race we also have: northern Bengal, 3 males (wing 100, 100, 95 mm.), 2 females (95, 98 mm.), and Assam, Margherita, 1 male and 1 female (♂ 93, ♀ 98 mm.). The breast of the Assam bird is very slightly darker, as Ripley (1950a, p. 385) has pointed out.

Microscelis madagascariensis psaroides (Vigors). Black Bulbul.

Butwal, 900 feet: 1 ♂; January.

Tansen, 4,600 feet: 3 ♂, 2 ♀; December.

Dana, 7,000 feet: 1 ♂; November.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Wing: ♂ 121, 122, 125, 125, 126, 128; ♀ 113, 123 mm.

We also have three Mussoorie birds (wing: ♂ 129, ♀ 121; sex? 126 mm.) and six Bengal birds (wing: ♂ 122, 122, 127, 128; ♀ 112, 118 mm.).

Family CINCLIDAE

Cinclus pallasii tenuirostris Bonaparte. Brown Dipper.

Dobhan, 1,500 feet: 1 ♀; February.

Baglung, 3,000 feet: 1 ♂; November.

Pokhara (14 miles west), 5,000 feet: 1 ♀; December.

Wing: ♂ 98; ♀ 93, 93 mm.

Of this race we have two females from Mussoorie taken in September (wing 89) and a male from Sikkim taken in February (wing 105). The November, December, and February birds are much more worn than is the September bird, and fading on the tips of the feathers, especially of the back, is pronounced.

The dipper was only occasionally seen, alone or in twos or threes on rapid rivers and streams. The Dobhan bird was in company with a gray and a lighter brown bird.

Family TROGLODYTIDAE

Troglodytes troglodytes nipalensis (Blyth). Nepal Wren.

Tukche, 9,000 feet: 1 ♂, 2 ♀; December.

Patale, 10,000 feet: 3 ♂, 2 ♀; December.

Wing: ♂ 50, 50, 52, 52; ♀ 49, 50 mm.

We also have a series of this race from Sikkim (wing: ♂ 50, 51, 52, 52, 53, 53; ♀ 47, 48, 48, 49, 51, 52 mm.). Our three west Nepal birds are identical with eastern Nepal and Sikkim birds. Compared with a single bird from Mussoorie (*T. t. neglectus*) the diagnostic lighter color above and below of *neglectus* is apparent.

The Tukche birds, occasionally found in stone walls of the town, were solitary. Those in east Nepal were alone or in pairs, inhabiting low cotoneaster shrubs on the crests of open ridges.

Family **TURDIDAE**

Brachypteryx montanus cruralis (Blyth). White-browed Shortwing.

Narayangarh, 1,500 feet: 1 ♀; April.

Nagarjung, 5,500 feet: 1 ♂; February.

Godaveri, 5,500 feet: 1 ♀?; February.

Wing: ♂ 66; ♀ 64, 66 mm.

The male is in brown immature plumage and the females lack the white eyebrows.

We also have one Sikkim adult male (wing: 71 mm.) and four Bengal birds, three males, two adult and one in brown plumage (wing: adult 70, 70; imm. 67 mm.), and a female (wing: 65 mm.).

The white-browed shortwing was solitary and hopped wren-like on the ground and among roots of trees. It was found in heavily wooded areas near streams and would flick its wings and give a quick call: *"fek."*

Erithacus calliope calliope (Pallas). Common Ruby-throat.

Tansen, 3,000 feet: 2 ♂, 1 ♀; December, January.

Bhorli, 2,500 feet: 1 ♂; December.

Wing: ♂ 75, 79, 80; ♀ 71 mm.

The common ruby-throat was occasionally seen on the ground along hedges near villages or in underbrush at the side of the road. It was fairly tame and would sit quietly for several minutes before moving. A note, *"chep . . . chep,"* was given at intervals of a few seconds.

Erithacus suecicus (Linnaeus). Red-spotted Blue-throat.

Bilauri, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 2 ♂, 3 ♀, 1 sex?; November, December.

Raghunathpur, 900 feet: 1 ♂, 1 ♀, 1 ♀?; January.

Wing: ♂ 72, 73, 74, 75; ♀ 70, 71, 71, 72.

This species was common throughout the Nepal *terai* where it inhabited hedgerows on the edges of rice fields and clumps of grass on the borders of ponds. When disturbed it would pop up out of the grass and rest on a reed. Its call was a *"tick-tick-tick."*

Erithacus pectoralis pectoralis (Gould). Himalayan Ruby-throat.

Barmdeo Mandi, 1,500 feet: 1 ♂; January.

Kathmandu Valley, 4,400 feet: 1 ♂; March.

Wing: 72, 74 mm.

Erithacus brunneus (Hodgson). Indian Blue Chat.

Phulchowk, 9,000 feet: 2 ♂; April.

Wing: 72, 76 mm.

We also have four birds from Mussoorie (wing: ♂ 71, 72, 73; ♀ 75 mm.).

The Indian blue chat arrived in April and had a loud call. It was fairly common and we found it near the tops of medium-sized trees below the taller oaks, at 9,000 feet.

Erithacus chrysaeus chrysaeus (Hodgson). Golden Bush Robin.

Tansen, 4,600 feet: 3 ♀; December, January.

Godaveri, 5,500 feet: 1 ♂ [♀]; February.

Wing: 62, 64, 65, 65 mm.

The golden bush robin was not common. We saw one at a time in winter and in each case it was in dense undergrowth near the ground. In summer we found it in pairs at 12,000–13,000 feet among rhododendron shrubs.

Erithacus cyanurus pallidior (Baker). Kashmir Red-flanked Bush Robin.

Sahajpur, 6,000 feet: 1 ♀; December.

Maildhap, 6,500 feet: 1 ♂, 1 ♀; January.

Tansing, 4,500 feet: 2 ♀; December, January.

Dana, 7,000 feet: 1 ♀; December.

Ulleri, 7,500 feet: 1 ♂; December.

The Sahajpur bird agrees fairly well with Mussoorie birds, while the others show an approach to the darker eastern subspecies, *rufilatus*.

Erithacus cyanurus rufilatus (Hodgson). Eastern Red-flanked Bush Robin.

Chisapani Garhi, 6,000 feet: 1 ♂; January.

Kathmandu Valley, 5,500 feet: 2 ♂, 3 ♀; January, February and March.

Wing: ♂ 78, 81, 83; ♀ 78, 78, 80 mm.

Compared with Sikkim birds these specimens are paler, but closer to them in color than to the much paler Mussoorie bird (*pallidor*). This species from Mussoorie to Sikkim represents a cline, with the ends rather different in color, and also the eastern (Sikkim) end averaging larger (Mussoorie, wing 77–79; Sikkim, 80–83 mm.). Two names seem adequate for discussing this variation, *pallidor* for the western end, *rufilatus* for the eastern.

Erithacus indicus indicus (Vieillot). White-browed Bush Robin.

Patale, 10,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 82; ♀ 73 mm.

This was not a common species. It was seen singly near the ground in heavy forest, usually near damp areas. It flicks its tail and gives a *"trrr - trrr - trrr."*

Copsychus saularis saularis (Linnaeus). Magpie Robin.

Dhangarhi, 900 feet: 1 ♂; December.

Tansing, 4,600 feet: 2 ♂, 4 ♀; January.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; December, January.

Raghunathpur, 900 feet: 1 ♂, 1 ♀; November, January.

Wing: ♂ 97, 99, 100, 101, 102; ♀ 93, 93, 94, 96, 96, 96 mm.

Two Bengal (Calcutta) birds measure: wing ♂ 99; ♀ 95 mm.

The magpie robin was one of the most common birds of town and cultivation. It was silent in winter but sang a great deal in April in gardens of Kathmandu.

Copsychus malabaricus indicus (Stuart Baker). Indian Shama.

Malakheti, 950 feet: 1 ♀; December.

Dhangarhi, 900 feet: 1 ♂, 2 ♀; November, December.

Butwal, 900 feet: 5 ♂; January, February.

Raghunathpur, 900 feet: 1 ♂?; December.

Wing: ♂ 91, 93, 94, 94, 94, 95; ♀ 87, 87, 88. Tail: ♂ 136, 138, 138, 140, 152, 153; ♀ 106, 107, 107 mm.

These measurements fit well into the series given by Ripley (1950a, p. 388) for Sikkim-United Province birds, which are somewhat intermediate between those of *malabaricus* (Malabar) and *indicus*.

The shama was fairly common in eastern and western Nepal in forests of the lowlands. It was usually solitary and preferred the bushes above the forest floor below the taller trees. It has several calls, a musical *"chir-chur,"* a *"chur-chi-chur-r-r,"* and a four or five note melody, *"oi-o-lee-nou."*

Phoenicurus erythronotus (Eversmann). Eversmann's Redstart.

Jomosom, 9,200 feet: 1 ♂; December.

Wing: 90 mm.

This bird compares well with three males (wing 86, 88, 89) from Tian Shan, Turkestan.

Phoenicurus coeruleocephalus Vigors. Blue-headed Robin.

Barmdeo Mandi: 1 ♀; January.

Sahajpur, 6,000 feet: 1 ♂, 2 ♀; December.

Tansen, 4,600 feet: 3 ♂, 1 ♀; December.

Lete, 8,500 feet: 1 ♂; December.

Tukche, 9,000 feet: 1 ♂; November.

Nagarjung, 5,500 feet: 1 ♂; February.

Patale, 9,500 feet: 1 ♂; December.

Wing: ♂ 80, 81, 81, 82, 82, 82, 83; ♀ 78, 78, 80.

We have only three others of this species, winter birds from Mussoorie (wing: ♂ 81, 84; ♀ 76 mm.).

The male birds are in the heavily fringed winter plumage, except for a male from Kathmandu Valley, taken early in February, in which the brown tips are worn off, showing the dark summer plumage.

The blue-headed robin was a common species in winter at 4,500–6,500 feet. It perched on tops of bushes on sunny slopes and flew a short distance to a nearby tree when disturbed.

Phoenicurus ochrurus rufiventris (Vieillot). East Indian Redstart.

Raghunathpur, 900 feet: 1 ♂, 2 ♀; January.

Chisapani, 950 feet: 1 ♂ [= ♀]; December.

Wing: ♀ 84, 85, 87; ♂ 88 mm.

This species was not very common. It was found near cultivations in the foothills in winter.

Phoenicurus hodgsoni (Horsfield and Moore). Hodgson's Redstart.

Jomosom, 9,200 feet: 1 ♀; December.

Tukche, 9,000 feet: 1 ♂ [= ♀?]; December.

Pokhara, 3,000 feet: 1 ♀; January.

Godaveri, 5,500 feet: 1 ♂; January.

Wing: ♂ 86; ♀ 81, 82, 83 mm.

We also have two birds from Sikkim (wing: ♂ 87; ♀ 88 mm.).

Hodgson's redstart was not common. It was found singly, in open areas.

Phoenicurus frontalis Vigors. Blue-fronted Redstart.

Tansen, 4,700 feet: 4 ♂; December.

Dana, 6,000 feet: 1 ♂, 1 ♀; November, December.

Ulleri, 7,500 feet: 1 ♀; December.

Kathmandu Valley, 4,500 feet: 1 sex?; January.

Manebhanjan, 5,500 feet: 1 ♂, 1 ♀; December.

Okhaldhunga, 7,500 feet: 2 ♀; December.

Patale, 9,500 feet: 3 ♂; December.

Wing: ♂ 83, 84, 85, 89, 89, 89, 89, 89, 92; ♀ 83, 84, 84 mm.

Phoenicurus schisticeps (Gray). White-throated Redstart.

Tukche, 9,000 feet: 1 ♂, 1 ♀; December.

Jomosom, 9,200 feet: 1 ♂; December.

Thinigaon, 9,200 feet: 1 ♂; December.

Patale, 10,000 feet: 1 ♂, 3 ♀; December.

Wing: ♂ 85, 87, 87, 87; ♀ 82, 83, 84, 85 mm.

Birds from the eastern part of the range average very slightly smaller. Szechwan: wing ♂ 84, 84, 87; Yunnan: ♂ 82, 83, 83, 84, 84, 85, 85 mm. The name *beichi* Stresemann, 1927, was applied to the north Kansu birds, but Stresemann later (1937, p. 560) decided that the difference was slight (Kansu birds, wing ♂ 80–87, av. 84.6 mm.) and not sufficient to merit separating them as a subspecies.

The white-throated redstart was a common species among scrub oaks on open ridges at 10,000 feet.

Phoenicurus erythrogaster grandis (Gould). Guldenstadt's Redstart.

Jomosom, 9,200 feet: 1 ♂; December.

Wing: 108 mm.

A male from Kashmir (wing: 104) and three males from Chinese Turkestan (wing: 102, 102, 104) are in Chicago Natural History Museum. Birds from Kansu and eastern Tibet are slightly larger (male, wing: 103–110) according to Schafer and de Schauensee (1938, p. 222), while Stresemann (1937, p. 556) gives from north Kansu: male, wing: 106.5–111, average of four, 108.6 mm. The name *maximus* Kleinschmidt 1923, was proposed for these large western birds, but Kinnear (1933, p. 458) thinks *vigorsi* Moore, 1854, type locality Bhutan, should be used, on the basis of a female (wing 104) from Bhutan.

Kinnear (l.c.) says the larger race comes to Bhutan and Sikkim in winter. If it be recognized, this single Nepal bird would have to be included with it. However, the difference is slight and names for it probably are not advisable.

Phoenicurus leucocephalus Vigors. White-capped Redstart.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Butwal, 900 feet: 1 ♂; January.

Tansen, 3,000 feet: 1 ♀; January.

Riri Bazaar, 3,000 feet: 1 ♂; November.

Ghasa, 8,500 feet: 1 ♂; December.

Sun Kosi, 1,800 feet: 2 ♂; December.

Wing: ♂ 97, 97, 100, 101, 101; ♀ 89, 92 mm.

Compared with two Kashmir, four Mussoorie, three Sikkim and two Assam birds.

This redstart was found on almost every stream or river from the *terai* up to 8,500 feet in winter. In summer birds were breeding at a lake at 10,000 feet.

Phoenicurus fuliginosus fuliginosus Vigors. Plumbeous Redstart.

Tansing, 3,000 feet: 1 ♂, 2 ♀; January.
Kusma, 3,500 feet: 1 ♂; November.
Dana, 5,000 feet: 1 ♀; December.
Ulleri, 8,000 feet: 1 ♀; December.
Tatopani, 4,000 feet: 1 ♂; December.
Pokhara, 3,000 feet: 1 ♀; December.
Butwal, 900 feet: 1 ♂; January.
Wing: ♂ 74, 75, 77, 77; ♀ 70, 71, 72, 73 mm.
Compared with Kashmir and Sikkim females.

Myiomela leucura leucura (Hodgson). White-tailed Blue Robin.

Phulchowk, 7,700 feet: 2 ♂; April.
Wing: 97, 98 mm.

The only place we found this bird was in the higher valleys of Kathmandu Valley, where a few pairs kept near streams. The male had a clear liquid song of seven notes, "*do-do-dle-do-da-li-do*" (*la, la, la, do, do, la, fa*).

Enicurus scouleri scouleri Vigors. Little Forktail.

Beni, 3,500 feet: 1 ♂, 1 ♀; November.
Dana, 5,000 feet: 1 ♂; December.
Wing: ♂ 77, 78; ♀ 74 mm.
We have specimens from as far east as Szechwan and Fukien.

Enicurus immaculatus Hodgson. Black-backed Forktail.

Butwal, 900 feet: 3 ♀, 1 sex?; February.
Tansen, 3,000 feet: 1 ♂; January.
Riri Bazaar, 3,000 feet: 1 ♂; November.
Pokhara, 3,000 feet: 1 ♂, 2 ♀; January.
Bhorli, 1,500 feet: 2 ♀; December.
Wing: ♂ 92, 95, 98; ♀ 88, 89, 90, 90, 90, 90 mm.

For comparison we have one Bengal specimen (wing: ♂ 96 mm.) (Sevoke) and four Assam birds (wing: ♂ 86, 86; ♀ 86, 90 mm.).

The Nepal and Bengal birds are slightly larger than the Assam specimens.

The streams of the foothills were the habitat of this bird. Its call was *"curt-see,"* the second syllable two notes higher than the first.

Enicurus schistaceus (Hodgson). Gray-backed Forktail.

Tansen, 3,000 feet: 2 ♂, 1 ♀; January.

Riri Bazaar, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♀; January.

Wing: ♂ 97, 98, 103; ♀ 94 mm.

Two males have the primaries tipped with white; one male and one female do not. The presence of these white tips is not a sexual dimorphism, as of four Sikkim-Bengal birds two (1 ♂, 1 ♀) show them and two (1 ♂, 1 ♀) do not. Though the white tips are individual in this area, there may be some change in the incidence of their occurrence geographically, as of thirteen Indo-Chinese birds only two do not show them while of six Fukien birds none shows them.

This species was in pairs, less common than but often associated with *E. immaculatus.*

Enicurus maculatus maculatus Vigors. Spotted Forktail.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Badamachli, 1,000 feet: 1 ♀?; December.

Sahajpur, 6,000 feet: 1 ♂; December.

Dana, 6,000 feet: 1 ♂; December.

Ulleri, 7,500 feet: 1 ♀; December.

Godaveri, 5,500 feet: 1 ♂, 1 ♀; January.

Wing: ♂ 106, 107, 110; ♀ 102, 104, 106, 110 mm.

For comparison we have three skins of *maculatus* from Mussoorie (wing: ♂ 107, 109; ♀ 105) and two *guttatus* from Sikkim (wing: ♂ 104; ♀ 97 mm.).

The Nepal population is a variable group but all have crescent bars on the lower back and the breast feathers are fringed with white, characteristics diagnostic of *E. m. maculatus.*

Saxicola torquata indica (Blyth). Indian Bush-Chat.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; November, December.

Tansen, 4,600 feet: 1 ♂, 1 ♀; December.

Dana, 5,000 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♂; January.

Manichur, 5,000 feet: 1 ♂ [= ♀]; April.

Raghunathpur, 900 feet: 2 ♀; January.

Manebhanjan, 5,500 feet: 1 ♂; December.

Okhaldhunga, 7,500 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 65, 66, 66, 69, 70, 70; ♀ 63, 65, 66, 67, 69, 69 mm.

These specimens are referred to this race on their small size. There is considerable variation in color, the Pokhara male (wing 70 mm.) having the breast and fringes of the dorsal feathers much paler than the other five males. A female from far western Nepal (wing 67) is much paler than the other five females.

This species was fairly common in open country singly or in pairs. A bird from Kathmandu Valley was in breeding condition April 10.

Saxicola torquata przewalskii (Pleske). Turkestan Bush-Chat.

Dhangarhi, 900 feet: 2 ♂; December.

Butwal, 900 feet: 1 ♂; January.

Baglung, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; December, January.

Tansen: 2 ♂, 4 ♀; December, January.

Kathmandu, 3,000–4,800 feet: 3 ♀; January, March.

Bhorli, 3,000 feet: 1 ♀; December.

Wing: ♂ 71, 72, 74, 74, 75, 75, 76; ♀ 68, 70, 70, 71, 71, 71, 71, 72, 73 mm.

These specimens are referred to this subspecies on the basis of their larger size; they also average considerably darker on the under parts than *S. t. indica*.

The Turkestan bush-chat was a common bird over open fields.

Saxicola torquata leucura (Blyth). White-tailed Bush-Chat.

Emelie, 900 feet: 1 ♂; January.

Wing: 69 mm.

The whitish under parts, the restricted rufous area on the breast, and the great extent of white in the tail, as described, are distinctive.

Saxicola caprata bicolor Sykes. North Indian Stone-Chat.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♀; January.

Tansen, 4,600 feet: 3 ♂, 3 ♀; December.

Baglung, 3,000 feet: 1 ♂; November.

Belawa, 3,000 feet: 1 ♀; November.

Pokhara, 3,000 feet: 2 ♂, 1 ♀; December.

Raghunathpur, 950 feet: 1 ♂, 1 ♀; January.

Sun Kosi, 1,800 feet: 2 ♀; December.

Wing: ♂ 66, 67, 68, 69, 70, 70, 70, 71; ♀ 64, 66, 66, 66, 67, 67, 68, 69, 69, 71 mm.

This chat was common in the *terai* and in the foothills up to 5,000 feet. It was a bird of the open fields and would perch on the top of a low bush. Its call was a short *"tik."*

Saxicola ferrea Gray. Western Dark Gray Bush-Chat.

Ainthpur, 900 feet: 1 ♀; January.

Dhangarhi, 900 feet: 1 ♂; December.

Tansen, 4,600 feet: 2 ♂, 1 ♀?; December, January.

Pokhara, 3,000 feet: 1 sex?; December.

Kathmandu Valley, 6,000–8,000 feet: 2 ♂; February.

Wing: ♂ 67, 67, 67, 69, 69, 70; ♀ 64, 67 mm.

This bush-chat was fairly common in the lowlands in winter and ascended the foothills in spring. It was seen alone or in pairs, usually on the tops of medium-sized trees. Its calls are *"zee-chunk,"* given at short intervals, and a *"tic-tic-brzeeeee."*

Saxicoloides fulicata cambaiensis (Latham). Brown-backed Indian Robin-Chat.

Dhangarhi, 900 feet: 1 ♀; December.

Butwal, 900 feet: 2 ♂; January, February.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: ♂ 72, 72, 74; ♀ 69 mm.

We do not have enough material to decide on the status of the various proposed races of the northern brown-backed birds—*munda, lucknowensis, stuartbakeri* and *cambaiensis*—and are listing them under the oldest name.

This species was uncommon in Nepal lowlands. It was seen in pairs, hopping over the ground with tail erect, a bird of the fields rather than gardens as it is at Dehra Dun, farther west.

Monticola gularis cinclorhyncha (Vigors). Blue-headed Rock Thrush.

Chandragiri Ropeway, 5,500 feet: 1 ♂; May.

Manichur, 5,800 feet: 1 ♂; April.

Wing: 102, 102 mm.

We also have a male from Kashmir (wing: 99 mm.) and a female from Mussoorie (wing: 99 mm.).

This rock thrush was occasionally seen in scrub jungle of the lower hills surrounding Kathmandu Valley. Both Nepal males were near breeding, the April bird fluttering with outspread wings. Its call sounds like *"peri, peri."*

Monticola rufiventris (Jardine and Selby). Chestnut-bellied Rock Thrush.

Tansing, 4,600 feet: 5 ♂, 5 ♀; December, January.

Nagarjung, 6,500 feet: 1 ♂; February.

Phulchowk, 7,800 feet: 1 ♀; February.

Wing: ♂ 118, 122, 122, 123, 126, 128; ♀ 111, 116, 116, 117, 117, 120 mm.

The amount of blue in the throat of the males varies as does the brown on the back and the amount of rufous on the under parts of the females and is unrelated to geographical distribution.

We also have five specimens from Sikkim (wing: ♂ 120, 127, 127, 127; ♀ 121 mm.) and five adults from Mussoorie (wing: ♂ 118, 122, 127; ♀ 121, 122 mm.).

Monticola solitarius pandoo (Sykes). Indian Blue Rock Thrush.

Beni (Kusma), 4,500 feet: 1 ♂; November.

Baglung (near), 3,000 feet: 1 ♂; November.

Wing: 122, 125 mm.

This was not a common bird. It was solitary, along the banks of the Kali Gandak River and again in pine forests (*Pinus longifolia*) of west Nepal.

Myiophoneus caeruleus temminckii Vigors. Himalayan Whistling Thrush.

Dhangarhi, 900 feet: 1 ♀; November.

Butwal, 900 feet: 1 ♂; January.

Tukche, 9,000 feet: 2 ♂; November, December.

Ghara, 8,000 feet: 1 ♀; December.

Pokhara, 3,000 feet: 2 ♀; January.

Wing: ♂ 170, 176, 181; ♀ 158, 166, 170, 181 mm.

Two Kashmir birds measure wing ♂ 177, 186 mm., two Mussoorie birds, wing ♂ 182, ♀ 167 mm., and five Sikkim birds, wing ♂ 167, 168, ♀ 159, 164, 172 mm. Ripley (1950a, p. 390) has suggested a cline, with increase in size from east to west, in Nepal. The above measurements support this view, but the difference between extremes is not great. The northwestern race, *turcestanicus*, is larger, wing 178–200 mm., according to Delacour, while the race to the east, *eugenei*, has a range of variation, wing 165–181 mm., about that of *temminckii*. Both these subspecies are separable on color characters, and the variations in *temminckii* do not merit nomenclatural recognition.

This species is found commonly along rivers and streams from the *terai* up to 9,000 feet. It has a long sustained song of many musical notes.

Zoothera citrina citrina (Latham). Orange-headed Ground Thrush.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♂; February.

Wing: ♂ 117, 122; ♀ 115 mm.

This race is new to our collection. The white spotting on the wing coverts is conspicuous.

The orange-headed ground thrush was fairly common in the *terai* of west Nepal, where it was found singly, feeding among dry leaves on the forest floor. It was not far from streams and damp areas. During the winter it is silent. In Tansen, Pokhara, and Kathmandu these birds are kept as cage birds, prized for their song.

Zoothera mollissima mollissima (Blyth). Plain-backed Mountain Thrush.

Phulchowk, 6,200 feet: 1 ♀; February.

Wing 142; tail 97; culmen 26; tarsus 36 mm.

We also have a Sikkim female (wing 144; tail 92) and two females from Mussoorie (wing 136, 146; tail 88, 91 mm.). These, and our Nepal bird vary only slightly, indicating that *simlaenis*, type locality Simla, described as paler and more golden rufous tinged, does not range as far east as Mussoorie.

Zoothera dixoni (Seebohm). Dixon's Plain-backed Mountain Thrush.

Godaveri, 5,500 feet: 1 ♂; January.

Wing 145; tail 108; culmen 25; tarsus 38 mm.

This bird has the pale marking on the tips of the wing coverts, the small bill, and the long tail that distinguished *dixoni* when compared with our specimens of the species *Z. mollissima.*

In general the color of the upper parts compares well with that of two males from Tonkin (wing 144, 150 mm.). A single Sikkim male (wing 141 mm.) is worn and therefore much more olive and has brownish above.

This bird was on the ground near a stream in heavy forest.

Zoothera dauma dauma (Latham). Small-billed Mountain Thrush.

Ainthpur, 900 feet: 1 ♀; January.

Emelie, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♀; November.

Butwal, 900 feet: 1 ♂; February.

Kathmandu Valley, 5,000 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ 139, 142, 146, 147, 150; ♀ 144, 150 mm.

Compared with a Sikkim male and three Mussoorie birds (wing: ♂ 142; ♀ 142, 145 mm.).

In winter this species was one of the most common in the lowlands of Nepal. It was usually solitary, often in the heavy *sal* forests near water. One was eating feces in a mango grove near a village.

Zoothera monticola monticola Vigors. Large Brown Thrush.

Barmdeo Mandi, 1,000 feet: 1 ♀; January.

Wing: 142 mm.

For comparison we also have a bird from Assam (wing: ♂ 147 mm.) and two from Mussoorie (wing: ♂ 145; ♀ 142 mm.).

The large brown thrush was uncommon in Nepal in winter. We only found it once, in a small, rocky stream bed in the low foothills. Its flight upstream was similar to that of the white-capped redstart which was with it.

Zoothera marginata marginata Blyth. Lesser Brown Thrush.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Wing 124; tail 68; culmen 33; tarsus 28 mm.

For comparison we have only a single specimen of *Z. m. parva* from Tonkin (♀, wing 128; tail 75; culmen 35; tarsus 28 mm.).

This apparently is the first record of this species from Nepal and represents a westward extension from Sikkim.

The lesser brown thrush was seen only once, along a tiny stream which fanned out into a small wooded marsh near the Sarda River.

Turdus unicolor Tickell. Tickell's Thrush.

Shivpuri, 8,000 feet: 1 ♀; October.

Phulchowk, 7,600 feet: 1 ♀ [= ♂]; April.

Tansen, 4,700 feet: 1 ♂; November.

Wing: ♂ 124; ♀ 119 mm.

This species is new to the collections of the Museum.

Tickell's thrush was only occasionally seen in pairs or small groups along streams in the higher mountain forests.

Turdus albocinctus Royle. White-collared Blackbird.

Shivpuri, 7,000 feet: 1 ♂, 1 ♀; January.

Chandragiri, 6,000 feet: 2 ♀; January.

Patale, 10,000 feet: 1 ♂; December.

Wing: ♂ 137, 142; ♀ 134, 136, 143 mm.

We also have four birds from Sikkim and five from Mussoorie.

The white-collared blackbird was fairly common in the higher forests around Kathmandu Valley, but it was only seldom seen in east and west Nepal.

Turdus boulboul (Latham). Gray-winged Blackbird.

Emelie, 900 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♀; December.

Sahajpur, 6,000 feet: 1 ♀; December.

Maildhap, 6,500 feet: 1 ♂; January.

Godaveri, 5,500 feet: 1 ♀; February.

Wing: ♂ 141, 142; ♀ 140, 143, 146 mm.

We also have a series of birds from Mussoorie and Sikkim.

The gray-winged blackbird was a common species from the *terai* up to the foothills in winter. It was seen singly or in flocks in wooded areas or near villages. One was eating human feces. The bird was silent in winter; in spring it has a sustained, mellow song of several notes.

Turdus rubrocanus rubrocanus Hodgson. Gray-headed Thrush.

Nagarjung, 6,500 feet: 1 ♀; February.

Wing: 139 mm.

We also have five birds from Mussoorie (wing: ♂ 135, 140, 144; ♀ 132, 135 mm.).

Turdus ruficollis atrogularis Temminck. Black-throated Thrush.

Tansen, 4,500 feet: 1 ♂, 7 ♀; December, January.

Jomosom, 12,500 feet: 1 ♀; December.

Pokhara, 3,000 feet: 1 ♂; February.

Godaveri, 5,500 feet: 1 ♀; February.

Patale, 10,000 feet: 2 ♂; December.

Wing: ♂ 134, 136, 137, 138; ♀ 130, 130, 132, 132, 132, 134, 134, 135, 135 mm.

We also have two birds from Sikkim and four from Mussoorie.

The black-throated thrush was the most common of thrushes in the foothills in winter. Flocks of 10–30 birds fed on the ground and, when disturbed, perched in the tops of trees bordering cultivations and open grassy spaces.

Family **SYLVIIDAE**

Seicercus burkii burkii (Burton). Black-browed Flycatcher Warbler.

Dhangarhi, 900 feet: 1 ♂, 1 ♀; December.

Tansen, 4,600 feet: 2 ♂, 1 ♀, 1 sex?; December, January, February.

Pokhara, 3,000 feet: 1 ♂, 1 ♀; December, January.

Kathmandu Valley, 3,000–9,000 feet: 1 ♂, 3 ♂, 1 sex?; January, March, April.

Harithumke, 6,000 feet: 1 ♂; December.

Wing: ♂ 55, 58, 58, 60, 60, 60; ♀ 51, 52, 54, 55, 57, 57 mm.

We have a long series of topotypes from Sikkim, with which these birds compare well, though slightly brighter below. Ripley (1950a, p. 399) records western Nepal birds as approaching *whistleri* of the western Himalayas, of which we have one bird from Mussoorie (♂ wing 58 mm.).

This species was usually in mixed parties of warblers, sometimes in the trees but more often in low bushes near the ground. The birds move continuously, like willow warblers.

Seicercus xanthoschistos albosuperciliaris (Jerdon). Kashmir Gray-headed Flycatcher Warbler.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Sahajpur, 6,000 feet: 1 ♂, 2 ♀; December.

Stuart Baker (1922–30, **2**: 490) has already suggested that the paler western race, *albosuperciliaris*, might occur in western Nepal.

We have four birds from Mussoorie (wing: ♂ 54; ♀ 53, 54, 57 mm.). All the above far-western Nepal birds, like the Mussoorie birds, have the ashy gray on the upper parts that is characteristic of *S. x. albosuperciliaris*.

This species was common in Nepal. Its call was a repeated "*psit, psit.*"

Seicercus xanthoschistos xanthoschistos (Gray). Gray-headed Flycatcher Warbler.

Tatopani, 4,500 feet: 1 ♂; December.

Dana, 5,000 feet: 1 ♀; December.

Bahaduri, 5,000 feet: 1 ♂; December.

Kathmandu Valley, 4,400–8,100 feet: 4 ♂, 3 ♀; January.

Wing: ♂ 51–58; ♀ 51–56 mm.

Ripley recorded only this eastern subspecies from Nepal. For comparison we have two birds from Sikkim (wing: ♂ 52, 55 mm.) and three from Bengal (wing: ♂ 51, 56; ♀ 54 mm.). Our east Nepal bird has darker slaty-gray upper parts, like the birds from Sikkim and Bengal.

The central and west (Kali Gandak) Nepal birds are intermediate between Sikkim and Mussoorie birds (*albosuperciliaris*), and on present material their allocation is arbitrary.

Seicercus castaniceps castaniceps (Blyth). Chestnut-headed Flycatcher Warbler.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Chandragiri Ropeway, 7,000 feet: 1 ♂, 1 ♀; April, May.

Godaveri, 5,500 feet: 1 sex?; March.

Wing: ♂ 50, 52; ♀ 50 mm.

We also have a female from Sikkim (wing 48 mm.).

This bird was not common. It had a double note call, *"chi-chi, chi-chi."*

Abroscopus schisticeps schisticeps (Gray). Black-faced Flycatcher Warbler.

Godaveri, 5,000 feet: 1 ♂; March.

Chandragiri, 7,000 feet: 1 ♂; April.

Wing: 45, 48 mm.

We also have a Sikkim bird (wing: ♂ 46 mm.).

This bird was in company with other species and moved slowly through the oak forests.

Phylloscopus collybita tristis Blyth. Brown Willow-Warbler.

Tansen, 4,500 feet: 1 ♂; December.

Dhangarhi, 900 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♀? [= ♂], 2 ♀; December, January.

Chisapani, 950 feet: 1 ♀; December.

Kathmandu (west of), 3,500 feet: 1 ♀; January.

Gokarna, 4,500 feet: 1 ♀; April.

Wing: ♂ 61, 65; ♀ 55, 56, 56, 57, 60 mm.

This bird was fairly common. We found it in mango groves and in bushes near the ground, usually with other species of warblers.

Phylloscopus affinis (Tickell). Tickell's Willow-Warbler.

Raghunathpur, 900 feet: 4 ♀; November, January.

Phulchowk, 9,000 feet: 2 ♂, 1 ♀; April, May.

Manichur, 6,000 feet: 2 ♂, 2 ♀; April.

Wing: ♂ 55, 56, 57, 61; ♀ 51, 52, 53, 56, 56, 57, 60 mm.

Small numbers of Tickell's willow-warbler occurred in scrub oaks and bamboo forests. Its call is a *"chip, chip."*

Phylloscopus fuligiventer (Hodgson). Smoky Willow-Warbler.

Bilauri, 900 feet: 1 ♀; January.

Wing: 60 mm.

Dr. Vaurie, who has checked this specimen, considers this a race of *P. fuscatus* (1954d, p. 9). The smoky willow-warbler is new to the collections of the Museum.

This specimen was taken in the vicinity of a small lake at the edge of a forest.

Phylloscopus fuscatus fuscatus (Blyth). Dusky Willow-Warbler.

Bahaduri, 4,500 feet: 1 ♀; December.

Wing: 55 mm.

Phylloscopus pulcher pulcher Blyth. Nepal Orange-barred Willow-Warbler.

Tansen, 4,500 feet: 1 ♂; December.

Kathmandu Valley, 4,500–9,100 feet: 6 ♂, 4 ♀; January, February, March.

Patale, 10,000 feet: 2 ♂, 1 sex?; December.

Okhaldhunga, 7,500 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 53, 55, 56, 57, 57, 58, 58, 59, 59, 61; ♀ 53, 54, 55, 56, 57.

We also have three winter birds from Bengal (wing: ♂ 59, 60; ♀ 57 mm.). The Nepal population represents a cline from darker birds in east Nepal to lighter birds in west Nepal. Our east Nepal and Kathmandu Valley specimens are best grouped with the three birds from Bengal. We also have two birds of *P. p. kangrae* from Mussoorie, and our far western Nepal birds approach this subspecies.

Ripley (1950a, pp. 400–401) divided the cline shown by Nepal birds into three groups. However, we think a name at each end of the cline is enough and in this we follow Ticehurst (1938, pp. 97–99).

This was a common species and had a rapid high-pitched *"tzi."*

Phylloscopus pulcher kangrae Ticehurst. North-West Orange-barred Willow-Warbler.

Bahaduri, 3,500 feet: 1 ♂; December.

Sahajpur, 6,000 feet: 1 ♂, 1 sex?; December.

Wing: ♂ 55, 57; sex? 59 mm.

For discussion see preceding account.

Phylloscopus inornatus humei (Brooks). Green Willow-Warbler.

Barmdeo Mandi, 950 feet: 1 ♀?, 1 sex?; January.

Dhangarhi, 900 feet: 1 ♂; December.

Tansen, 4,500 feet: 2 ♂; December, January.

Kathmandu Valley, 4,500–7,000 feet: 6 ♂, 18 ♀, 2 sex?; February, April.

Raghunathpur, 900 feet: 4 ♀; January.

Chisapani, 950 feet: 1 ♀; December.

Sun Kosi, 1,800 feet: 1 ♀; December.

Wing: 8 ♂ 54–60; 25 ♀ 53–61 mm.

This was one of the commonest of the willow-warblers and moved in parties with other species.

Phylloscopus proregulus simlaensis Ticehurst. Simla Willow-Warbler.

Barmdeo Mandi, 950 feet: 1 ♀?; January.

Pokhara, 3,000 feet: 1 ♂; December.

Wing: ♂ 57 mm.

We also have two birds from Mussoorie (wing: ♀? 52; sex? 54 mm.).

Phylloscopus proregulus chloronotus (Gray). Himalayan Willow-Warbler.

Kathmandu Valley and vicinity, 3,500–6,500 feet: 5 ♂, 7 ♀, 3 sex?; January, February, March, April.

Wing: ♂ 49, 52, 54, 56, 56; ♀ 49, 50, 51, 51, 54, 55, 55 mm.

These are topotypes, following Ripley's restriction of the type locality.

This bird was one of the commonest of willow-warblers and occurred in mixed parties with other closely related species.

Phylloscopus maculipennis maculipennis (Blyth). Gray-faced Willow-Warbler.

Sahajpur, 6,000 feet: 1 ♂; December.

Godaveri, 5,500 feet: 1 ♂, 2 ♀; January.

Patale, 9,500 feet: 2 ♂; December.

Wing: ♂ 48, 51, 51, 51; ♀ 48, 49 mm.

We also have six birds from Sikkim (wing: ♂ 47, 48, 50, 51; ♀ 47, 49 mm.) and six from Bengal (wing: ♂ 45; ♀ 45, 45, 46, 47, 48 mm.). There seems to be a change from a darker, duller eastern bird to a paler, more yellowish form to the west of Nepal (*virens*). The variation in our Nepal population is slight and they are close to *P. m. maculipennis* of Sikkim and Bengal.

Ripley (1950a, pp. 401–402) names an intermediate population, *P. m. centralis*, from central and western Nepal. A name at each end of the cline seems enough and we follow Ticehurst (1938, pp. 120–123).

This bird was not common. It occurred in mixed parties, including sunbirds among mistletoe in oaks. It flicks its wings and gives a high-pitched "*ts, ts, ts.*"

Phylloscopus magnirostris Blyth. Large-billed Willow-Warbler.

Phulchowk, 9,000 feet: 1 ♂; April.

Wing: 71 mm.

The large-billed willow-warbler is new to the collections of the Museum.

Dr. Vaurie has checked the identification of this specimen.

Phylloscopus trochiloides trochiloides (Sundevall). Blyth's Willow-Warbler.

Narayangarh, 1,000 feet: 1 ♂, 2 ♀; April.

Phulchowk, 9,000 feet: 2 ♂; April.

Chisapani, 900 feet: 1 ♀; December.

Wing: ♂ 62, 63, 67; ♀ 58, 58, 59 mm.

Dr. Vaurie has checked the identification of this series.

Blyth's willow-warblers were found in small parties with similar species in the lowlands as well as on the higher ranges in Kathmandu Valley in April. No specimens were approaching breeding condition.

Phylloscopus trochiloides viridanus Blyth. Greenish Willow-Warbler.

Dhangarhi, 900 feet: 1 ♂; December.

Narayangarh, 1,000 feet: 1 ♂; April.

Kathmandu Valley, 5,000–7,500 feet: 2 ♂, 3 ♀; April, May.

Raghunathpur, 900 feet: 4 ♀; November, December, January.

Chisapani, 950 feet: 1 ♂, 2 ♀, 1 sex?; December, January.

Wing: ♂ 59, 61, 62, 62, 64; ♀ 57, 57, 57, 58, 58, 58, 59, 61, 65 mm.

Dr. Vaurie has checked the identification.

During winter months these birds were found commonly in the lowland in acacia groves along the edges of streams. By April they were common in forests of Kathmandu Valley at 7,000 feet, and a few were beginning to come into breeding condition.

Phylloscopus nitidus Blyth. Green Willow-Warbler.

Narayangarh, 1,000 feet: 1 ♀; April.

Chandragiri, 6,800 feet: 1 ♀; April.

Wing: 62, 62 mm.

This species is new to the Museum's collections. Dr. Vaurie has checked the identification of the series. A female from Mussoorie, taken May 3 (wing: 63 mm.), is also this species.

Phylloscopus reguloides reguloides (Blyth). Crowned Willow-Warbler.

Butwal, 900 feet: 1 ♂; February.

Kathmandu Valley, 4,500–8,000 feet: 2 ♂, 3 ♀; January, March, April, May.

Wing: ♂ 56, 57, 60; ♀ 55, 58, 58 mm.

Several birds in mixed parties worked through shrubs or taller trees.

Orthotomus sutorius patia Hodgson. Burmese Tailor Bird.

Belbahadi, 3,500 feet: 1 ♀; December.

Dhangarhi, 900 feet: 1 ♂, 2 ♀; December.

Marek, 3,000 feet: 1 ♂, 1 sex?; December.

Tansing, 4,500 feet: 2 sex?; January.

Riri Bazaar, 3,000 feet: 1 ♂; November.

Beni, 3,500 feet: 1 ♀; November.

Kathmandu, 3,000 feet: 1 ♀; January.

Chisapani, 950 feet: 1 ♂; December.

Bhorli, 1,500 feet: 2 ♀ ; December.

Wing: ♂ 45, 45, 47, 49; ♀ 44, 45, 46, 47, 47, 48 mm.

Ripley (1950a, p. 402) has commented on the slight variation in this species in Nepal.

Cisticola exilis tytleri Jerdon. Yellow-headed Fantail-Warbler.

Dhangarhi, 900 feet: 1 ♂, 1 ♀ ; December.

Wing: ♂ 45; ♀ 44 mm.

These two birds with several others were in dry grass.

Cisticola juncidis cursitans (Franklin). Streaked Fantail-Warbler.

Dhangarhi, 900 feet: 2 ♂, 2 ♀ ; December.

Chisapani, 900 feet: 1 ♀ ; January.

Raghunathpur, 900 feet: 3 ♀ ; January.

Wing: ♂ 48, 55; ♀ 47, 48, 48, 49, 49, 55 mm.

This fantail-warbler was common in open dry grasslands of the *terai*. Flocks of a dozen were found scattered about through fields. One at a time the birds would climb up on a stalk of dry grass. If disturbed, they would fly a short distance and dive into the grass, where they stayed fairly close to the ground.

Prinia hodgsonii rufula Goodwin-Austen. Beavan's Wren-Warbler.

Belbahadi, 3,500 feet: 1 ♀ ; December.

Butwal, 900 feet: 1 ♀ ; February.

Tansen, 4,500 feet: 3 ♂, 1 sex?; December, January.

Kathmandu (17 miles west), 3,000 feet: 1 ♂, 1 ♀ ; January.

Chisapani, 950 feet: 1 ♂, 1 ♀ ; December.

Wing: ♂ 42, 43, 45, 46, 49; ♀ 45, 46, 47, 48 mm.

This is *Franklinia gracilis* (part) of Stuart Baker (see Deignan, 1942, p. 4).

This wren-warbler was fairly common in the *terai* area as well as the lower valleys (2,500 feet) below Tansen. A flock of 10 to 15 was frequently found in low, thorny *ber* or wild plum bushes (*Zizyphus jujuba*). The call is a *"zee-zee-zee."* The birds in central Nepal were found in patches of sugar cane near Kathmandu Valley along the motor road to the west.

Prinia inornata fusca Hodgson. Brown Wren-Warbler.

Dhangarhi, 900 feet: 2 ♂, 2 ♀; December.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: ♂ 47, 52; ♀ 50, 52 mm.

The four west Nepal birds are even deeper and more richly colored than the single east Nepal bird, so we refer them all to *fusca*, type locality Nepal, though Ripley (1950a, p. 403) referred a single west Nepal specimen to the paler *terricolor* of the United Provinces and westward.

Small groups of this wren-warbler were seen in reeds along streams and in dry grass in open fields.

Prinia sylvatica gangetica (Blyth). Jungle Wren-Warbler.

Dhangarhi, 900 feet: 2 ♂, 2 ♀; December.

Wing: ♂ 59, 60; ♀ 59, 61 mm.

This species was not common. We found it in small parties of two to five in grass at the edge of the forest.

Prinia socialis subsp.

Barmdeo Mandi: 1 ♂; January.

Wing: 47 mm.

Prinia cinereocapilla Hodgson. Hodgson's Wren-Warbler.

Badamachli: 1 ♂; December.

Baila, Doti: 1 ♀; December.

Belbahadi, Doti: 1 ♀; December.

Wing: ♂ 45; ♀ 42, 43 mm.

Stuart Baker keeps this species in *Franklinia*.

Prinia crinigera crinigera (Hodgson). Brown Hill-Warbler.

Ulleri, 7,000 feet: 1 ♂; December.

Birethanti, 4,500 feet: 1 ♀; December.

Manebhanjan, 5,500 feet: 1 ♂; December.

Wing: ♂ 55, 57; ♀ 48 mm.

We also have a specimen of this race from northern Bengal (Mangpu), and one from Mussoorie.

This is *Suya crinigera* of Stuart Baker (see Deignan, 1942, p. 9).

Cettia flavolivacea flavolivacea (Blyth). Aberrant Warbler.

Tansen, 4,500 feet: 1 ♂, 1 ♀; December, January.

Pokhara, 3,000 feet: 1 ♂; December.

Birethanti, 4,500 feet: 2 ♀; December.

Kathmandu, 3,500 feet: 1 ♀?; January.

Wing: ♂ 56, 56; ♀ 55, 57, 58, 60. Tail: ♂ 47, 52; ♀ 50, 55, 58, 59. Culmen: ♂ 15; ♀ 14, 14, 14, 17. Tarsus: ♂ 22, 22; ♀ 21, 22, 22, 23 mm.

Delacour (1943a, p. 29) puts this species in the genus *Cettia*, and it has also been put in *Horornis*, *Horeites*, and *Neornis* in recent years.

Cettia (Horeites) brunnifrons (Hodgson). Rufous-capped Bush-Warbler.

Barmdeo Mandi, 950 feet: 1 sex?; January.

Birethanti, 4,500 feet: 1 ♀; December.

Wing: ♀ 45; sex? 45 mm.

No races are recognizable, according to Vaurie (1954e, pp. 5, 6).

The Barmdeo Mandi bird was in a shady area in deep grass. It moved about like a wren.

Tribura thoracica thoracica (Blyth). Spotted Bush-Warbler.

Bhorli, 1,500 feet: 1 ♀; December.

Wing: 50 mm.

The genus *Tribura* should perhaps be included in *Bradypterus*.

Acrocephalus dumetorum Blyth. Blyth's Reed-Warbler.

Phulchowk, 9,500 feet: 2 ♀?; April.

Raghunathpur, 900 feet: 2 ♂, 2 ♀; December, January.

Chisapani, 950 feet: 1 ♀?; December.

Wing: ♂ 58, 61; ♀ 60, 63.

This bird is new to the collections of the Museum.

A few specimens of this warbler were found together in hedgerows in a village or in small bushes in the *terai* in winter. In spring it had moved up into the foothills at 8,000 feet, where we found it near the ground in clumps of bamboo.

Megalurus palustris isabellinus Swainson. Striated Marsh-Warbler.

Dhangarhi, 900 feet: 1 ♀; December.

Emelie, 900 feet: 2 ♂; January.

Wing: ♂ 98, 99; ♀ 87 mm.

The striated marsh-warbler was occasionally found singly or in small flocks along the edges of ponds and swamps in tall grass.

Graminicola bengalensis bengalensis Jerdon. Large Grass-Warbler.

Bilauri, 900 feet: 1 ♂, 2 ♀; December, January.

Wing: ♂ 60; ♀ 59, 62 mm.

This species is new to the Museum's collection.

This grass-warbler has a call similar to that of the American catbird.

Tesia castaneocoronata (Burton). Chestnut-headed Wren-Warbler.

Maildhap, 6,500 feet: 1 ♀; January.

Tansen, 3,000 feet: 1 ♀; January.

Baglung, 3,000 feet: 1 ♀; November.

Phulchowk, 9,500 feet: 1 ♀; March.

The suggested larger size of eastern birds is borne out by our material, as the following table indicates:

	WING		
	Male	*Female*	*Sex?*
Mussoorie	49	49, 51	50
Nepal	...	47, 47, 49, 49	...
Sikkim	49, 50, 51, 51, 52	47, 48, 49	...
Tonkin	51, 53, 54	50, 53	...
Szechwan	55	....	...

Whether or not the difference is great enough to warrant applying *abediei* Delacour and Jabouille to the larger eastern birds seems doubtful, though Deignan (1951) recognized *abediei* and also described *T. c. riplei* from Yunnan, and Koelz (1954, p. 11) described *regia* from Assam.

This bird was occasionally found on the ground in places thick with ferns. Its call is a single, loud *"tzeet."*

Tesia cyaniventer Hodgson. Slaty-bellied Wren-Warbler.

Riri Bazaar, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♂; February.

Wing: 51, 52 mm.

These specimens have the greenish crown and back, the pale belly, and the orange of lower mandible restricted to base, that characterize this species. Other specimens from Sikkim, Bengal, Tonkin, and Annam agree well with them. We have *T. olivea* from Sikkim, Bengal, and Tonkin.

Family **REGULIDAE**

Regulus regulus subsp. Goldcrest.

Tukche, 9,100 feet: 1 sex?; December.

Patale, 10,000 feet: 1 sex?; December.

Wing: 55, 57 mm.

These specimens have a strong fulvous tinge below, and one would expect them to be *himalayensis*. But on the back they are as dark as the one available specimen of *sikkimensis* from Sikkim, which has only a faint tinge of fulvous below.

We also have two birds from Mussoorie (wing: ♂ 55; sex? 53 mm.).

The goldcrest was with a mixed party of small birds working through the fir forests. In Mussoorie a mixed flock of several species was in the tops of Himalayan cedars (*Cedrus deodara*).

Leptopoecile sophiae obscura Przewalski. Tibetan Tit-Warbler.

Jomosom, 12,000 feet: 1 ♂; December.

Wing: 52 mm.

Compared with a male of *L. s. sophiae* from Tian Shan, Chinese Turkestan, this specimen is much darker, above and below, and the under parts are almost all deep lilac purple, as described for this race.

Family **MUSCICAPIDAE**

We have followed Vaurie's (1953) arrangement and generic limits for the species he has covered. In view of Ripley's (1955) further comments on this, a few remarks are in order. Two quite dissimilar attacks on the problem of generic limits are possible. One is to attempt to find the genus characters which presumably exist, and

the "typical" members of each group, and then to separate the non-typical members into other genera. This tends to give one main "genus" (though it may include strange bedfellows) with a number of small peripheral "genera" and is perhaps a result of looking for key characters that will diagnose the group, as exemplified by the keys of Sharpe and Stuart Baker. Carried to an extreme, this method results in many monotypic genera. The other approach is to put together birds that seem to be most closely related on overall appearance and then to attempt to diagnose these groups as genera. This method was used by Delacour and, for this group, by Vaurie. Though the latter approach makes genera harder to diagnose, the end result is likely to be more in keeping with our aims of putting closest relatives together. For example: of the birds that Vaurie puts in *Niltava* as a related series, Ripley puts *hodsoni*, admittedly at one end of the series, in a monotypic genus, and in an earlier work has put a few species at the other end of the series in *Niltava*, and he advocates putting the bulk of the species in the more comprehensive genus *Muscicapa*. This approach will head back for the small genera of Stuart Baker and Oberholser, who placed distinct species in separate genera.

Ficedula parva albicilla (Pallas). Eastern Red-breasted Flycatcher.

Bilauri, 900 feet: 1 sex?; January.

Badamachli, 950 feet: 1 ♂; December.

Bichchua, 900 feet: 1 ♂; December.

Dhangarhi, 900 feet: 2 ♂, 1 ♀; December.

Lumpek, 6,000 feet: 1 ♂; November.

Tansen, 4,500 feet: 3 ♂, 2 ♀; December, January.

Pokhara, 3,000 feet: 1 ♂; December.

Narayangarh, 1,000 feet: 1 ♂; April.

Kathmandu Valley, 4,500 feet: 1 ♂, 1 sex?; January, February.

Raghunathpur, 900 feet: 1 ♂, 1 ♀, 1 sex?; November, January.

Chisapani, 950 feet: 1 ♂; December.

Wing: 13 ♂ 66–70 mm. (av. 68 mm.); 4 ♀ 69, 69, 69, 70 mm.

This species was common. It occurred in mango groves near villages, flitted from bush to bush in scrub jungle and occasionally accompanied tits and other birds through taller trees of more open forests.

Ficedula strophiata strophiata (Hodgson). Orange Gorgetted Flycatcher.

Sahajpur, 6,000 feet: 1 ♂; December.

Lumpek, 6,000 feet: 1 ♂; November.

Phurti Ghat, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 sex?; December.

Tansing, 4,600 feet: 3 ♂, 6 ♀, 1 sex?; December, January.

Marek, 3,000 feet: 1 sex?; December.

Kathmandu Valley, 4,000–6,000 feet: 1 ♂, 1 ♀, 1 sex?; January, February.

Manebhanjan, 6,000 feet: 1 ♀; December.

Mayakhu, 5,500 feet: 1 ♀; December.

Wing: ♂ 73, 73, 74, 74, 76, 78, 80; ♀ 68, 69, 69, 69, 70, 70, 71, 73, 74, 76, 76, 77 mm.

Compared with birds from Sikkim and Bengal.

This species, a very common flycatcher, was found near villages in high trees of open forests as well as in thickets near the ground.

Ficedula monileger monileger (Hodgson). Hodgson's White Gorgetted Flycatcher.

Godaveri, 5,500 feet: 1 ♀; January.

Wing: 58 mm.

This specimen was in thick undergrowth near the ground over a damp area.

Ficedula hyperythra hyperythra (Blyth). Rufous-breasted Blue Flycatcher.

Baila, 3,000 feet: 1 ♂; December.

Butwal: 1 ♀; November.

Phulchowk, 9,500 feet: 1 ♀; April.

Wing: ♂ 59; ♀ 58, 59 mm.

Compared with birds from Bengal, Assam, and Indo-China.

There is considerable variation, presumably individual, in this series, though the western specimens, both male and female, are paler. Ripley (1950a, p. 405) also records west Nepal birds as paler on the breast and slightly larger than birds from eastern Nepal to Assam.

This bird was found in forests. The female taken on Phulchowk at the end of April was near the ground in thick clumps of bamboo. Ovaries were slightly enlarged.

Ficedula westermanni collini (Rothschild). Indian Little Pied Flycatcher.

Barmdeo Mandi, 950 feet: 1 ♀ [= ♂]; January.

Ainthpur, 900 feet: 1 ♂; January.

Badamachli, 950 feet: 1 ♂; December.

Phulchowk, 8,200 feet: 2 ♂; March, May.

Bhorli, 1,500 feet: 1 ♂ [= ♀]; December.

Wing: ♂ 56, 57, 57, 64; ♀ 54 mm.

We also have a female from Sikkim (wing: 54 mm.).

This bird was occasionally seen in the tops of tall trees, usually with other species. It has a loud two or three note song.

Ficedula superciliaris aestigma (Hodgson). Little Blue-and-White Flycatcher.

Kathmandu Valley and vicinity, 3,500–7,000 feet: 4 ♂; March, April.

Wing: 62, 63, 65, 65 mm.

All these specimens have traces of a white supercilium. Three were collected in vines and trees near water; the other was in a mixed party of birds in a forest. The bird's call is a softly repeated "*tick*."

Ficedula tricolor tricolor (Hodgson). Slaty-blue Flycatcher.

Barmdeo Mandi, 950 feet: 1 ♂, 1 ♀; January.

Bilauri, 900 feet: 1 ♀; January.

Belbahadi, 3,000 feet: 1 ♂, 1 ♀; December.

Baila, 3,000 feet: 2 ♂; December.

Dhangarhi, 900 feet: 1 ♀; December.

Birethanti, 4,500 feet: 2 ♂; December.

Kathmandu, 3,500 feet: 1 ♂; January.

Wing: ♂ 60, 60, 60, 61, 61, 61, 62; ♀ 54, 54, 56, 58 mm.

Throat pure white, center of breast and abdomen grayish white, with flanks darker gray and faintly tinged fulvous, comparing well with three males from United Provinces (wing 57, 60, 61 mm.).

The slaty-blue flycatcher was occasionally seen alone or in pairs, in low bushes in fields and in the heavier forests.

Niltava grandis grandis (Blyth). Large Niltava.

Godaveri, 5,500 feet: 2 ♂, 1 ♀; January, February.

Phulchowk, 6,000–8,300 feet: 1 ♂, 1 ♀; March.

Wing: ♂ 103, 106, 107; ♀ 102, 104 mm.

Our birds from Nepal compare well with three birds from Bengal (wing: ♂ 104, 105; ♀ 102 mm.).

The large niltava was not uncommon at Godaveri and on Phulchowk. It was a bird of the heavier forests, usually in the undergrowth or small trees. It was an excellent singer, with a variety of notes, the most common of which was *"more time to eat"* (*do, re, re, mi*) and also *"right here," "t-z-z-z-t,"* and *"ha, ha, ha, ha."*

Niltava macgrigoriae macgrigoriae (Burton). Small Niltava.

Barmdeo Mandi, 950 feet: 2 ♂; January.

Badamachli, 950 feet: 1 ♂; December.

Tansen, 4,500 feet: 2 ♀; January.

Godaveri, 5,500 feet: 2 ♂; March.

Kathmandu, 4,500 feet: 1 ♂; January.

Wing: ♂ 63, 65, 65, 66, 66, 67; ♀ 61, 64 mm.

When these Nepal birds were compared with Sikkim, Assam, and Indo-Chinese birds it was at once apparent that the paler under parts of the males from Nepal could be used as a diagnostic character in separating them as subspecies. Presumably birds from farther west (the species ranges to northern Punjab) are the same, and it seems admissable to use Burton's name, type locality "Himalayas," for them.

The males from Sikkim (3), Assam (Margherita, 1), and Indo-China (Tonkin and Laos, 14) differ in having the upper breast deeper gray and the lower breast and abdomen grayer, less whitish than the Nepal birds. Of the six Nepal males only one, from Kathmandu Valley, is dark enough to overlap with the more eastern birds.

Of females we have only two from Nepal and three from Indo-China (Laos, Tonkin, and Annam). The Indo-China series is variable, but the brownest of them is duller, less reddish brown, more grayish, on head, hind neck, back, breast and flanks.

These two races stand as:

(a) **Niltava macgrigoriae macgrigoriae** Burton

Phoenicura macgrigoriae Burton, Proc. Zool. Soc. London, 1835 (=Feb. 15, 1839), p. 152—type locality Himalayas, hereby restricted to western Himalayas.

Range.—Punjab to Nepal.

(b) **Niltava macgrigoriae signata** Horsfield

Leiothrix signata "ex McClelland ms" Horsfield, Proc. Zool. Soc. London, 1839 (=March, 1940), p. 162—type locality Assam.

Range.—Sikkim to Indo-China.

Diagnosis.—Like *N. m. macgrigoriae* but the male darker gray on breast and abdomen, and the female less rufescent, more grayish, above and below.

Niltava sundara sundara Hodgson. Rufous-bellied Niltava.

Badamachli, 950 feet: 1 ♂; December.

Tansen (near): 2 ♂; January.

Kusma (near), 3,500 feet: 1 ♀ [= ♂]; November.

Pokhara, 3,000 feet: 1 ♂; December.

Kathmandu Valley, 5,000–8,000 feet: 1 ♂, 4 ♀; January, March.

Wing: ♂ 80, 80, 80, 81, 84, 85; ♀ 77, 79, 80, 80 mm.

This species was common in the Kathmandu Valley, preferring open areas in bushes near water. Its call is a *"s-i-i-i-i-f cha chuk."*

Niltava poliogenys poliogenys (Brooks). Brooks' Flycatcher.

Raghunathpur: 2 ♀; January.

Dobhan: 1 ♂; February.

Butwal: 2 ♀; January.

Chisapani: 2 ♂, 1 ♀; December.

Narayangarh: 1 ♂, 1 ♀, 1 sex?; April.

Wing: ♂ 75, 76, 77, 79; ♀ 72, 74, 77, 77, 78 mm.

For comparison we have two eastern Nepal birds lent by Dr. Ripley; two Bengal birds; and two Assam (Margherita) birds, one of them lent by Ripley.

This species used to be considered conspecific with *olivacea* (see Delacour, 1947, p. 292, and Vaurie, 1952, pp. 3, 16).

The geographical variation in this species seems clear: a dark, intensely colored, brownish bird in Assam; a well-marked, paler, more olive and more grayish bird from Nepal, with birds intermediate in color from intermediate areas as shown by our Bengal birds. In all these the sexes are alike. From descriptions another isolated population in the eastern Ghats seems similar to the Nepal bird in the female, but the male has some blue in its plumage.

Disregarding *N. p. vernayi* of the eastern Ghats, two names seem sufficient for the cline from pale and gray (west) to dark and brown (east) birds. Unfortunately, the type locality of *N. p. poliogenys* (Brooks) is in the Sikkim *terai*, of which our Bengal birds are practically topotypes, and the name applies to an intermediate population but its use is best extended to cover all the paler end of the cline, from Nepal to Sikkim and Bengal at least.

N. p. saturatior Robinson and Kinnear, with type locality in upper Assam, applies to the darker end of the cline—parts of Assam at least and presumably Burma.

In certain well-wooded foothills near water, especially at Narayangarh, Chitwan District, this bird was fairly common and its song was the dominant one. There was quite a variation in the song: a mellow *"doe doe chi cha," "surani-so-swent," "snareeti-do-deee,"* and, when disturbed, a *"tik, tik, tik, tik."* These birds, taken in April, were in breeding condition.

Niltava tickelliae tickelliae (Blyth). Tickell's Blue Flycatcher.

Dhangarhi, 900 feet: 2 ♂, 1 ♀; December.

Butwal, 900 feet: 1 ♀; February.

Wing: ♂ 74, 74; ♀ 70, 72 mm.

We found the Tickell's blue flycatcher in the lowlands of west Nepal. It was fairly noisy, calling from the tops of forest trees (*"tick, tick, tick"*) and from smaller trees at dusk.

Niltava (Muscicapella) hodgsoni Moore. Pigmy Blue Flycatcher.

Godaveri, 5,500 feet: 1 ♂; February.

Phulchowk, 9,000 feet: 2 ♂; May.

Wing: 47, 47, 48 mm.

We also have a male from Bengal (wing: 48 mm.).

Numbers of this species occurred on Phulchowk from 8,000 to 9,800 feet in May. They had a distinctive high-pitched call, *"tzit*

che che che cheeee" (*do, do, te, la, te*), by which we located them near the tops of the taller oak trees, fifty feet or more from the ground. They seemed to move slowly from one tree to another, spending some time in the same tree. One came down and sat quietly in the middle of a small wild pear tree above a pool. These habits of this rare bird are rather different from those reported by others.

Muscicapa sibirica carabata (Penard). Nepal Sooty Flycatcher.

Phulchowk, 7,900 feet: 1 ♂, 1 ♀; April.

Wing: ♂ 74; ♀ 72 mm.

We also have four Sikkim birds (wing: ♂ 73, 75, 76; ♀ 71 mm.).

The sooty flycatcher was seen singly after the middle of April. It perched on the top of oak trees (*Quercus incana*).

Muscicapa ruficauda Swainson. Rufous-tailed Flycatcher.

Phulchowk, 8,000 feet: 1 ♀; May.

Wing: 73 mm.

The rufous-tailed flycatcher is new to the collections of the Museum. It compares well with Sharpe's description in the *Catalogue of Birds* (1877).

This specimen was fluttering on the ground in a wooded ravine and was caught by hand.

Muscicapa (Eumyias) thalassina thalassina Swainson. Verditer Flycatcher.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Butwal, 900 feet: 1 ♂; January.

Godaveri, 5,000 feet: 1 ♂; March.

Wing: 83, 84, 85 mm.

We also have a small series of birds from United Provinces, Sikkim, and Assam.

During winter months, this flycatcher is almost absent from the *terai* and foothills, but it arrives in the Kathmandu Valley early in March.

Culicicapa ceylonensis calochrysea Oberholser. Gray-headed Flycatcher.

Malakheti, 900 feet: 1 ♀; December.

Riri Bazaar, 3,000 feet: 1 ♂?; November.

Butwal, 900 feet: 1 ♀?; January.

Kathmandu Valley: 2 ♀; March.

Wing: ♂? 65; ♀ 59, 61, 67 mm.

Compared with Sikkim and Tonkin birds. For revision see Deignan (1947, p. 581).

This flycatcher was common in the *terai* and foothills, where it was often found catching insects in fig and mango trees.

Rhipidura hypoxanthum Blyth. Yellow-bellied Fantail Flycatcher.

Baglung, 3,000 feet: 1 ♂; November.

Beni, 3,500 feet: 1 ♂; November.

Tansen, 4,500 feet: 1 ♀; January.

Kathmandu, 5,000 feet: 1 ♂; January.

Sun Kosi, 3,000 feet: 1 ♀; December.

Wing: ♂ 57, 57, 57; ♀ 54, 55 mm.

We also have three birds from Mussoorie (wing: ♂ 60, 58; sex? 56) and birds from Sikkim and Bengal. The population from Nepal and Mussoorie tends to be slightly brighter below and paler above than more eastern birds.

This flycatcher was fairly common among the foothills in winter where it was found in twos or threes in trees near cultivations. Its call is a repeated *"chief."*

Rhipidura aureola aureola Lesson. White-browed Fantail Flycatcher.

Bilauri, 900 feet: 1 ♀; January.

Raghunathpur, 900 feet: 1 ♂, 2 ♀; November, December, January.

Wing: ♂ 85; ♀ 79, 82, 84 mm.

We also have two birds from Baroda (wing: ♂ 80, 82 mm.) and one from Assam (♀ 84 mm.).

This flycatcher, seen only in the lowlands, appeared to be fairly uncommon. Several were in a mango grove in the *terai* of east Nepal. Its call was a *"har-rup, har-reep."*

Rhipidura albicollis albicollis (Vieillot). White-throated Fantail Flycatcher.

Malakheti, 900 feet: 1 ♂; December.

Dhangarhi, 900 feet: 1 ♀, 1 sex?; December.

Raghunathpur, 950 feet: 1 ♂; January.

Wing: ♂ 80, 78; ♀ 78 mm.

This bird was fairly common in the undergrowth of lowland forests where it occurred in twos and threes along with other species. Its call was a "*pek*," given at intervals, and its song a group of five quarter notes on a descending scale.

Family **PRUNELLIDAE**

Prunella himalayana (Blyth). Altai Hedge Sparrow.

Jomosom, 9,200 feet: 1 ♂, 1 sex?; December.

Wing: ♂ 95; sex? 91 mm.

We also have a series from Sikkim (wing: ♂ 88, 90; ♀ 87, 89, 90, 90 mm.).

This species was found on rocky slopes at 14,000 feet. During a snow storm it descended to sheltered ravines along the Kali Gandak.

Prunella rubeculoides rubeculoides (Moore). Robin Hedge Sparrow.

Jomosom, 9,200 feet: 1 ♀; December.

Wing: 75 mm.

Spring- and summer-taken birds from Sikkim have a considerably paler rufous breast and other differences, presumably the result of wear. The race from the western Himalayas, *muraria* Meinertzhagen 1926, is described as paler than Sikkim and Nepal birds.

The robin hedge sparrow was not a common bird. A single specimen was taken at the edge of fields along the Kali Gandak River.

Prunella strophiata jerdoni (Brooks). Jerdon's Hedge Sparrow.

Tansen, 4,500 feet: 1 ♂, 1 ♀; December.

Sahajpur, 6,500 feet: 1 ♂, 2 ♀; December.

Wing: ♂ 63, 65; ♀ 63, 64, 65 mm.

For comparison we have three birds from Mussoorie (wing: ♂ 66; ♀ 66; sex? 66 mm.), with which our west Nepal birds agree well in being paler above and below. It is interesting that the two Tansen birds come from the same river valley, just south of the localities from which *P. s. strophiata* was secured. All apparently were in winter quarters.

This hedge sparrow was fairly common in the lower foothills where flocks containing from four to eight were found at the edges of fields in forested areas.

Prunella strophiata strophiata (Blyth). Rufous-breasted Hedge Sparrow.

Lumpek, 7,000 feet: 1 ♀; November.

Tukche, 9,000 feet: 1 ♀; December.

Jomosom, 9,100 feet: 3 ♂; December.

Patale, 10,000 feet: 5 ♂, 1 sex?; December.

Wing: ♂ 64, 64, 65, 66, 66, 68, 68, 71; ♀ 63, 65.

A series of Sikkim birds taken in March and May (♂, wing 63, 64, 64, 65, 66, 66, 68 mm.), and these east Nepal, and high altitude west Nepal birds, and a Mussoorie bird taken in February, agree in their dark coloration. The Mussoorie bird was taken from a locality whence *P. s. jerdoni* was also taken, and in west Nepal both forms were taken in the same general area. Evidently in winter the two forms mix in certain localities, but our specimens sort fairly clearly into two series which we allocate to these two subspecies.

This bird occurred in small parties in fallow fields near villages or around abandoned cattle sheds. Its call was a *"ch-r-r-r-r-r."*

Prunella fulvescens subspecies. Brown Hedge Sparrow.

Jomosom, 9,200 feet: 1 ♀; December.

Wing: 73 mm.

This is an example of the eastern group of birds, with the upper parts fairly heavily streaked. The breast is rich ochraceous. Stuart Baker (1922–30, **2**: 198) called all Indian birds *P. f. fulvescens*, but more recently *sushkini* Collins and Hartert, 1927, new name for *P. f. tibetanus* (preoccupied), has been used for the Nepal-Bhutan birds.

A small flock of the brown hedge sparrow was feeding on seeds near an old yak hut. The territory was open, rocky hillsides where the rufous-breasted accentors were also found.

Prunella immaculata (Hodgson). Maroon-backed Accentor.

Okhaldhunga, 7,500 feet: 3 ♀ ; December.

Wing: 78, 78, 79 mm.

The maroon-backed accentor was found only once, in a small party at the top of a wooded ridge near a few open fields.

Family **MOTACILLIDAE**

Motacilla maderaspatensis Gmelin. Large Pied Wagtail.

Tansen, 2,500 feet: 1 ♀ imm.; January.

Narayangarh, 1,000 feet: 1 ♀ ad.; April.

Wing: ♀ ad. 92; ♀ imm. 87 mm.

The adult female is in worn plumage, with the back very dull and faded. An egg was found in the oviduct of this April bird.

Numbers of this species were found along the edge of water of the Narayani River and we also saw it elsewhere in the lowlands and in the rice fields of the foothills.

Motacilla alba alboides Hodgson. White Wagtail.

Riri Bazaar, 3,000 feet: 1 ♂; November.

Tukche, 9,000 feet: 1 ♂, 1 ♀, 1 sex?; November, December.

Tansen, 2,500 feet: 1 ♂; January.

Kathmandu, 3,500 feet: 1 ♀ ; January.

Chisapani, 950 feet: 1 ♂; December.

Wing: ♂ 92, 93, 94, 97; ♀ 89, 90 mm.

These birds are in winter plumage, with white throat. Three males have the upper parts generally black; one has a gray tinge; the females and the unsexed specimen have them black tinged gray, except for the back of the neck and top of the head, which are pure black. All agree in the wide white band on forehead and fore part of crown (about 10–12 mm. wide). This is confluent with the white side of the head. The chin, upper throat, and side of the head are white except for a black line that starts near the gape, passes below the ocular area, spreads out to cover the ear coverts and then joins

the black of the side of the neck. The series is fairly uniform except for variation in the amount of white in the black of the lower throat.

Except for having the throat white (winter plumage) these birds agree well, sex for sex, with five summer birds from Sikkim (wing: ♂ 94, 95, 96, 97; ♀ 88) and one from Ladak (wing: ♂ 90 mm.).

This was a common species along banks of larger streams and rivers.

Motacilla alba dukhunensis Sykes. Indian White Wagtail.

Dhangarhi, 900 feet: 1 ♂ imm.; December.

Tansen, 2,500 feet: 1 ♀ imm.; January.

Pokhara, 3,000 feet: 1 ♂ ad., 1 ♀ ad., 1 sex? imm.; December, January, February.

Narayangarh, 1,000 feet: 1 ♂ ad., 1 ♀ ad.; April.

Kathmandu Valley, 4,400 feet: 1 ♂ ad., 1 ♀ imm.; April.

Raghunathpur, 900 feet: 1 ♂ ad., 1 ♀ imm.; November, December.

Wing: ♂ ad. 92, 92, 92, 93; ♀ ad. 90, 92 mm.

The adults have a white forehead forming a band of about 10 mm., and the whole side of head and neck is white. Only one, a male, taken April 13, has the chin and throat black. The other adults have it white, i.e., winter plumage.

These birds were fairly common along river banks and in rice fields in company with other wagtails. Gonads of two April birds were slightly enlarged.

Motacilla alba personata Gould. Masked Wagtail.

Dhangarhi, 900 feet: 1 ♀; December.

Raghunathpur, 900 feet: 1 ♂, 2 ♀; November, December.

Wing: ♂ 97; ♀ 87, 89, 93 mm.

These birds, apparently all adult, have a broad white forehead (10–12 mm.), the white extending to around the eye. The ear coverts are black. The November bird has a white throat. In the others the throat is black, mottled with white.

The masked wagtail was collected in dry fields and near ponds in villages.

Motacilla feldegg melanogriseus (Homeyer). Turkestan Black-headed Wagtail.

Malakheti, 900 feet: 2 ♂; December.

Wing: 79, 79 mm.

This species is new to the Museum's collections. Several were in cut-over rice fields in the lowlands of west Nepal; otherwise we did not see them.

Motacilla cinerea melanope Pallas. Eastern Gray Wagtail.

Birethanti, 4,500 feet: 1 ♀; December.

Butwal, 900 feet: 1 ♂, 1 ♀?; December, January.

Tansen, 2,500 feet: 1 ♂, 1 ♀; January.

Kathmandu (17 miles west): 2 ♀; January.

Phulchowk, 6,500 feet: 1 ♂, 1 ♀; April.

Tail: ♂ 88, 88, 88; ♀ 83, 86, 87, 91, 94, 96 mm.

Ripley (1950a, p. 381) records this species for Nepal as *M. c. caspica*. According to Bates the far eastern birds have shorter tails (eastern Asia, 86–94 [av. 90 mm.]) and the western birds longer tails (British Isles, 93–104 [av. 99.5] mm.), the change between being gradual, representing a long cline. Persian birds, type locality of *caspica*, are in the larger end of the cline and should be included with *M. c. cinerea*, according to Witherby (1936), for it seems inadvisable to divide this cline into more than two subspecies.

We have three summer birds from Kashmir (May and June, tail 90, 90, 94); and three from Turkestan (August, tail 88, 91, 94). The measurements of the Nepal birds, from near the central portion of the cline, seem to place them better with the eastern birds, *melanope*.

The gray wagtail was common in open, grassy areas near streams.

Motacilla flava beema (Sykes). Indian Blue-headed Wagtail.

Dhangarhi, 900 feet: 1 ♂ [= ♀]; December.

Kathmandu, 4,300 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♀? [= ♂], 1 ♀; November, January.

Numbers of these birds occurred in marshes, where they waded through shallow water for insects. Others were found along forest streams.

Motacilla citreola citreola Pallas. Yellow-headed Wagtail.

Dhangarhi, 900 feet: 2 ♂; December.

Raghunathpur, 900 feet: 2 ♂; January.

Wing: 82–87 mm.

None of these had any black in the back, though the depth of gray varies.

A bird from Sikkim measures, ♂ wing 88, tail 80 mm.; two from Manchuria, ♂ wing 88, tail 84 mm., ♀ wing 84, tail 79 mm.

This bird was in a small river-bed in the lowlands.

Motacilla citreola calcarata Hodgson. Yellow-headed Wagtail.

Dhangarhi, 900 feet: 1 ♂; December.

Wing: 87 mm.

This specimen has a few black feathers in the back.

A dozen or more birds of this species were running after insects in a swamp. It was a fairly common bird in the lowlands.

Anthus trivialis trivialis Linnaeus. Tree Pipit.

Tansen, 4,500 feet: 1 ♀; December.

Wing: 82 mm.

Anthus hodgsoni yunnanensis (Uchida and Kuroda). Northern Tree Pipit.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Emelie, 900 feet: 1 ♀; January.

Belawa, 3,000 feet: 1 ♀; November.

Lete, 8,500 feet: 1 ♀; December.

Dana, 5,000 feet: 1 ♀; December.

Sikha, 9,100 feet: 1 ♂; December.

Tansing, 4,500 feet: 1 ♂, 3 ♀; December, January.

Butwal, 900 feet: 2 ♀; January, February.

Kathmandu Valley, 2 ♂; January, February.

Chisapani, 950 feet: 1 ♀; January.

Bhorli, 1,500 feet: 1 ♀; December.

Manebhanjan, 6,000 feet: 1 ♀; December.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Wing: ♂ 84, 86, 86, 88; ♀ (13) 79–86 (av. 83) mm.

For use of this name for the northern race with little streaking on the back see Ripley (1948a, p. 622 ff.).

Anthus richardi richardi Vieillot. Richard's Pipit.

Raghunathpur, 900 feet: 1 ♀; December.

Wing: 95 mm.

Richard's pipit was found singly or in pairs in rice fields of the *terai* of east Nepal.

Anthus richardi rufulus Vieillot. Indian Pipit.

Dhangarhi, 900 feet: 3 ♂, 2 ♀; November, December.

Tansen, 3,000 feet: 2 ♀; January.

Pokhara, 3,000 feet: 1 ♂, 3 ♀; December, January.

Narayangarh, 1,000 feet: 1 ♂; April.

Kathmandu, 3,500 feet: 1 ♀; January.

Raghunathpur, 950 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂; January.

Wing: 7 ♂ 78–85 (av. 82 mm.); 8 ♀ 74–84 (av. 79 mm.).

The Indian pipit was a common bird of village squares, playing fields, and areas bordering human habitation.

Anthus cervinus Pallas. Red-throated Pipit.

Tukche, 17,000 feet: 1 ♂; December.

Wing: 88 mm.

This is an adult with cinnamon-red throat, and much heavy streaking below.

Anthus roseatus (Blyth). Hodgson's Pipit.

Tansen, 2,500 feet: 2 ♂, 1 ♀; February.

Kathmandu, 3,500 feet: 1 ♀; January.

Wing: ♂ 90, 91; ♀ 82, 82 mm.

All three specimens are in immature plumage. This species was seldom seen. A flock of 10 or 12 birds was in damp rice fields in the foothills.

Anthus sordidus jerdoni Finsch. Brown Rock Pipit.

Barmdeo Mandi, 950 feet: 1 ♂; January.

Bilauri, 900 feet: 1 ♀; December.

Wing: ♂ 97; ♀ 98 mm.

We also have two male birds from Mussoorie (wing 100, 103 mm.).

The brown rock pipit was occasionally seen near cultivations. It was solitary and would perch on the highest mound or rock in the vicinity.

Oreocorys sylvanus (Blyth). Upland Pipit.

Ulleri, 7,500 feet: 1 ♀; December.

Tansen, 4,700 feet: 3 ♂, 1 ♀; December, January.

Wing: ♂ 79, 80, 81; ♀ 74, 79 mm.

For comparison we also have five birds from Mussoorie (wing: ♂ 79, 82; ♀ 78, 78, 78 mm.) and one from Szechwan (wing: 84 mm.; taken December 21, 1931). This latter is so very much darker than the Nepal specimens that it raises the question again as to the validity of a dark eastern race. Koelz (1954, p. 21) has described a race from Punjab.

The upland pipit was occasionally found at the top of open, grassy ridges, where it walked on the ground or perched on rocks.

Vaurie (1954c, p. 13) would include the monotypic genus *Oreocorys* in *Anthus*.

Family **LANIIDAE**

Lanius vittatus Valenciennes. Bay-backed Shrike.

Chisapani, 950 feet: 1 ♀; January.

Wing: 86 mm.

The bay-backed shrike was not common. We saw two or three birds in acacia groves in the *terai* of east Nepal.

Lanius schach

Lanius schach erythronotus (Vigors)

Dhangarhi, 900 feet: 2 ♂; December.

Baila, 3,000 feet: 1 ♂; December.

Sahajpur, 6,000 feet: 1 ♀; December.

Barmdeo Mandi, 950 feet: 1 ♀; January.

Wing: ♂ 87, 90, 97; ♀ 90, 92 mm.

We have nine birds from United Provinces (wing: ♂ 89, 89, 90, 92, 94, 98; ♀ 88, 88, 93 mm.) and one Punjab bird (wing: ♂ 88 mm).

Lanius schach tricolor (Hodgson)

Dhangarhi, 900 feet: 2 ♀; December.

Tansing, 4,500 feet: 3 ♂, 3 ♀; November, December, January.

Lumpek, 6,500 feet: 1 ♀?; November.

Belawa, 3,000 feet: 1 ♂; November.

Ghara, 8,000 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♂; December.

Kathmandu (17 miles west), 3,000 feet: 1 ♀; January.

Wing: ♂ 92, 93, 93, 94, 95, 97; ♀ 93, 93, 94, 94, 95, 96.

Lanius schach tephronotus (Vigors)

Barmdeo Mandi: 1 ♂; January.

Kusma (near), 3,500 feet: 1 ♂; November.

Ghasa, 8,000 feet: 1 ♀; December.

Wing: ♂ 100, 101; ♀ 95 mm.

This group has been reviewed a number of times, with different conclusions. A review of the whole subject would be out of place here, but as our data differ on a number of points from the most recent review by Biswas (1950, p. 444), it seems advisable to comment briefly.

1. *L. s. erythronotus.* We have nine specimens from the United Provinces and one from the Punjab, all winter-taken except two worn birds from United Provinces (June 10). These are a fairly uniform series except for the greater or less extent of rufous on the lower back. A few specimens, including the two summer birds, have dusky tips to some of the feathers of the head and upper back, probably due to wear and staining.

We also have five specimens, winter-taken, from far western Nepal (Doti-Kailali and Kanchanpur area). This also is a fairly uniform series except that two of the specimens have the basal two thirds of the feathers of crown and nape black, showing through in places, presumably an approach to *tricolor*. This far western Nepal series differs considerably from the United Province–Punjab series in having the rufous of the lower back extending as a faint wash over the gray of the upper back, and the rufous of the lower back, upper tail coverts, and flanks deeper and richer in color. This series shows none of the extreme variability one would expect of

a "hybrid swarm" or from an area of intergradation, such as has been reported from west Nepal. Rather it looks like an orderly progression toward the color pattern of *tricolor*. The difference between these west Nepal birds and United Province birds in the depth of the rufous is of the magnitude ordinarily used to separate fairly well "average" marked subspecies. However, as three names —*erythronotus, kathiawarensis* and *caniceps*—are already available for pointing out trends in general color tone and extent of rufous of the Indian population, another does not seem necessary.

2. *L. s. tricolor*. This Nepal series consists of thirteen birds, winter-taken: one from near Kathmandu, eleven from the Kali Gandak area of west Nepal, and one from far western Nepal (Dhangarhi). Again this series is fairly uniform, with only a moderate amount of variation in the amount of gray between black of head and rufous of back, and in two specimens having some of the black feathers of the crown or nape with grayish tips.

This series differs from the far western Nepal *erythronotus* in the strikingly different, black, not gray head and otherwise in the somewhat darker rufous back and flanks, and the somewhat greater extent of the rufous on the upper back.

3. Three somewhat worn birds from Indo-China taken in April and May are very similar to the Nepal series of *tricolor*, except for being paler rufous, perhaps the result of wear and fading.

4. *L. s. longicauda*. Five winter-taken birds from Bangkok, Thailand, differ from the above *tricolor* in the much longer tail, as described; in the larger white area on the primaries; in the deeper rufous back, not paler as sometimes said; and in the great reduction of the gray in the upper back, which is at most faintly indicated, instead of being a distinct band, or a gray, rufous-washed area.

5. *L. s. tephronotus*. Our three winter-taken Nepal specimens are immatures of this gray-backed bird, with obscure markings on the breast. As Biswas found no specimens of this form with any trace of character of any other, it is advisable to comment on our other specimens.

We have twelve specimens from Sikkim, one from Assam, three from Indo-China, and seven from China that are all fairly uniform.

From one Sikkim locality, Chungtang, we have five May specimens of typical *L. s. tephronotus*, two of which are marked as having enlarged gonads. Also from this locality we have two specimens

that look like hybrids between *L. s. tephronotus* and *L. s. tricolor* (of which latter we have no Sikkim specimens).

One, a male, taken May 7 and marked with enlarged gonads, is very similar to *L. s. tephronotus* except for having the whole top and back of head and neck black as in *L. s. tricolor*.

The other, a female, taken May 7 and marked with enlarged gonads, is similar to *tricolor* in having the white patch in the primaries, but otherwise is intermediate in having the rufous of the rump extending not quite halfway up the back, and in having the top of the head and neck mixed black and gray, with the posterior edge rather more sharply delimited in black.

This material, except for the Sikkim *tephronotus*, gives a rather different picture from that presented by Biswas.

The most notable feature is that the United Province and far western Nepal gray-headed birds segregate sharply from the black-headed Nepal birds in characters and also geographically except for one black-headed bird in far western Nepal. When it is considered that the west Nepal and the far western Nepal localities are only about two hundred miles apart, the absence of anything like a "hybrid swarm" in this winter-taken material becomes still more surprising.

In looking at Biswas' "hybrid index" figures it is noticeable that his analysis (which does not attempt to analyze populations but only selected individuals) shows very few birds that are really intermediate. Especially in color they are near one or the other end of the series. A different view of individual variation might have given a different picture.

Present material presents a better case for considering *tephronotus* and *tricolor* conspecific than it does *tricolor* and *erythronotus*. Tentatively we consider them all conspecific.

Lanius cristatus cristatus Linnaeus. Brown Shrike.

Tansing (near): 1 ♀?; January.

Raghunathpur, 900 feet: 3 ♂; November, January.

Chisapani, 900 feet: 1 ♂; December.

Birganj, 900 feet: 1 ♀; April.

Wing: ♂ 85, 87, 88, 92; ♀ 82 mm.

The brown shrike was found in fields near or in villages. At dusk it gave a loud call, *"je-je-je-je-jit."*

Family STURNIDAE

Gracula religiosa intermedia Hay. Indian Grackle.

Narayangarh, 1,000 feet: 2 ♂; April.

Wing: 172, 176 mm.

Our Nepal birds compare well with birds from Bengal and Assam.

The Indian grackle was nowhere common in Nepal. When we did come across it in the *terai* along the Narayani River, a dozen birds were feeding in fig trees. Their call was a short loud *"kik,"* given at short intervals. One male was assuming breeding condition.

Sturnus malabaricus malabaricus (Gmelin). Gray-headed Myna.

Pokhara, 3,000 feet: 1 ♂; December.

Tansing, 4,500 feet: 1 ♂; January.

Wing: 103, 105 mm.

Sturnus contra contra Linnaeus. Pied Myna.

Dhangarhi, 900 feet: 1 ♀; December.

Wing: 121 mm.

We also have a bird from Assam (wing: ♂ 122 mm.), one from Gorakhpur District, United Provinces (wing: ♀ 120 mm.), three from Central Provinces (wing: ♂ 122; ♀ 119, 121 mm.), and two from Dehra Dun, topotypes of *S. c. dehrae* (wing: ♂ 122; ♀ 118 mm.). These give no support to the recognition of *S. c. dehrae*, which, following Marien (1950, p. 480) we consider a synonym of *S. c. contra*.

Sturnus vulgaris porphyronotus Sharpe. Central Asian Starling.

Dhangarhi, 900 feet: 2 ♂, 1 ♀, 1 sex?; December.

Wing: ♂ 130, 132; ♀ 128 mm.

Starlings were only occasionally seen in the *terai* area. A flock of about 10–15 roosted in a tall, shady tree near a pond. Of these we got four. They were in company with common mynas.

Acridotheres tristis tristis (Linnaeus). Common Myna.

Tansen, 4,600 feet: 1 ♂; January.

Dhangarhi, 900 feet: 1 ♀; December.

Wing: ♂ 150; ♀ 142 mm.

One of the most common birds of the lowlands up to 5,000 feet. *A. grandis fuscus* was more common than *A. t. tristis* in Pokhara.

Acridotheres grandis fuscus (Wagler). Jungle Myna.

Pokhara, 3,000 feet: 1 ♂; January.

North of Tansen, 2,500 feet: 2 ♂; February.

Raghunathpur, 950 feet: 1 ♀; January.

Wing: ♂ 124, 125, 126; ♀ 127 mm.

The irises are marked as yellow. Compared with two United Province birds the Nepal birds are slightly darker above. Whistler and Kinnear (1932–37, **36:** 590) have commented that western Himalayan birds are paler. Garthwaite and Ticehurst (1937, p. 555) give reasons for considering *grandis* and *fuscus* conspecific and *cristatellus* a different species. Whistler and Kinnear (l.c.) restrict the type locality of *fuscus* to Sikkim. Stuart Baker (1922–30, **3:** 57) had already given it as East Bengal, having so restricted it in 1921.

Acridotheres ginginianus (Latham). Bank Myna.

Dhangarhi, 900 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♀; January.

Wing: ♂ 122; ♀ 122 mm.

We also have adult birds from Bihar (wing: ♂ 124 mm.), Bengal (wing: ♀ 119 mm.), and Assam (wing: ♂ 126 mm.).

The bank myna was found in small parties in open fields of the *terai*, where it was associated with cattle. It perched on their backs or ran between their legs. When disturbed, it would fly from one cow to another. It was not common in Nepal but in United Provinces it frequents cities and railway stations such as Dehra Dun and Lucknow.

Family **NECTARINIIDAE**

Nectarinia asiatica asiatica (Latham). Purple Sunbird.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 2 ♂; February.

Tansing, 4,500 feet: 1 ♀; November.

Raghunathpur, 900 feet: 3 ♂, 1 ♀; December, January.

Chisapani, 950 feet: 2 ♂, 1 ♀; December, January.

Wing: ♂ 54, 55, 56, 56, 56, 56, 57, 57; ♀ 53, 53, 54 mm.

Aethopyga nipalensis horsfieldii (Blyth). Blyth's Yellow-backed Sunbird.

Sahajpur, 6,000 feet: 1 ♂, 3 ♀; December.

Belbahadi, 3,500 feet: 1 ♀; December.

Dana, 6,000 feet: 1 ♂; December.

Lumpek, 6,500 feet: 1 ♂; November.

Exposed culmen: ♂ 18, 19; ♀ 17, 18, 18 mm.

Three males from Mussoorie in our collection are *A. n. horsfieldii* topotypes (exposed culmen, 18, 18.5 mm.). Our far western Nepal male compares well with the Mussoorie birds in size and color; it has the yellow breast with almost no red streaks and the maroon color almost absent.

Two males from west Nepal (Dana and Lumpek) are intermediate between the paler *A. n. horsfieldii* and the more richly colored *A. n. nipalensis*.

This bird was common at 6,000–7,000 feet around flowering shrubs in forests.

Aethopyga nipalensis nipalensis (Hodgson). Nepal Sunbird.

Kathmandu Valley, 5,000–8,000 feet: 3 ♂; January, March.

Tari, 1,000 feet: 1 ♂; December.

Okhaldhunga, 7,500 feet: 5 ♂, 2 ♀; December.

Culmen: ♂ 21, 20.5, 20, 20, 20, 20, 20, 20 mm.

The Kathmandu birds can be considered topotypical *nipalensis*. Ripley (1948b, p. 106) described a long-billed race from Assam, *A. n. koelzi* (culmen: ♂ 22–24 vs. 17.5–19 mm. in *nipalensis*), which he gave as ranging west to Sikkim and to eastern Nepal. We have two birds from Adung Valley, Upper Burma (exposed culmen: ♂ 22, 24), that are evidently *koelzi*, with the long bill and with the yellow breast moderately well streaked with red.

However, we have a series from Sikkim and Bengal as well as eastern Nepal, and none of these are separable from topotypical *nipalensis*. The bill length (exposed culmen) of males is: Kathmandu Valley, 20, 20, 21; east Nepal, 20, 20, 20, 20, 20.5; Sikkim, (10) 19–21 (av. 20.1); Bengal, 19, 20 mm., thus showing little variation. In color these males of *nipalensis* are not separable from

our two specimens of *koelzi*. All have the breast heavily marked with red and the wide maroon band on the upper back.

This bird was fairly common from 5,000 to 9,000 feet. It preferred heavy forest areas and was found near water or flowering shrubs.

Aethopyga saturata saturata (Hodgson). Black-breasted Sunbird.

Badamachli, 1,500 feet: 2 ♂; December.

Tansen, 2,500 feet: 1 ♂; February.

Godaveri, 5,500 feet: 1 ♂; January.

Wing: 53, 54, 56.5, 57 mm.

We also have a series of males from Sikkim and Bengal.

The black-breasted sunbird was less common than other species. It was found in the lower foothills, usually near forests.

Aethopyga siparaja seheriae (Tickell). Indian Scarlet-backed Sunbird.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 1 ♂ ad., 1 ♂ imm.; November, January.

Tansen, 4,500 feet: 6 ♂, 1 sex?; December, January.

Riri Bazaar, 3,000 feet: 1 ♂ imm.; November.

Bahaduri, 4,500 feet: 1 ♂; December.

Raghunathpur, 900 feet: 1 ♂; January.

Chisapani, 950 feet: 1 ♂ ad., 1 ♂ imm.; December.

Sun Kosi, 1,800 feet: 1 ♂ imm.; December.

Wing: 11 ♂ ad. 58–60 (av. 59 mm.).

Four adult males (November 3–December 27) show considerable body, wing, and tail moult. Stuart Baker (1922–30, **3**: 378) says Hodgson's Nepal skins on which the name *miles* was founded are very dark, dull gray below, practically without any olive-green, and suggests that the color was due to Hodgson's method of curing skins. Certainly our specimens are as olive green below as a Sikkim bird and as Indo-Chinese birds of this subspecies.

This bird was common in dry areas from 1,000 to 3,000 feet near a particular species of flowering shrub.

Aethopyga ignicauda ignicauda (Hodgson). Fire-tailed Sunbird.

Tansing, 4,600 feet: 6 ♂, 1 ♀, 2 sex?; November, December.

Dana, 5,000 feet: 2 ♂; December.

Ulleri, 7,000 feet: 1 ♂, 1 ♂?; December.

Birethanti, 4,500 feet: 1 ♂; December.

Kathmandu Valley, 4,600 feet: 1 sex?; February.

Manebhanjan, 6,000 feet: 1 ♂; December.

Okhaldhunga, 7,500 feet: 2 ♂; December.

Patale, 9,500 feet: 2 ♀; December.

Wing: ♂ 54, 55, 55, 56, 56, 58, 58, 60; ♀ 54, 54, 56 mm.

All these males are largely in the green, eclipse plumage, but all have at least a few orange or red feathers.

This species was very common among flowering shrubs around Tansen. In June it was among the rhododendron trees at 12,000 feet.

Family **DICAEIDAE**

Dicaeum erythrorhynchum erythrorhynchum (Latham). Tickell's Flowerpecker.

Butwal, 900 feet: 3 ♂, 1 sex?; November, December.

Dhangarhi, 900 feet: 1 sex?; December.

Chitwan, 1,000 feet: 1 ♀; April.

Raghunathpur, 1 ♂, 2 ♀; December, January.

Wing: ♂ 47, 47, 48, 49; ♀ 46, 46, 48.5 mm.

This species is new to our collection. Mayr and Amadon (1947, p. 19) write that in parts of India where this species and *D. concolor* occur together they may be so similar that occasional specimens are unidentifiable. This is evidently not true for our area. *D. c. olivaceum* is recorded for Nepal, and our specimens of it, one from Nepal and the others from Indo-China, are easily separable from our Nepal *D. e. erythrorhynchum*. The latter have much paler dorsal coloration and very much paler, heavier, and more curved bill.

This species was occasionally found in the lowlands in parties of five to ten, usually in fig trees.

Dicaeum ignipectus ignipectus (Blyth). Fire-breasted Flowerpecker.

Pokhara, 3,000 feet: 1 ♂; December.

Marek, 3,000 feet: 1 ♂; January.

Tansen, 4,500 feet: 4 ♂, 1 ♀; December.

Kathmandu Valley, 5,000 feet: 1 ♂; January.

Okhaldhunga, 7,500 feet: 1 ♂; December.

Wing: ♂ 46, 47, 48, 49, 49, 50, 50, 50; ♀ 47 mm.

Compared with male of this race from Sikkim.

Dicaeum concolor olivaceum Waldon. Plain-colored Flowerpecker.

Nagarjung, 4,800 feet: 1 ♂; March.

Wing: 47 mm.

We also have a series of this species from Indo-China.

Dicaeum agile agile (Tickell). Thick-billed Flowerpecker.

Malakheti, 950 feet: 1 ♂; December.

Dhangarhi, 900 feet: 1 ♀?; December.

Birganj, 900 feet: 1 imm.; April.

Wing: ad. ♂ 57; ♀? 64 mm.

This bird is new to the Museum's collections.

It did not appear to be common. Single specimens were taken from mango groves in the lowlands.

Dicaeum melanozantha (Hodgson). Yellow-bellied Flowerpecker.

Nagarjung, 4,800 feet: 1 ♀; March.

Wing: 69 mm.

We have a series of this bird from Sikkim.

Family ZOSTEROPIDAE

Zosterops palpebrosa palpebrosa (Temminck). Indian White-eye.

Dhangarhi, 900 feet: 1 ♂; December.

Butwal, 900 feet: 1 ♂, 2 ♀, 1 ♀?; January, February.

Marek, 3,000 feet: 1 ♂; January.

Tansen, 4,500 feet: 2 ♀; December, February.

Narayangarh, 1,000 feet: 1 ♂; April.

Kathmandu, 4,500 feet: 1 ♀; January.

Raghunathpur, 900 feet: 1 ♂, 1 ♀; November, January.

Wing: ♂ 51, 51, 53, 54, 54; ♀ 50, 52, 52, 52, 53, 55 mm.

Ripley (1950a, p. 411), who had a series of Nepal birds, has shown that *occidentalis* Ticehurst and *elwesi* Baker are synonyms.

Family PLOCEIDAE

Passer domesticus indicus (Jardine and Selby). House Sparrow.

Butwal, 900 feet: 1 ♂; February.

Dhangarhi, 900 feet: 1 ♂, 3 ♀; December.

Bilauri, 900 feet: 3 ♂, 1 ♀; January.

Emelie, 900 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♂; December.

Wing: ♂ 72, 73, 74, 75, 75, 76, 76; ♀ 70, 72, 73, 73 mm.

Though Nepal birds have been referred to *parkini* by Ripley (1950a, p. 413) and by Vaurie (1949b, p. 18), the small measurements and pale chestnut color of the males compared with Kashmir birds (five worn males from Kashmir in Chicago measure, wing: 79, 80, 81, 83, 83 mm.) cause us to refer the present series in fresh plumage to *indicus*. Earlier authors considered Nepal birds intermediate.

The house sparrow was a common species in the *terai* in winter. It arrives in Kathmandu in April on nearly the same date each year. A male taken in mid-February was in breeding condition.

Passer montanus malaccensis Dubois. Tree Sparrow.

Lumpek, 6,500 feet: 1 ♂; November.

Belawa, 3,000 feet: 1 ♀; November.

Baglung, 3,000 feet: 1 ♂; November.

Pokhara, 3,000 feet: 1 ♀; January.

Tansing, 4,500 feet: 2 ♂, 4 ♀, 1 sex?; December, January.

Kathmandu, 4,300 feet: 2 ♂, 1 ♀; March.

Wing: ♂ 68, 68, 69, 71, 72, 74; ♀ 67, 68, 68, 69, 69, 71, 72 mm.

Vaurie (1949b, p. 23) has suggested that *malaccensis* can not be separated from *montanus*. Comparing the above seven fresh-plumaged birds, which agree with specimens from Indo-China and Java, with a series of birds in comparable plumage from Germany, the difference usually stated is readily apparent; *malaccensis* is darker and redder above, and the flanks are darker.

The tree sparrow is common throughout the foothills of Nepal.

Passer montanus tibetanus Stuart Baker. Tibetan Tree Sparrow.

Tukche, 9,000 feet: 2 ♂; November.

Jomosom, 9,200 feet: 1 ♂; December.

Wing: 76, 76, 78 mm.

These birds, in fresh plumage, come from farther in the Himalayas than any of the specimens of *P. m. malaccensis* listed above, and are at once separable on size and on color. In color they are very similar to *P. m. montanus*, from which they differ in their larger size. Birds in comparable plumage from Szechwan (*obscuratus*) are slightly darker and more vivid above, with darker flanks, thus approaching *malaccensis* in color. Szechwan birds measure: wing, ♂ (9) 73–78 (av. 75.5 mm.), ♀ (14) 66–74 (av. 72.5 mm.). Apparently *tibetensis* can be used for these birds, as Meinertzhagen (1927, p. 391) and Kinnear (1937, p. 476) have done, though with some discrepancies as to the type of color difference that exists. This last is perhaps due to hybrid and/or intergrading populations.

Passer rutilans cinnamomeus (Gould). Kashmir Cinnamon Sparrow.

Lumpek, 6,500 feet: 1 ♂ imm., 1 ♀; November.

Baglung, 3,000 feet: 1 ♂ [= ♀ ?], 1 ♀; November.

Tansen, 2,500 feet: 3 ♂, 1 ♀; December.

Maildhap, 4,000 feet: 3 ♂, 1 ♀; January.

Wing: ad. ♂ 70, 70, 71, 71, 72, 72; ♀ 60, 67, 69, 70 mm.

We also have seven birds from Mussoorie (wing: ♂ 71, 71, 72, 73, 73, 74) and three from Kashmir (wing: ♂ 72, 73; ♀ 69 mm.). The Nepal group agrees in size with the Mussoorie birds. The color of our Nepal birds—all taken in winter—seems somewhat richer than that of the Mussoorie and Kashmir birds, taken in spring, summer, and fall. The plumage, however, is not comparable.

The specimens of *schaeferi* which Streseman had were much larger (♂ 72–82 mm.). Vaurie's five adult males from Sikkim and Bhutan measure: Sikkim, 74 + (very worn), 77, 78.5; Bhutan, 77.5, 80 mm.

The cinnamon sparrows were fairly common in certain areas of the foothills of western Nepal where they gathered in flocks of 5 to 20 birds.

Gymnoris xanthocollis xanthocollis (Burton). Yellow-throated Sparrow.

Raghunathpur, 900 feet: 1 ♂; January.

Narayangarh, 900 feet: 1 ♂; April.

Wing: 83, 86 mm.

We also have two males from Mussoorie (wing: 80, 85 mm.).

Some authors merge the genus *Gymnoris* in *Petronia*.

Lonchura malabarica malabarica (Linnaeus). White-throated Munia.

Raghunathpur, 900 feet: 2 ♂; December.

Wing: 53, 55 mm.

We came across the white-throated munia this once; several were in a cactus hedge in a village.

Lonchura striata acuticauda (Hodgson). Hodgson's Munia.

Tatopani, 4,000 feet: 1 ♂; December.

Pokhara, 3,000 feet: 1 ♂ ad., 1 ♂ imm., 1 ♀ ad., 2 ♀ imm.; December, January.

Tansen, 2,500 feet: 4 ♂, 2 ♀; December, January.

Barmdeo Mandi, 950 feet: 1 sex?; January.

Wing: ♂ ad. 51, 52, 52, 52, 53, 53; ♂ imm. 53; ♀ ad. 51, 52, 52; ♀ imm. 52, 53 mm.

These birds were common in the foothills of west Nepal. They gathered in flocks of 20–30 and had a plaintive peeping call.

Lonchura punctulata lineoventer (Hodgson). Spotted Munia.

Riri Bazaar, 3,000 feet: 1 ad., sex?; November.

Tansen, 2,500 feet: 3 ♂, 2 ♀, 1 ♀?, 1 sex?; December.

Pokhara, 3,000 feet: 1 ♂ imm.; January.

Dhangarhi, 900 feet: 1 ♂; December.

Bilauri, 900 feet: 2 ♀; December, January.

Godaveri, 5,500 feet: 1 ♀ [= ♂]; January.

Wing: ♂ 54, 54, 54, 56, 56; ♀ 54, 56, 56, 57 mm.

Ploceus philippinus philippinus Linnaeus. Baya Weaver.

Dhangarhi, 900 feet: 1 ♀; December.

Emelie, 900 feet: 1 ♂; January.

Wing: ♂ 72; ♀ 68 mm.

The baya weaver was occasionally seen in the *terai* of west Nepal. A single bird was collected from an acacia tree. Small parties of 3 to 10 were found in reeds. When they were disturbed they flew rapidly to high grass, but after a minute or two they hopped up the stems to the head of the grass, where they fed.

Ploceus benghalensis (Linnaeus). Black-throated Weaver Bird.

Dhangarhi, 900 feet: 2 ♂; December.

Wing: 69, 75 mm.

We also have two males from Bihar and Assam (wing: 69, 70 mm.).

The black-throated weaver bird did not appear to be common. We found a large flock of 60 to 70 birds in a marsh, eating seeds at the tips of long grass.

Family **FRINGILLIDAE**

Carduelis spinoides spinoides Vigors. Green Finch.

Emelie, 900 feet: 2 ♂, 1 ♀; January.

Pokhara, 3,000 feet: 1 ♂ ad., 1 ♂ imm., 1 ♀; December.

Kulikhana, 3,500 feet: 1 ♀? [= ♂], 1 ♀; January.

Kathmandu, 3,500 feet: 1 ♀; January.

Wing: ♂ ad. 76, 79, 80, 80; ♂ imm. 77; ♀ 72, 75, 75, 76 mm.

For taxonomic notes on Nepal birds see Vaurie (1949a, p. 8), who found no difference between northern Punjab, Mussoorie, and Nepal specimens.

Large flocks, sometimes as many as 75 to 100 birds, gathered in a single tree in the foothills of west Nepal during winter. The bird was less common in east Nepal.

Carduelis thibetana (Hume). Tibetan Siskin.

Godaveri, 5,000 feet: 2 ♂, 4 ♀; January.

Wing: ♂ 68, 71; ♀ 66, 69, 69, 70 mm.

For comparison we also have birds from Sikkim (♂ wing: 67, 68, 70, 71, 73 mm.).

Flocks of 10 to 20 birds were eating seeds from the tops of alder trees.

Carpodacus erythrinus $\gtrless$ **erythrinus** (Pallas). Russian Rose Finch.

Dhangarhi, 900 feet: 1 ♂; November.

Sahajpur, 6,000 feet: 1 ♀; December.

Belbahadi, 3,500 feet: 2 ♀; December.

Tansen, 4,500 feet: 3 ♂, 1 ♀; December, January.

Kathmandu Valley, 4,200–6,000 feet: 2 ♂, 1 ♀; March, May.

Raghunathpur, 900 feet: 1 ♀?; January.

Wing: ♂ 84, 84, 85, 87, 87; ♀ 79, 80, 82, 83, 84, 86 mm.

The birds from Belbahadi had a call, *"tur-lee,"* repeated at intervals of a few seconds.

Vaurie (1949a, pp. 36–44) has shown that four races occur in India in winter, *ferghanensis, kubanensis, erythrinus* and *roseatus.* However, when identifying Indian winter birds (i.e., migrants) he has divided them simply into (a) *C. e. roseatus* and (b) non-*roseatus.*

Though we have series of breeding season specimens of *roseatus* from China and of *ferghanensis* from Kashmir, we have inadequate winter-taken material.

Allowing for wear, none of the above Nepal specimens can be *roseatus,* the males being lighter in color, with less red on the back and less pink on the abdomen than our Chinese *roseatus.* Again allowing for wear, they seem to be on the average very similar to our summer Kashmir birds, i.e., *ferghanensis.*

The females are variable. Some are rather brownish below; none is as dark and as heavily streaked below as our *roseatus.* Tentatively we allocate them all to near *C. e. erythrinus,* indicating they are not *roseatus.*

It should be noted that Nepal is the type locality of *roseatus* and that Ripley (1950a, pp. 411–412) recorded *roseatus, kubanensis* and *erythrinus* from Nepal.

These rose finches were found in small groups of 4 to 10 in hedges along cultivations and often in small valleys with streams. The females from Sahajpur and Belbahadi, west Nepal, had a note very similar to that of *C. rodochrous.*

Carpodacus nipalensis nipalensis (Hodgson). Nepal Rose Finch.

Tansing, 4,500 feet: 7 ♂, 2 ♀; December, January.

Kathmandu Valley, 5,000 feet: 2 ♂, 1 ♀; January, February.

Okhaldhunga, 7,500 feet: 1 ♂ imm., 1 ♀; December.

Wing: ♂ ad. 89, 89, 89, 90, 91, 91, 91, 92, 92; ♀ 81, 85, 85, 88 mm.

Vaurie, in his recent review of the variation of this species, was unable to come to a definite conclusion as to geographical variation because of lack of material. He suggests that an east to west cline in intensification of color exists, with the name *C. n. kangrae* available for the west Himalayan bird, *nipalensis* for the Nepal bird, and *intensicolor* for the darkest eastern Chinese bird. Our only material other than the Nepal birds is two adult males from Mussoorie (January 19, 1948; wing 94 mm.).

These Mussoorie birds are very slightly paler above and below than Nepal birds, giving some slight support to recognizing *kangrae*, but in any case our Nepal specimens should be *nipalensis* (type locality Nepal).

The Nepal rose finches were usually in small groups of 2 to 5 in tops of trees over open fields. They had a call of a single repeated note, *"chaar."*

Carpodacus rhodochrous (Vigors). Pink-browed Rose Finch.

Baila, 3,000 feet: 3 ♀; December.

Ghasa, 8,000 feet: 1 ♂ imm.; November.

Tukche, 9,000 feet: 1 ♂ ad.; December.

Ulleri, 8,000 feet: 1 ♂ imm.; December.

Wing: ♂ ad. 74; ♀ 67, 70 mm.

Compared with four males and two females from Mussoorie. Vaurie (1949a, p. 46), in his recent study of this species, had material from eastern Nepal to compare with Punjab and Kashmir birds and also found no variation. The name has been amended to *rhodochrous*, but Vigors' spelling is *rodochroa*.

This bird was occasionally found in small parties in scrub jungle or near villages on open hillsides.

Carpodacus thura thura Bonaparte and Schlegel. White-browed Rose Finch.

Tukche, 9,000 feet: 1 ♂ ad., 2 ♂ imm., 2 ♀; December.

Patale, 10,000 feet: 1 ♀; December.

Wing: ♂ ad. 86; ♂ imm. 82, 82; ♀ 80, 83, 83 mm.

These birds compare well with a series of topotypes from Sikkim (wing: ♂ ad. 83–87 mm.).

This finch was collected among thick juniper shrubs at 14,000 feet as well as among rhododendrons at 10,000 feet. Other species of finches were often with it.

Carpodacus rubicilloides lucifer Meinertzhagen. Kansu Great Rose Finch.

Jomosom, 9,200 feet: 1 ♀ ; December.

Thinigaon, 9,100 feet: 1 ♀ ; December.

Wing: 104, 105 mm.

C. r. lucifer was described on the basis of the male being darker than *C. r. rubicilloides* from Kansu, and *lapersonnei* (Ladak) as paler. After an examination of the material in the British Museum, Kinnear (1937, p. 473) decided that the color characters described as separating the three races were due to different stages of plumage of the different series, but that *lucifer* with *lapersonnei* a synonym could be recognized on the basis of larger size.

Vaurie (1949a, p. 52) recognizes *lapersonnei* on the basis of paler coloration and larger size. Lacking specimens, he did not comment on *lucifer*. We had no comparative material in Chicago, and Dr. Vaurie kindly compared these two specimens with the material in the American Museum. He writes me that our two Nepal birds, presumably *lucifer*, differ very distinctly from *lapersonnei* in being darker, differ slightly from *C. r. rubicilloides* in being darker, and that both *lapersonnei* and *lucifer* differ from *C. r. rubicilloides* in being larger, with a larger bill.

The present Nepal birds are certainly larger than the measurements Vaurie (l.c.) gives for *C. r. rubicilloides* (wing: ♀ 100, 100) and those he quotes from Meise (98–102; av. 100.4 mm.) and agree with his measurements of *lapersonnei* (wing: ♀ (5) 103–109; av. 106.4 mm.).

It seems advisable to recognize the above three races, but the allocation of Szechwan birds, of which we have two males and three females, is not clear. Vaurie, examining them, writes me that the females are very slightly paler than a Kansu and a Kuku Nor female, but the bills of both are small. Their measurements are large (wing: ♂ 104, 108; ♀ 102, 104, 106 mm.).

Carpodacus puniceus puniceus (Blyth). Hodgson's Rose Finch.

Tukche, 9,000 feet: 1 ♀ ; December.

Wing: 113 mm.

A Sikkim immature male (wing: 109 mm.) compares well with this Nepal bird.

Carpodacus pulcherrimus pulcherrimus (Moore). Beautiful Rose Finch.

Tukche, 9,000 feet: 3 ♂ ad., 4 ♂ imm., 4 ♀; November, December.

Jomosom, 9,200 feet: 2 ♂ imm., 3 ♀; December.

Patale, 10,000 feet: 6 ♂, 3 ♀, 1 sex?; December.

Wing: 9 ♂ ad. 74–81 (av. 78); 6 ♂ imm. 73–78; 10 ♀ 74–78 (av. 75.8) mm.

The wing measurements of these male birds, which may be considered topotypical, cast doubt on recognizing the race *waltoni* Sharpe from southern Tibet, characterized as larger (wing: 78–82 mm.), though there is, of course, the possibility that these winter-taken birds are migrants from elsewhere and that Nepal breeding birds are smaller (wing: ♂ 76, 78.5) as has been recorded.

We have a series of the larger race, *argyrophrys*, from Yunnan and Szechwan (wing: ♂ ad. (15) 82–87, av. 84.6 mm.), as well as a series of the very similar *C. eos* (wing: ♂ 75–77 mm.).

Carpodacus rodopeplus (Vigors). Spotted-winged Rose Finch.

Dana, 7,000 feet: 3 ♂ imm.; November.

Tukche, 9,000 feet: 1 ♂ imm.; December.

Patale, 10,000 feet: 3 ♂, 1 ♀; December.

Wing: ♂ ad. 81, 82, 83; ♂ imm. 79, 80, 81, 83; ♀ 83 mm.

We also have two birds from Mussoorie (wing: ♂ 82; ♀ 78 mm.).

These birds were found on open, grassy hillsides perched on the tops of small bushes.

Carpodacus edwardsii rubicunda Greenway. Large Rosy Finch.

Belbahadi, 3,500 feet: 1 ♀; December.

Wing: 71 mm.

Dr. Vaurie has checked the identification of this bird, which formerly was known as *C. e. saturatus* (preoccupied).

This bird was solitary and in a thicket of low bushes.

Pyrrhula erythrocephala Vigors. Red-headed Bullfinch.

Tukche, 13,000 feet: 1 ♂; December.

Dana, 7,000 feet: 3 ♀; December.

Patale, 10,000 feet: 1 ♂; December.

Wing: ♂ 80, 81; ♀ 77, 78, 79 mm.

Vaurie (1949a, p. 55) found eastern and western Himalayan birds very similar and observed differences that were due perhaps to different stages of plumage or to sampling.

For comparison we have from Mussoorie, near the restricted type locality, six males and three females, and also ten males and six females from Sikkim. The Sikkim series is very variable in color of crown and breast and the Mussoorie and Nepal birds fall within the range of variation of these Sikkim birds, with only minor discrepancies. Wing measurements: Mussoorie, ♂ (6) 79–81 (av. 79.2); ♀ (3) 76, 78, 79 mm. Sikkim, ♂ (9) 76–81 (av. 78.5); ♀ (6) 76–80 (av. 77.8 mm.).

The red-headed bullfinch was fairly uncommon. Small parties of five to seven birds inhabited the birch forests at 14,000 feet, as well as the oak forest from 10,000 down to 7,000 feet. Their call was a faint mellow *"cher-peri."*

Pyrrhula nipalensis nipalensis Hodgson. Brown Bullfinch.

Godaveri, 5,500 feet: 2 ♂, 1 ♀; March.

Phulchowk, 8,600 feet: 2 ♂; March, May.

Wing: ♂ 85, 87, 87, 88; ♀ 86 mm.

For comparison we have three Sikkim birds (wing: ♂ 89, 90; ♀ 86 mm.) and two Mussoorie birds (wing: ♀ 85, 86 mm.).

Parties of eight to twelve of the brown bullfinch were fairly common in the hills around Kathmandu Valley. They ate seeds on trees and moved through clumps of bamboo at 8,500 feet. The call is a mellow *"pearl-lee."*

Mycerobas carnipes carnipes (Hodgson). White-winged Grosbeak.

Tukche, 9,000 feet: 1 ♀; December.

Wing: 114. Exposed culmen: 2.2. Greatest width of bill at gape, lower mandible, 15.5 mm.

Vaurie (1949a, p. 58) has shown that *nanschanicus* of northwestern Kansu and Szechwan is identical in color with *M. c. carnipes* of Punjab, Nepal, Sikkim, and Yunnan, but is distinguished by longer wing and larger bill. The present specimen agrees in

wing length and in bill width with Vaurie's measurements of *carnipes*. It also agrees with three of our females from Sikkim (Snatong, March 7–10, 1931).

The Sikkim material in Chicago Natural History Museum presents a problem. Five males and three females are fairly uniform in measurements, allowing for a slight sexual dimorphism, but two other females have longer wings and very much more massive bills. The following measurements show this:

Sikkim, Snatong (March): Wing: ♂ 112, 113, 114, 115, 116; ♀ 110, 112, 115. Exposed culmen: ♂ 21.5, 22, 22, 22.5, 22.5; ♀ 19.5, 20, 20.5. Width of lower mandible at gape: ♂ 14, 14, 14.5, 14.5, 14.5; ♀ 13, 13.5, 14.

Sikkim, Thangu (May): Wing: ♀ 118, 120. Exposed culmen: ♀ 22.[1] Width of lower mandible at gape: ♀ 18.[1]

My bill measurements appear somewhat smaller than Vaurie's, perhaps due to a difference in methods of measurements, but it is apparent that these two Thangu birds fall completely outside the range of variation of the rest of the Sikkim specimens and compare favorably with those of Kansu birds.

Schafer and de Schauensee (1938, p. 245) have commented on the great difference of bill size in different individuals and have suggested that it may be due to a wearing away and a shedding of the outer layers of the bill covering. This certainly does not apply here.

Meinertzhagen (1927, p. 376) has already pointed out the great range in size in Sikkim birds, and mentions the possibility that the larger birds are migrants from China (thus actually *M. s. nanschanicus*). This is possible, though the dates for my Thangu birds—May 19, 20—seem late for a species that begins nesting in June. Meinertzhagen, however, inclines to the belief that the species is exceptionally variable in Sikkim, with wing 103–123 mm. Another possibility is that two species, a large- and a small-billed one, are involved.

Mycerobas melanoxanthos melanoxanthos (Hodgson). Spotted-winged Grosbeak.

Nagarjung, 4,800 feet: 1 ♀; February.

Wing: 124 mm.

[1] The second bird has a damaged bill, making measurements impossible, but it appears about the size of that of the other Thangu specimen.

We also have two females from Sikkim (wing: 128 mm.) and two males from Mussoorie (wing: 121, 124 mm.).

A flock of about a dozen birds was eating seeds in trees. This bird is an occasional winter visitor to Kathmandu Valley.

Loxia curvirostra himalayensis Blyth. Himalayan Crossbill.

Patale, 10,000 feet: 1 ♂, 1 ♀; December.

Wing: ♂ 83; ♀ 82 mm.

Numbers of crossbills were observed at the tops of tall conifers. Their note was a *"vic, vic, vic, vic."*

Propyrrhula subhimachala subhimachala (Hodgson). Red-headed Rose Finch.

Patale, 10,000 feet: 3 ♂, 5 ♀; December.

Wing: ♂ 94, 95, 95; ♀ 92, 93, 93, 95, 96 mm.

We also have a male from Sikkim (wing: 95 mm.).

Following a cold snap, small flocks of this bird appeared in the rhododendron thickets at the top of our 10,000 foot ridge. They were rather sluggish and had subdued warbling notes something like a canary, *"terp, terp, tee."*

Fringilauda nemoricola nemoricola Hodgson. Hodgson's Mountain Finch.

Patale, 10,000 feet: 2 ♂, 1 ♀; December.

Wing: ♂ 102, 102; ♀ 95 mm.

The axillaries of these birds are more or less yellow.

Emberiza pusilla Pallas. Little Bunting.

Kathmandu Valley, 5,000 feet: 1 ♂, 2 ♀; March.

Tari, 1,000 feet: 1 ♂; December.

Manebhanjan, 6,000 feet: 1 ♀; December.

Wing: ♂ 72, 73; ♀ 67, 70, 73 mm.

We also have a series from Sikkim.

The little bunting was occasionally seen; it occurred in small flocks and perched in the tops of bushes bordering cultivation near water. Its call was a short *"tzit."*

Emberiza stewarti Blyth. White-capped Bunting.

Tansen, 4,500 feet: 2 ♂; December.

Barmdeo Mandi, 950 feet: 3 ♀; January.

Wing: ♂ 78, 80; ♀ 72, 74, 74 mm.

We also have a male from the Punjab (wing: 79 mm.) and two males and a female from Mussoorie (wing: ♂ 82, 82; ♀ 81 mm.).

The white-capped bunting was not a common species. A small flock was perched in the tops of leafless trees near a village. Several were in *ber* bushes (*Zizyphus jujuba*) near the edge of the Sarda River.

Emberiza aureola Pallas. Yellow-breasted Bunting.

Chitwan District, 1,000 feet: 1 ♂; April.

Wing: 78 mm.

Emberiza rutila Pallas. Chestnut Bunting.

Kathmandu (Godaveri), 5,000 feet: 1 sex?; January.

Wing: 75 mm.

This bird is in immature plumage and seems to show a slight westward extension of its wintering range.

Emberiza cia subspecies. Transcaspian Meadow Bunting.

Ghasa, 8,000 feet: 1 ♂; November.

Tukche, 9,000 feet: 2 ♂; November, December.

Thinigaon, 9,100 feet: 1 ♂, 3 ♀; December.

Wing: ♂ 81, 86, 86, 87; ♀ 77, 81, 83 mm.

For comparison with *E. c. par* we have two males from Russian Turkestan (May; wing: 86, 87 mm.). Of *stracheyi* we have three Kashmir males (May; wing: 79, 85, 88 mm.) and two Mussoorie males (January; wing: 86, 86) and one female (?) (84 mm.).

Our Nepal birds represent a variable series, from ones as pale as our series of *E. c. par* to ones as dark as our average *E. c. stracheyi*. It may be that both races are represented in this series by winter migrants.

However, as a population intermediate between *E. c. par* and *E. c. stracheyi* is reported from Gilgit, it is possible these birds represent a similar intermediate population.

These birds were fairly common on open, rocky slopes, walking through dry grass. Bad weather brought them down to sheltered ravines along the river.

Melophus lathami (Gray). Crested Bunting.

Badamachli, 1,000 feet: 1 ♀; December.

Dhangarhi, 900 feet: 1 ♀; December.

Tansen, 2,500 feet: 4 ♂ ad., 2 ♂ imm., 2 ♀, 1 sex?; January.

Pokhara, 3,000 feet: 1 ♂ imm., 1 ♀; December.

Kathmandu, 3,500 feet: 1 ♂; January.

Raghunathpur, 900 feet: 1 ♂; January.

Wing: ♂ ad. 85, 85, 86, 86; ♀ 77, 78, 78, 79 mm.

The crested bunting was occasionally found in the lowlands but was more common in the foothills. It fed on the ground in grassy areas. Its call was a repeated *"tip."*

BIBLIOGRAPHY

ALI, SALIM, and RIPLEY, S. D.

1948. The birds of the Mishmi Hills. Jour. Bombay Nat. Hist. Soc., **48**, (1), pp. 1–37.

AMADON, D.

1953. Remarks on the Asiatic hawk-eagles of the genus *Spizaëtus*. Ibis, **95**: 492–504.

BAKER, E. C. STUART

1922–30. The fauna of British India. Birds, **1–8**. Taylor and Francis, London.

1925. [On *Passer montanus tibetanus*.] Bull. Brit. Orn. Club, **45**: 104.

BANGS, O., and VAN TYNE, J.

1931. Birds of the Kelley-Roosevelts Expedition to French Indo-China. Field Mus. Nat. Hist., Zool. Ser., **18**: 33–119.

BATES, G. L.

1934. [Races of *M. cinerea*.] Bull. Brit. Orn. Club, **65**: 46–49.

BERLIOZ, J.

1930. Revision systematique du genre *Garrulax* Lesson. L'Oiseau et Rev. Franç. d'Orn., **11**: 1–27, 78–105, 129–159.

BISWAS, B.

1950. On the shrike *Lanius tephronotus* (Vigors), with remarks on the *Erythronotus* and *Tricolor* groups of *Lanius schach* Linné, and their hybrids. Jour. Bombay Nat. Hist. Soc., **49**: 444–455.

1951. Revisions of Indian birds. Amer. Mus. Nov., no. 1500, pp. 1–12.

DEIGNAN, H. G.

1938. Plumage change in wild Siamese hunting crows. Ibis, **1938**: 769–772.

1942. A revision of the Indo-Chinese forms of the avian genus *Prinia*. Smith. Misc. Coll., **103**, no. 3, pp. 1–12.

1945. The birds of northern Thailand. Bull. U. S. Nat. Mus., **186**: 1–616.

1946a. Descriptions of two new leafbirds from Siam. Smith. Misc. Coll., **106**, (12), pp. 1–3.

1946b. The races of the scarlet minivet . . . . Auk, **63**: 511–533.

1947. The races of the gray-headed flycatcher (*Culicicapa ceylonensis* Swainson). Auk, **64**: 581–584.

1949. Races of *Pycnonotus cafer* . . . . Jour. Wash. Acad. Sci., **39**: 273–279.

1950. The races of the collared scops owl, *Otus bakkamoena* Pennant. Auk, **67**: 189–201.

1951. New passerine birds from the Indo-Chinese subregion. Postilla, no. 7, pp. 1–4.

DELACOUR, J.

1932. Description de deux oiseaux d'Indochina. L'Oiseau et Rev. Franç. d'Orn., **2**, (n.s.), pp. 616–618.

1942. The whistling thrushes (genus *Myiophoneus*). Auk, **59**: 246–264.

1943a. The bush-warblers of the genera *Cettia* and *Bradypterus* . . . . Ibis, **1943**: 27–40; Addendum, p. 343.

1943b. A revision of the genera and species of the family Pycnonotidae (Bulbuls). Zoologica, **28**: 17–28.

1946. Les Timaliines. L'Oiseau et Rev. Franç. d'Orn., **16**, (n.s.), pp. 7–36.

1947. Birds of Malaysia, pp. 1–382. Macmillan Co.

1949. The genus *Lophura* (Gallopheasant). Ibis, **1949**: 188–220.

1951a. The lesser graybirds (*Coracina*) of Asia and Malaysia. Amer. Mus. Nov., no. 1497, pp. 1–15.

1951b. The pheasants of the world. Country Life, pp. 1–347.

DELACOUR, J., and VAURIE, C.

1950. Les Mesanges Charbonnieres (Revision de l'espece *Parus major*). L'Oiseau et Rev. Franç. d'Orn., **20**, (n.s.), pp. 91–121.

GARTHWAITE, P. F., and TICEHURST, C. B.

1937. Notes on some birds recorded from Burma. Jour. Bombay Nat. Hist. Soc., **39**: 552–560.

HELLMAYR, C. E.

1929. Birds of the James Simpson-Roosevelts Asiatic Expedition. Field Mus. Nat. Hist., Zool. Ser., **17**: 27–144.

KINNEAR, N. B.

1924. Descriptions of new races of birds from Tonkin. Bull. Brit. Orn. Club, **45**: 10–11.

1933. *In* LUDLOW, F., and KINNEAR, N. B.: A contribution to the ornithology of Chinese Turkestan. Ibis, **1933**, part I, pp. 240–259, part II, pp. 440–473.

1937. *In* LUDLOW, F., and KINNEAR, N. B.: The birds of Bhutan and adjacent territories of Sikkim and Tibet. Ibis, **1937**, part I, pp. 1–46, part II, pp. 249–293, part III, pp. 467–504.

1944. *In* LUDLOW, F.: The birds of south-eastern Tibet. Ibis, **1944**: 348–389.

KOELZ, W. N.

1954. Ornithological studies. Contr. Inst. Reg. Exp., no. 1, pp. 1–33. Ann Arbor, Michigan.

LOWE, W. P.

1938. The plumage of the green magpies. Ibis, **1938**: 536.

MARIEN, DANIEL

1950. Notes on some Asiatic Sturnidae (birds). Jour. Bombay Nat. Hist. Soc., **49**: 471–487.

1951a. Notes on the bird family Prunellidae in southern Asia. Amer. Mus. Nov., no. 1482, pp. 1–28.

1951b. Notes on some pheasants from southwestern Asia, with remarks on moult. Amer. Mus. Nov., no. 1518, pp. 1–25.

1952. The systematics of *Aegithina*. Amer. Mus. Nov., no. 1589, pp. 1–18.

MAYR, E.

1938. Birds of the Vernay-Hopwood Chindwin Expedition. Ibis, **1938**: 277–320.

1940. *Pericrocotus brevirostris* and its double. Ibis, **1940**: 712–722.

1940–41. *In* STANFORD, J. K., and MAYR, E.: The Vernay-Cutting Expedition to northern Burma. Ibis, **1940**, Part I, pp. 679–711; 1941, Part II: 56–105; Part III: 213–245.

1947. On the correct name of the Tibetan shrike usually called *Lanius tephronotus*. Jour. Bombay Nat. Hist. Soc., **47**: 125–126.

1949. Geographical variation in *Accipiter trivirgatus*. Amer. Mus. Nov., no. 1415, pp. 1–12.

MAYR, E., and AMADON, DEAN

1947. A review of the Dicaeidae. Amer. Mus. Nov., no. 1360, pp. 1–32.

MEINERTZHAGEN, R.

1927. Systematic results of birds collected at high altitudes in Ladak and Sikkim. Ibis, **1927**: 363–422.

1950. Review of the Alaudidae. Proc. Zool. Soc. London, **121**, Part I, pp. 81–132.

PETERS, J. L.

1931–51. Check-list of birds of the world. **1–7**. Cambridge, Massachusetts.

RAND, A. L.

1953a. Geographical variation in the laughing thrush *Garrulax affinis*. Chicago Academy of Sciences, Nat. Hist. Misc., no. 116, pp. 1–6.

1953b. A new fruit pigeon from Nepal. Fieldiana: Zool., **34**: pp. 201–202.

RAND, A. L., and FLEMING, R. L.

1956. Two new birds from Nepal. Fieldiana: Zool., **39**: 1–3.

RILEY, J. H.

1931. A second collection of birds from the provinces of Yunnan and Szechwan, ... Proc. U. S. Nat. Mus., **80**: 1–91.

1938. Birds from Siam, ... Bull. U. S. Nat. Mus., **172**: 1–581.

RIPLEY, S. D.

1941. Notes on the genus *Coracina*. Auk, **58**: 381–395.

1946. Comments on Ceylon birds. Spolia Zeylonica, **24**: 197–241.

1948a. Notes on Indian birds I. The races of *Anthus hodgsoni*. Jour. Bombay Nat. Hist. Soc., **47**: 622–627.

1948b. Notes on Indian birds II. The species *Glaucidium cuculoides*. Zoologica, **33**: 199–202.

1948c. New birds from the Mishmi hills. Proc. Biol. Soc. Wash., **61**: 99–107.

1950a. Birds from Nepal, 1947–1949. Jour. Bombay Nat. Hist. Soc., **49**: 355–417.

1950b. New birds from Nepal and the Indian region. Proc. Biol. Soc. Wash., **63**: 101–106.

1952. The thrushes. Postilla, no. 13, pp. 1–48.

1955. Some comments on Vaurie's revision of the Muscicapini. Auk, **72**: 86–88.

SCHAFER, E., and DE SCHAUENSEE, R. M.

1938. Zoological results of the Second Dolan Expedition to western China and eastern Tibet, 1934–1936. Part II, Birds. Proc. Acad. Nat. Sci. Phila., **90**: 185–260.

SHARPE, R. B.

1877. Catalogue of the birds in the British Museum. **3**: 1–343.

STANFORD, J. K., and TICEHURST, C. B.

1938. Birds of northern Burma. Ibis, **1938**: 65–102.

STEGMANN, B.

1938. Eine neue Form von *Lerwa lerwa* (Hodgs.). Orn. Monatsber., **46**: 43–44.

STEVENS, H.
1924. Notes on the birds of the Sikkim Himalayas. Jour. Bombay Nat. Hist. Soc., **29**: 1007–1030.

STRESEMANN, E., *et al.*
1937. Aves Beickianae. Jour. f. Orn., **85**: 276–576.

TICEHURST, CLAUD B.
1938. A systematic review of the genus *Phylloscopus*. 193 pp. British Museum (Natural History).

VAN TYNE, J., and KOELZ, W.
1936. Seven new birds from the Punjab. Occ. Pap. Mus. Zool. Univ. Michigan, no. 334, pp. 1–6.

VAURIE, C.
1949a. Notes on some Asiatic finches. Amer. Mus. Nov., no. 1424, pp. 1–63.
1949b. Notes on some Ploceidae from western Asia. Amer. Mus. Nov., no. 1406, pp. 1–41.
1949c. A revision of the bird family Dicruridae. Bull. Amer. Mus. Nat. Hist., **93**: 203–342.
1950a. Notes on some Asiatic nuthatches and creepers. Amer. Mus. Nov., no. 1472, pp. 1–39.
1950b. Notes on some Asiatic titmice. Amer. Mus. Nov., no. 1459, pp. 1–66.
1951a. Notes on some Asiatic swallows. Amer. Mus. Nov., no. 1529, pp. 1–47.
1951b. A study of Asiatic larks. Bull. Amer. Mus. Nat. Hist., **97**: 435–526.
1952. A review of the bird genus *Rhinomyias* (Muscicapini). Amer. Mus. Nov., no. 1570, pp. 1–36.
1953. A generic revision of flycatchers of the tribe Muscicapini. Bull. Amer. Mus. Nat. Hist., **100**: 453–538.
1954a. Systematic notes on Palearctic birds. No. 4. The choughs (*Pyrrhocorax*). Amer. Mus. Nov., no. 1658, pp. 1–7.
1954b. Systematic notes on Palearctic birds. No. 5. Corvidae. Amer. Mus. Nov., no. 1668, pp. 1–17.
1954c. Systematic notes on Palearctic birds. No. 7. Alaudidae and Motacillidae (genus *Anthus*). Amer. Mus. Nov., no. 1672, pp. 1–13.
1954d. Systematic notes on Palearctic birds. No. 9. Sylviinae: The genus *Phylloscopus*. Amer. Mus. Nov., no. 1685, pp. 1–23.
1954e. Systematic notes on Palearctic birds. No. 10. Sylviinae: The genera *Cettia*, *Hippolais*, and *Locustella*. Amer. Mus. Nov., no. 1691, pp. 1–9.
1955a. The geographical variation of *Dicrurus hottentottus* in India. Ibis, **97**: 153–155.
1955b. Systematic notes on Palearctic birds. No. 18. Supplementary notes on Corvidae, Timeliinae, Alaudidae, Sylviinae, Hirundinidae, and Turdinae. Amer. Mus. Nov., no. 1753, pp. 1–19.

VOOUS, K. H., and VAN MARLE, J. G.
1949. The distributional history of *Coracina* in the Indo-Australian Archipelago. Bijdragen tot de Dierkunde, **28**: 513–529.

WHISTLER, H.
1936. On seven recently described birds from the Punjab. Ibis, **1936**: 718–724.

WHISTLER, H., and KINNEAR, N. B.
1932–37. The Vernay scientific survey of the Eastern Ghats (Ornithological Section). Jour. Bombay Nat. Hist. Soc., **35**: 505–524, 737–760; **36**: 67–93,

334–352, 561–590, 832–844; **37:** 96–105, 281–297, 515–528, 751–763; **38,** 26–40, 232–240, 418–437, 672–698; **39:** 246–263, 447–463.

WITHERBY, H. F.
1936. [Races of *M. cinerea.*] Bull. Brit. Orn. Club, **85:** 98–99.

List showing Number of Families, Species, and Subspecies Collected in Nepal

Family	Species	Species and subspecies	Page
Podicipididae	2	2	48
Anhingidae	1	1	48
Ardeidae	6	6	48
Ciconiidae	3	3	50
Threskiornithidae	2	2	50
Anatidae	7	7	51
Accipitridae	23	23	52
Pandionidae	1	1	56
Falconidae	5	6	56
Phasianidae	18	19	58
Turnicidae	1	1	63
Gruidae	1	1	64
Rallidae	4	4	64
Jacanidae	1	1	65
Charadriidae	5	5	65
Scolopacidae	7	7	66
Recurvirostridae	1	1	68
Burhinidae	1	1	68
Glareolidae	2	2	68
Laridae	4	4	68
Columbidae	11	11	69
Psittacidae	5	5	72
Cuculidae	9	9	74
Strigidae	10	10	77
Caprimulgidae	3	3	80
Apodidae	1	1	82
Hemiprocnidae	1	1	82
Trogonidae	1	1	82
Alcedinidae	5	5	82
Coraciidae	1	1	84
Upupidae	1	1	85
Meropidae	2	2	85
Bucerotidae	2	2	86
Capitonidae	5	8	86
Picidae	20	23	90
Eurylaimidae	1	1	98

Family	Species	Species and subspecies	Page
Pittidae	1	1	98
Alaudidae	5	5	98
Hirundinidae	4	4	100
Campephagidae	9	9	101
Dicruridae	7	7	104
Oriolidae	3	3	107
Corvidae	11	11	108
Paridae	9	10	114
Sittidae	3	3	118
Certhiidae	5	5	119
Timaliidae	46	52	121
Pycnonotidae	11	11	143
Cinclidae	1	1	147
Troglodytidae	1	1	147
Turdidae	43	46	148
Sylviidae	33	37	162
Regulidae	2	2	173
Muscicapidae	20	20	173
Prunellidae	5	6	182
Motacillidae	13	17	184
Laniidae	3	5	189
Sturnidae	7	7	193
Nectariniidae	5	6	194
Dicaeidae	5	5	197
Zosteropidae	1	1	198
Ploceidae	9	10	199
Fringillidae	24	24	202
Total	459	490	

Publication 826