

## Darjeeling Natural History Society.

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The Society was started about the end of 1923.

The objects being to maintain the Museum in a proper condition and to promote the study of Natural History. To get together, as complete as possible, collections of Natural History specimens from a limited area, this area including "the civil districts of Jalpaiguri and Darjeeling and the State of Sikkim" as well as what could be procured from the neighbouring countries of Tibet, Bhutan and Nepal.

The Government and Municipal grants not being sufficient for our purpose it was proposed to enrol members so as to increase our funds. The response to our appeal has been poor and it is hoped that more will join the Society and co-operate to make the Museum and Journal a success.

The annual subscription is only Rs. 10

Application for membership should be made to :--

*The Curator,  
Natural History Museum,  
Darjeeling.*

# FOREWORD

BY

His Excellency Sir Hugh Stephenson, Governor of Bengal.

A visit to the Darjeeling Natural History Museum must impress on even the most casual observer the great variety and wealth of Fauna to be found in the neighbourhood of Darjeeling. Specimens are regularly collected from Sikkim and from the Darjeeling and Jalpaiguri Districts while others have been received from Nepal and Tibet, and with the wonderful diversity of natural conditions obtaining in so varied an area it is not surprising that the range of the collections should be wide and interesting. There is, therefore, ample scope for the activities of a Natural History Society.

We owe it to the initiative and influence of Lord Carmichael, himself an enthusiastic naturalist, that the Museum, which had previously been housed in the Lloyd Botanic Garden, now possesses its own home so admirably adapted for the exhibition of specimens and so easily accessible to the public. The Museum has been fortunate in securing the active sympathy and support of His Excellency the Earl of Lytton, whose interest in Natural History is well known, ever since his first arrival in Darjeeling in 1922.

Since the appointment of Mr. Inglis as Curator and the formation of the Darjeeling Natural History Society three years ago great progress has been made in developing the collection and noteworthy improvements have been effected in the general arrangements for the exhibition and preservation of the specimens. The fullest use has been made of the exceptional opportunities offered by the nature of the collecting area. It is now proposed to publish a quarterly journal, in which the additions to the Museum will be recorded and original notes and papers from the Society's members will be published. Mr. Inglis's own contributions to the literature of Natural History in this country are already well known and I am confident that this new journal will prove an interesting and valuable addition to scientific knowledge. With the vast possibilities of such an area as this, the observations of the members of the Society should prove of interest and value to naturalists, not only in Bengal but throughout India and beyond.

Mr. Inglis's enthusiasm for a study, in which he has such intimate knowledge, should be a guarantee of the journal's success and I trust that it will serve to direct attention to the work of the Museum and to stimulate interest in the wonderful gifts of nature, amongst which we live.

H. L. Stephenson,  
*Governor of Bengal.*

Journal  
OF THE  
Darjeeling Natural History Society.

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No. 3

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Game Birds of Sikkim including the Darjeeling District  
and of the Jalpaiguri District, Bengal.

BY

C. M. INGLIS, F. Z. S., F. E. S., M. B. O. U.

3. The Large Orange-breasted Green Pigeon (*Treron bisincta domvillii* (Swinh)).

This beautiful little Green Pigeon is about the same size as the last one and is quite unlike any others we get in our area more especially the cock. The latter can easily be recognized by the colour of the breast which has a broad lilac band on the upper portion the remainder being orange and there is no maroon on the mantle. The legs are red as in the last species. The hen is somewhat like that of the Ashy-headed Green Pigeon but whereas in the latter bird the whole of the crown of the head is ashy grey and the tail has green in it, in the Orange-breasted hen the nape alone is grey and the tail is practically all dark grey without any trace of green.

Although in Assam this green pigeon commonly ascends the hills up to 2,500 ft. and even sometimes as high as 4,000 ft. I don't think it is found in our area except in the plains. It is most partial to forest country and in the Duars is more noticeable during the rains than at any other season, though it may be met with throughout the year. Mr. O'Donel tells me that this is the commonest green pigeon there and the only one to be found in any number. They do not congregate into very large flocks and are generally seen in parties of a dozen or less. Their flight is fast though less so than the Ashy-headed Green Pigeon. In thickly wooded country they feed practically all day long but where not so secluded, only in the early mornings and evenings retiring to the forest about 10 A. M. Besides jungle fruits, Mr. Stuart Baker has found them eating ripe guavas which they tear to pieces with their bills; he also says they have the objectionable habit "of getting into the orange-groves and pulling off the tiny oranges when about the size of small marbles. I don't think they ate many of these, for after a flock had visited and been frightened away from a grove, a large number of these little oranges were to be found lying under the trees; and it really looked as if, after they had tasted the fruit and found it unpalatable, they had then set to work to mischievously destroy what they did not care to eat." They are, like others of this family, very quarrelsome, beating each other with their wings and pecking each other.

With regard to their note this author writes:—"They have quite a large range of conversational notes, covering much bad language, and not a little which we may hope to be good; but their ordinary notes are the sweet whistling ones common to all the Green Pigeons."

They certainly breed in the Duars but I have no information as to the season. March and April are the principal breeding months in the plains. The nests are of the usual type but if anything more frail than usual and are situated in trees or saplings either, in or on the outskirts of thick jungle. Mr. Baker has also found them breeding in thick high bushes and in bamboos in cane-brakes in swamps. The eggs, two in number, are like those of the Ashy-headed Green Pigeon and measure 1.1 by .89 inches.

*(To be continued)*

## MISCELLANEOUS NOTES.

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### **Ethics of shooting game with the aid of Artificial Light.**

I am not in agreement with your remarks, on page 9 of part No. 1 of the Journal, regarding the shooting of dangerous game such as Tiger and Leopard from machans with the aid of artificial light. Taking it for granted that shooting from a machan before dark or by moonlight is legitimate (and which in the dense jungles of the Dooars is the only way it can be done by people who have no elephants), I think that shooting at night even with the aid of artificial light, such as an electric torch, is far more so. At night, everything is against the shikari, he can't see and in many cases even hear the animal approaching, whereas it can see as well by night as it can by day, and the slightest movement of the man in the machan is visible to it. As a rule the only indication a shikari has of the arrival of the animal, is the sound of the kill being dragged away, and by the time he has switched his light on, the animal is out of sight. Tigers and leopards are not always dazzled by the light and do not invariably stand still. I have known several cases where they have bounded off the moment the light has been switched on, and it is not an easy job to get the beam of light, at the first attempt, bang on to the place where the animal happens to be. I suppose I have shot as many tigers and leopards from machans as most men in the Dooars (12 tigers and between 30 and 40 leopards) and I have only managed to get one leopard with the aid of artificial light. I unhesitatingly say that shooting by night from a machan even with the aid of an electric torch is far more difficult than it is by day. I think it will be admitted that the more difficult the shooting is, the more sporting it is, and the man who can sit up at night, with mosquitoes worrying him and other discomforts, and manage to bag a tiger or leopard, fully deserves the trophy; also getting down from a machan at night with a tiger knocking about is no joke.

I consider shooting deer such as Sambhur from an elephant by day, or from a car or machan by night, with the aid of lights, is pure murder, and only excus-

able in the case of a novice who has no trophies, or to give your coolies food while in Camp.

Aibheel T. E.

Matelli P. O.

11th July 1926.

W. P. FIELD

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[When writing my note on this controversial subject I hadn't access to that excellent book "Wild Animals in Central India" by Dunbar Brander. I now quote what he has to say, when writing about shooting over kills. "So far, in discussing this method of shooting tigers, it has been assumed that the sportsman is prepared to deal with the difficulties nature has placed in his way and to give the tiger the benefit of these and a fair sporting chance. Modern inventions have eliminated these difficulties, and it is possible to sit up on the darkest night and when the tiger arrives to illuminate the whole scene by turning on an electric torch strapped to the rifle or by a bulb hung over the kill. The tiger stands in stupid wonder gazing at what it no doubt considers some phenomenal star. The ethics of doing this have often been discussed and personally I do not think it gives the tiger a fair chance and does not call up those qualities which we expect him to possess when he hunts a beast like a tiger. One expects endurance, skill, self-possession and a certain amount of courage. The whole question turns on the extent to which artificial aids are legitimate and it may be argued that the rifle is the first aid. Without the rifle, however, it is impossible to kill the tiger and its use requires no justification. If we once admit the electric lamp, at what point are we to stop? With modern inventions it would be quite easy to be playing cards in the tent and when the tiger turns up, kill him by pressing a button on the tent wall. This, while not departing from truth, is possibly stating an extreme case which would be condemned by everybody, but the point at issue is where in the scale is the personal element eliminated to such an extent as to be unsporting. Each person must decide for himself, but personally, except to get rid of a pest, I consider the use of electric torches oversteps the mark."

Lt. Col. R. W. Burton writing in the Journal of the Bombay Natural History Society Vol. XXXI. No. 1 says about the above:--

**Use of Electric Light.**---It is not possible to be dogmatic as to the use of electric light as an aid to shooting tigers over kills. Where beating is possible that method should not be resorted to. Most sportmen will hold that view. In many of the jungles of India beating is not possible at any time, and during the cold weather months it is not feasible in most jungles. In such cases it is necessary to sit up over kills, and the use of electric light should not then be considered as 'overstepping the mark.'

"Undoubtedly more tigers are nowadays shot over kills than used to be the case before electric light came into use.....This---the undue diminution in the number of tigers---will, in the future, be the factor to rule the matter: and in those jungles under the control of the Imperial Forest Department, where tigers are becoming scarce, the use of electric light should be prohibited."

Mr. Morris writing from Mysore also agrees with Mr. Field's views. In writing in an earlier volume of the same Journal, Vol. XXX No. 3 he says:---"I have not found the tiger stands in stupid wonder gazing at what it no doubt considers some phenomenal star:" only on one occasion did a tiger give me an easy stationery shot on turning on the light---and I missed it!! In the majority of cases the tiger, I have found, bounds away alarmed and a quick and often difficult shot has to be taken..... Quite recently, a tiger never even gave me the slightest chance of getting in a shot, although it came to the kill three times the tiger was out of the area lit up by the light within a fraction of a second of the light being turned on each time." Dunbar Brander in reply said:---"It was never expected that my criticism of the electric lamp would have general acceptance; all the same I have had a great deal of encouragement from perfect strangers. I only used the electric lamp as an experiment as long ago as 1905. I found that unless the tiger became aware of one by movement or noise in turning on the light they behaved as described. African observers have confirmed this behaviour with respect to other animals. Since 1905 the electric light has come into general use there are bound to be sophisticated tigers."

Writing about leopards Dunbar Brander says:---"As leopards can be considered vermin, pure and simple, the ethics of how they are killed does not arise." But are they?

At present there is a great difference of opinion on the subject of using artificial light, I should like to know what proportion of tigers and leopards get away wounded by shooting with the aid of artificial light as compared when it is not used. Ed].

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### **The number of species of some kinds of game &c. in our area.**

Now that we have a Natural History Society in Northern Bengal of which most of the members are active shikaris, we ought to be able to settle some of controversies about the numbers of species of the larger mammals that exist in the area. In these controversies it is the sportsmen who incline towards the greater number of species and the Natural History books which incline towards the less; a curious state of affairs considering that the authorities on Natural History are often accused of unnecessarily multiplying species.

To the question, recently asked in our journal, as to whether there are two kinds of bear (excluding the sloth bear) or only one in our area, Mr. Crees has replied that, in his opinion, there are three. Some say, and I think Mr. Crees is again among them, that there are two kinds of pig. Many say that there are two kinds of wild dog, and the question of two kinds of leopard, or a leopard and a panther is, of course, an old one.

It is worth noting here that a Malayan wild dog, and a Malayan bear, which some have identified with our "ruk-bhalu", are perfectly well known species though never authoritatively recorded from our area.

Now all these questions are open to proof, and proof consists in skins with skulls. It is up to us to produce this proof if possible, and convince the authorities; meanwhile it would be of very great interest if all believers in multiple species would give us their definition of these species as Mr. Crees has done in the case of the bears. In giving these definitions I think we should distinguish between first hand evidence and hearsay for, although the local people are often most knowledgeable on these points, I have a feeling that they are inclined to multiply varieties: at any rate, where trees are concerned, Nepalis distinguish between a "cock" and a "hen" variety of a great number of species.

I began about mammals but, if I may be allowed to switch off, I think many fishermen recognize at least three varieties of mahseer. It would be most interesting if those who do, would let us know what they consider to constitute the difference between these varieties.

Darjeeling,  
16th November, 1926.

E. O. SHEBBEARE.

### Nearer to God than thee.

There were fifteen coolies lined up on a hot muggy morning as this was going to be a chase after a bear which had foraged in the busti the previous night and been tracked to a cliff, shaped like a U, in which were two "earths" in either of which the bear might be.

Off we started on a two mile tramp down hill. I was told that all I had to do was to roll up to the place and shoot the bear. We reached a river and going along it for a bit the *mandal* stopped, and pointing up, said. "This is the cliff." I looked up, scratched my head and asked him where, as I could see nothing but jungle above. However, by carefully looking, I made out the cliff covered and surrounded by jungle. We then formed a plan for the offensive which was this:---I was to station myself just below the two earths where two bear tracks met and the coolies were to surround the cliff and yell. Should the bear be outside the earth it would probably go in or else come past me; should it be inside it might come out but probably we would have to smoke or poke it out.

We started off, myself led by a Lepcha, to the bears' "company suttak" below the two "earths" and the coolies to their places as planned.

I had taken my shoes off at the river, which visibly swelled from the blood pouring from millions of leech bites. We wormed our way on hands and knees, every here and there cutting the undergrowth carefully at places where we couldn't crawl under and, thank goodness, at last reached the place. The Lepcha, by signs, pointed to a tree on my right and a big rock to my left, the two "earths." After a few minutes wait we heard the first shout and later on yells came from all sides. Suddenly there was a great rush from above, and a barking deer came down at the rate of 90 miles per

hour and swerving in time passed on down below. I couldn't make out whether it was a buck or a doe, as I was then recovering from the three heart beats which I had lost in the excitement. Shortly afterwards the jungle above the tree started to sway and the Lepcha looking at me nodded his head; yes the bear was coming our way, gradually closer and closer. At last a small patch of light, between the trees, was blotted out and I could make out the bear's white bib for a second; it was very close now and I had my rifle ready, the first pull pulled, waiting for its head to appear. I had no luck the bear had smelt us and was going back. The Lepcha drew closer to me and pointed at the light which was again being blotted out; it was a case of now or never and the Lepcha whispered "Pull, pull." I did, but only the first pull, the second would fire the rifle and get him on the shoulder; the light reappeared and I lowered my rifle and followed up, the Lepcha cutting a path in front of me. We arrived at the patch of light and there was the bear, on the other side of it, beside a rock. I had it covered with my rifle, which, however, I soon lowered. The "bear" was the Lepcha *mandal*, dressed in black coat and white shirt, who had lost his way!

E. SAMPSON-WAY.

Gielle T. E.

6th October 1926.

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### HOW BIRDS FLY.

The conquest of the air by man is undoubtedly one of the greatest achievements of to-day. To fly has been the ambition of human beings from the earliest ages. Everyone knows the story of Daedalus and his son Icarus, the Greek pre-historic scientists who tried to fly, to escape the wrath of the King Crete, by making wings of feathers fastened on with wax and attempting to flap like a bird. Daedalus got safely away, but Icarus "crashed" and was killed. For many centuries afterwards men tried to copy birds, thereby risking their lives, and even to-day some machines are being made on the principle of birds' flight. These are called "Ornithopters," and not one has yet been successful.

At a time when so much interest is being taken in Flying Machines, it may be interesting to discuss the flight of birds---how they fly and how they breathe,

and wherein lies their superiority to any man-made machine.

There are many fine specimens of birds in the Darjeeling Museum of all shapes and sizes, and these will repay careful examination. While some birds have practically lost the power of flying, the great majority belong to the flying host. This includes ducks, geese, herons, pelicans, cormorants, partridges, pheasants, pigeons, birds of prey, parrots, magpies, and all the thousands of "Passerine" or Sparrow-like birds (bulbuls, mynas, finches, swallows, crows, &c.) specimens of all of which may be seen in the Museum. These are among back-boned animals what insects are among the back-boneless-winged possessors of the air.

Before we can understand how they actually effect the act of flight, we must consider their structure.

#### **Structure.**

Examination of the birds in the cases at the Museum will show that all flying birds have certain points in common. They are covered with feathers (thereby differing from Bats and other flying mammals and from the Insect tribe), (2) they have two wings and two legs and (3) they have a breast-bone in the shape of a keel, to which are fixed the muscles used in flight. All these features, as will be seen later on, are essential to flying birds.

*The Wing.* The Wing of the bird of course corresponds to the hand and arm of a mammal. If the the skeleton of a bird is studied, it can be seen that in the "hand" only the thumb and two fingers are developed and to the back of these fingers and to the forearm specially long feathers are attached which form a supporting membrane like the plane of an aeroplane.

*The Feathers.* The Feathers should be carefully scrutinized. It will then be seen that each feather has a central axis which is a hollow cylindrical quill with a solid rather quadrangular formation down the middle called the rachis which carries all the particles, or Barbs, making up the vane. The barbs are all linked together by tiny attachments called barbules which can be seen by the naked eye, and by microscopic barbicels. The back surface of the rachis is convex, the front surface grooved. At the base of the feather is a tiny hole through which blood enters, and at that place the feather is embedded in a pit in the skin.

*The Skeleton.* The Skeleton of a bird marvellously combines strength and lightness, for though the bones

are made of specially strong material, they are hollow and spongy in texture.

### Flight.

Having considered the structure, we are now able to find out how a bird flies. Imagine how a boat is borne along when the wind fills the sails or when the oars strike the water. Think, too, of how a swimmer beats back the water with his hands. A bird flaps its wings by contracting the strong muscles joining the wing to the breast-bone, and on so doing beats back the air and is carried forward, its keel-shaped breast-bone cleaving through the air like the keel of ship. But air is not so resistant as water and so the bird can not float as does a boat, but each stroke has a downward as well as a backward direction. "When there is more of the downward direction the bird rises, when there is more of the backward direction it speeds forward; but usually the stroke is both downward and backward for the lightest bird has to keep itself from falling as it flies. Buoyant as many birds are all have to keep themselves up by an effort. But the possibility of flight also depends upon the fact that the raising of the wing in preparation for each stroke can be accomplished with very little effort; the whole wing and its individual feathers are adjusted to present a maximum surface during the down stroke, a minimum surface during the elevation of the wing."\* This fact can be shown by experimenting with a bird's wing.

There are many different kinds of flight, as all birds do not go through the same motions, though the principle is the same. Humming birds flutter, larks soar, kestrels hover, and the albatross sails. The effortless sailing motion of birds, such as the Kite so often to be watched in Darjeeling, is hard to account for. It is to be compared with the rising of a paper kite, "the weight of the bird corresponding to the tail of the paper kite" and it is possible only when there is wind or when great velocity has been previously attained. But all these kinds of flight require further examination and special explanation.

### Breathing.

The great energy which birds put into flight, as well as into hopping, singing, nesting, and preening, and

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\* Sir A. Thomson "The Study of Animal Life."

clutches of eggs, is due partly to a very special way of breathing. The lungs of the bird are small and their air-chambers smaller than those of a mammal of the same size. But air is drawn not only into the air-chambers of the lungs but right through the lungs into great air-balloons (called air-sacs) found also in some flying insects but not in mammals. The air-sacs lie like air cushions under and between the internal organs of the bird and sometimes extend into the skin and bones. When a bird expands its chest, air rushes through the lungs and sacs and draws a great draught into the breathing spaces of the lungs. When the chest contracts the sacs are compressed and the air is driven out, sweeps through the lungs carrying the impurities with it. Thus the lungs may be called "tidal" and the air sacs, which have no blood vessels, ensure the complete filling and emptying of the lungs with each successive movement. The rapid breathing thus made possible help greatly to the buoyancy of birds.

#### **Muscle-Pigments.**

Birds have another contrivance which helps their flight indirectly. Everyone must have noticed that birds have dark coloured muscles. This dark colouring is due to a pigment which acts as a store of oxygen and enables them to move constantly and to continue forcible movements without undue fatigue. When migratory birds are found to be exhausted and powerless on arrival from a distant country, this is due probably to lack of food and to cold rather than to muscular fatigue.

Birds are at the climax of activity, and their temperature is many degrees higher than that of mammals. The warm covering of feathers of course helps to maintain this high temperature.

Thus we may see that every tiniest detail of a bird's structure tends to increase its buoyancy and power of flight. Birds rank high amongst other animals. They are to the air what mammals are to the earth and fishes to the sea. Man will have to strive for generations before his machines will in any way attain to the perfection of bird flight.

J. MAJUMDAR.

Darjeeling,  
28th September 1926.

### A note on *Kallima*, the Leaf Butterfly.

There is probably no Natural History Museum of any repute that does not show, as one of its exhibits of "Protective Mimicry", a specimen or two of the well-known leaf butterflies belonging to the genus *Kallima*. These are very carefully arranged on a stalk with their wings closed, and the tail of the hindwing closely adapted to the stalk. A few dead leaves closely resembling the insect are attached to the stalk below it. The set-piece is a beautiful and very convincing example of mimicry, and yet how far from the truth?

I have had plentiful opportunities of studying the South Indian species, especially in Coorg and the Nilgiris. The bed of the river at Kallar or at Burliyar in the Nilgiris, is a locality where it may be found nearly all the year round. The female is shy and retiring, the male bold never given to such subterfuges as cooping a dead leaf. He takes up a prominent position on a tree overhanging the ravine through which the river flows. Generally he perches on a leaf, walks sedately to its tip and from this point of vantage launches itself on every passer-by, more especially the large pale blue *polymnestors*. He pursues these for some distance up the ravine but eventually returns to the self-same leaf. I decide to disturb it and do so with a few well aimed pebbles. Does it at once assume a statuesque pose as a leaf? Not a bit of it. It rises in alarm, circles and returns to its leaf again? I disturb it repeatedly but it returns again and again to its leaf until a better aimed stone thoroughly frightens it. It flies in a zig-zag course to the trunk of a tree, on which it settles. On this new resting place, it is practically invisible. Its habits then are exactly similar to the *Vanessidae*, more especially *indica* or *canace*. I have tried this experiment on frequent occasions and have never known the male to hide up on a twig, it invariably flew to and settled on a tree trunk.

The female is to be sought elsewhere, it is crepuscular and hides up in undergrowth and thickets like *Melanitis*. She rises quite suddenly at your feet, and you see the sudden flash of pale blue—it looks white, in the prevailing gloom of the underforest. Every time its wings open in flight, you get the flash of white, so that it alternately appears and disappears and then finally for good, near the ground. Frequently you stalk it in vain, for it gets up before you have spotted it. A very

careful approach and a careful scrutiny of the ground is necessary to find the hidden insect. You will study the surrounding twigs in vain for it is not on these that lady Kallima has come to rest. She is eventually found on the ground, lying almost flat on her side after the manner of *Melanitis*, but rather more so. Lying thus, the insect looks for all the world like a fallen leaf, far more so than that perpetually perpetrated fraud mounted on a twig in our museums. Truly "truth is stranger than fiction."

F. C. FRASER. LT. COL., I. M. S.

### EDITORIAL.

This is just a continuation of the October issue and gives a brief account of the touring and collecting done and a list of members and visitors up to the time when it was written viz:--3rd December 1926.

**Touring and collecting:**--The whole of March and the first week of April was spent collecting in the Duars and for practically the whole of that period I was the guest of Mr. and Mrs. O'Donel at Hasimara, but I also spent a short time with Mr. and Mrs. Bailey at Rajabhatkhawa. Mr. O'Donel being himself a very keen naturalist, this trip was a great success, wholly due to the valuable help I got both from him and his wife. The trip added a large number of birds to our collection but we didn't get very much else. 373 specimens of birds were collected and preserved and out of this number 52 were species not represented at all in our collection and a number of others show sexes not previously obtained. Besides birds the following were collected:--Mammals 10, Snakes 4, Lizards 2 and Fish 3. Insects were very scarce, the following were obtained:--Butterflies 64; Bees and Wasps 42; Dragonflies 17; Moths 11; Beetles 8; Bugs 5 and one mantis. A total of only 148 insects.

I spent ten days at Mangpu in May and again ten days in June as Mr. and Mrs. Shaw's guest. I was also there the whole of July, the guest of Mr. and Mrs. Osborne but unfortunately I was laid up most of that period. I had a collector with me so the time wasn't wasted. I again visited Mangpu for ten days in November and the Osborne's again kindly put me up. Three of the days were spent at Birik in the Tista Valley. I must thank Mr. and Mrs. Shaw and Mr. and Mrs. Osborne for all their help and kindness.

During my first visit to the Shaw's the weather was kind on the whole. Mangpu is an ideal collecting spot but this year birds were very scarce; in fact there was a dearth of most things, except beetles, and they were not got in any very great variety. During those ten days we got:--1 Bat; 2 Snakes; 281 Beetles; 151 Dragonflies; 72 Butterflies; 14 Bugs; 11 moths; 8 Bees and Wasps; 2 Flies and 1 Grasshopper or a total of 477 insects. The weather during the second trip to the Shaws and Osbornes was pretty wet but there were few days during which nothing was brought in. We collected:--26 Birds and 1 Snake and the Insects consisted of:--432 Beetles; 317 Dragonflies; 184 Butterflies; 129 Bugs; 52 Grasshoppers &c; 41 Bees and Wasps; 15 Flies and 8 moths or a total of 1179 insects.

During the last visit to Mangpu and Birik not much was done, and although we crossed the whole hillside from Birik to Kalijhora, little life was seen. We got:--19 Birds; 20 Dragonflies; 15 Butterflies; 1 Silk moth new to us and 3 Beetles or a total of 39 insects only.

We will now give a list of contributions to the Museum since the publication of our first number.

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|--|--------------------------------|--|
| One Short-tailed mole ( <i>Talpa micrura</i> )                     | from Miss Betty Osborne.       |  |
| Horns of Four-horned Antelope ( <i>Tetraceros quadricornis</i> )   | from Mr. W. T. FitzGibbon.     |  |
| One Changeable Hawk-Eagle<br>( <i>Spizaetus limnaetus</i> )        |                                | } From<br>Mr. D. G.<br>Smyth<br>Osborne. |
| One Blue Rock-Pigeon ( <i>Columba livia<br/>intermedia.</i> )      |                                |  |
| One Solitary Snipe ( <i>Capella solitaria</i> )                    | from Col. H. S. Wood, I. M. S. |  |
| One Common Wolf-Snake ( <i>Lycodon aulicus.</i> )                  |                                | } From<br>Mr. B.<br>N. Crees.            |
| One Large Spotted Kukri-Snake ( <i>Oligodon<br/>juglandifer.</i> ) |                                |  |
| One Boie's Whip Snake ( <i>Dryophis<br/>prasinus.</i> )            |                                |  |
| Two Green Pit-Vipers ( <i>Trimeresurus<br/>gramineus.</i> )        |                                |  |
| One Stoliczka's Pit-Viper ( <i>Trimeresurus<br/>monticola.</i> )   |                                | } From<br>Mr. A. K.<br>Glasson.          |
| One Mock Cobra ( <i>Pseudoxenodon augusticeps</i> )                |                                |  |
| One Stoliczka's Pit-Viper ( <i>Trimeresurus<br/>monticola.</i> )   |                                |  |
| One Elephant Leech.  |                                |  |

- One Orange-collared Keelback (*Rhabdophis himalayanus*) } From  
One Grays' Polyodont (*Polyodontophis collaris*). } Mr. A.J.H.  
One Stoliczka's Pit-Viper (*Trimeresurus monticola*). } Tietkens.  
One Gray's Polyodont (*Polyodontophis collaris*). } From  
One McClelland's Coral Snake (*Calliophis maclellandi*). } Mr. J. T.  
Two Spiders. } Mulroney.  
One Hamadryad (*Naja hannah*). From Mr. P. Cresswell.  
One Broad-barred Coluber (*Coluber porphyraceus*) From  
Mr. M. C. McKean.  
One Schlegel's Rat-Snake (*Zamenis Korros*) From Mr.  
P. V. Osborne.

A number of moths from Mrs. Bateman and minor contributions from Miss Sullivan, Messrs P. V. Osborne, W. K. Langdale Smith, P. A. McNaught, S. C. Sen, A. J. H. Tietkens, T. C. Tweedie and Captain Ross.

**Visitors** :---The following distinguished visitors visited the Museum during the year.

Col. R. Meinertzhagen, the well known Ornithologist on the 1st January 1926.

His Excellency the Earl of Lytton and Viscount Knebworth on the 7th June 1926.

Major General H. D. O. Ward and Mrs. Ward on the 29th August 1926.

Her Excellency Lady and Miss Stephenson on the 18th September 1926.

Dr. W. D. Matthew, Curator of Vertebrate Palaeontology, American Museum of Natural History, New York on the 13th October 1926.

Our next issue will contain an Index to the volume and an account of our financial position.

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