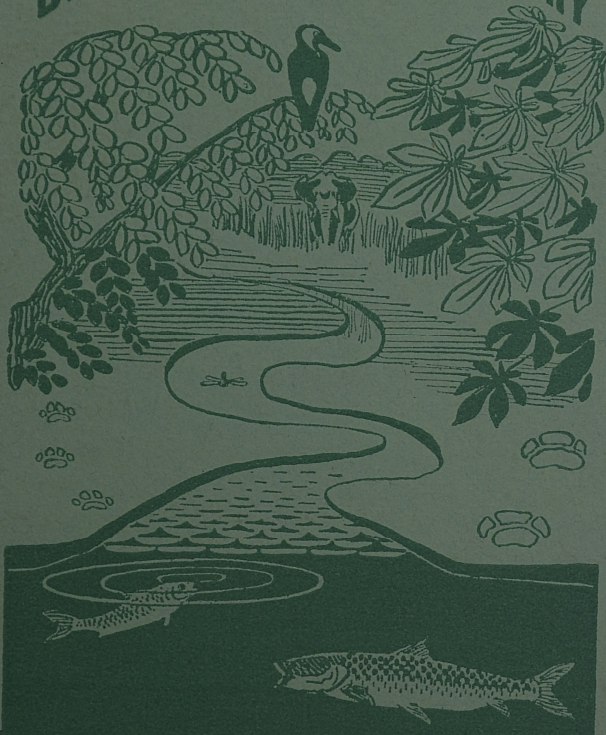


THE JOURNAL OF THE
BENGAL NATURAL HISTORY
SOCIETY



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

BENGAL NATURAL HISTORY SOCIETY.

The Society under the name Darjeeling Natural History Society was started about the end of 1923, the objects being to maintain the Museum in a proper condition; to promote the study of Natural History and to get together, as complete as possible, collections of Natural History specimens from a limited area, including "the civil districts of Jalpaiguri and Bengal 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, and a Quarterly Journal has been started. It is hoped that everybody will join the Society and co-operate to make the Museum and Journal a success.

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Pastor roseus Linn
The Rosy Pastor

After Lilian Medland

JOURNAL
OF THE
BENGAL NATURAL HISTORY SOCIETY.

—
Vol. XV.—No. 3.
—

The Starlings and Mynas of Bengal with special reference
to those of North Bengal.

By

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

The Starlings and Mynas are a very well known family of birds, one member being the commonest of Indian birds and most obstrusive in its habits. They belong to the family *Sturnidae* which is very closely allied to the *Eulabetidae* (Grackles and Stares). It is a large family. Baker gives 36 species and sub-species, belonging to 12 genera, as found in India.

Many of these birds are residents but others are migratory and semi-migratory. Those which are migratory spend the winter in various parts of India.

They are often gregarious, some to a very large degree and others much less so. They feed largely on the ground but some are wholly arboreal. Those which frequent the ground are excellent walkers and the flight of all of them is even and often swift.

Nine species, belonging to eight genera may be found in Bengal. Of these, however, one is very doubtful and we can find no references, of recent years, of a second one.

We should here like to thank the Director of the Zoological Survey, Dr. Bains Prashad, for his great kindness in hunting for references of these doubtful species in works which we do not possess.

We include these species in the hope that some one may come across them somewhere and record the fact.

We must also express our gratitude to Mr. J. Vallis for doing the excellent black and white sketches especially as,

due to bad sight, we were unable to undertake the work. This, however, is no matter for regret as the sketches have been done by more capable hands than ours. We have included illustrations of the doubtful species as a help to identification if met with

All the species we discuss are easily recognized by size and colour.

We give a key which only refers to the species given in this paper.

A. Length 9 inches or over

a No bare face wattle.

a' Rosy-pink and black ; long crest *Rosy Pastor.*

b' Iridescent purple, green and blue
with buff tips ; neck and
breast hackled ... *Finsch's Starling.*

c' Dark and ashy brown, erect tuft
of feathers at base of bill ... *Indian Jungle*
Myna.

b With bare face wattles.

a'' Vinous-brown and black ; yellow
wattle ... *Common Myna.*

b'' Grey and black ; brick-red wattle *Bank Myna.*

c'' Black and white ; small orange
wattle ... *Assam Pied*
Myna.

B. Length less than 9 inches.

a. With a crest.

a' Black and yellow ; crest yellow ... *Gold crested*
Myna.

b'' Grey and rich buff ; crest black ;
neck and breast hackled ... *Black-headed*
Myna.

b. No crest.

a'' Grey and rufous ; head and neck
hackled ... *Grey-headed*
Myna.

1. The Rosy Pastor.

Pastor roseus (Linn.)

Field identification :—A rosy-pink and black bird, with full crest seen in flocks both on the ground and in trees, often in company with Starlings and Mynas.

Description :—The excellent plate shows the distribution of the colours very well. The white portions are rosy-pink and the black ones glossy black, often lightly tipped with buff.

The length is about 9" ; wing 5·2" ; tail 2·5" and tarsus 1·25".

The colours of the soft parts are :—Bill rosy-pink, browner on the culmen ; iris dark brown ; legs pink or tan.

The female is duller in colour than the male. The *Young* bird is brown gradually assuming the adult plumage.

Distribution :—*In our area*.—We can find no recent records of this bird occurring anywhere in Bengal. There are two old records by Blyth.

(1) In *Ann. Mag. Nat. History XII (1st. Series) 1843* p. 47 he writes that in the vicinity of Calcutta *P. roseus* "visits arboreal cotton in February, like *P. pagodarum*, but shops are supplied from elsewhere and this species is not often to be procured there."

(2) In the *Journal of the Asiatic Society of Bengal III (1844)*, p. 365 he says that "they visit Calcutta only towards the end of the cool season when flocks are seen on arboreal cotton then in blossom."

In the British Museum there is a specimen from "Darjeeling (Coll. Pearson), donated by the Indian Museum."

These are the only records, so far as we know, of the occurrence of this bird in Bengal.

Outside our area :—Stuart Baker gives the distribution as follows :—'Breeding in South-East Europe, West and

Central Asia to Turkestan. In Winter it occurs in great numbers all over North-West India and in smaller numbers in South India, having been obtained as far South as Ceylon, and as far East as Manbhum, and Bihar. Stragglers have occurred yet further East. I obtained a specimen in Assam, Col. Tytler obtained one specimen in the Andamans, whilst later, 1905, Osmaston twice saw flocks and shot three specimens in these islands."

In Bihar we did not find them common but got them from December, to, as late as, the 13th April.

The migration of the Rosy Pastor is most interesting. The route lies through North Baluchistan; large flocks are noted by Ticehurst as being seen almost daily in the Quetta Valley on their Westward spring migration, from the middle of April to the middle of May. It is said that some of these remain round about Kohat during the hot weather. The return passage, in a South-East direction, takes place from the first week of July, being at its highest in Mid-August and lasting till September. It seems quite possible that some birds may remain and breed in North Baluchistan or the North-West Frontier Province as suggested by Ticehurst; but so far no eggs seem to have been taken anywhere within Indian limits.

One was shot at Lahore towards the end of April 1926 which as a nestling had been ringed in N. E. Hungary on the 30th June 1925 and bore a ring numbered 27381 of the Royal Hungarian Institute of Ornithology. According to Whistler the distance between the place it was ringed and where it was shot is 3000 miles. This is a very valuable link towards the elucidation of the migration of this beautiful bird.

Habits :—The Rosy Pastors frequent open country of all sorts but are especially partial to cultivated areas and grassy banks and fields where they may be seen in company with Starlings and various species of Mynas in attendance on grazing cattle and picking up insects disturbed by the latter. They roost on trees also often in company with Mynas.

In some parts of India such as the Punjab, Baluchistan etc. they are found in huge flocks but in Bihar we only came across small parties.

They resemble Starlings in all their habits in fact so closely do they resemble them that, as Whistler says, when seen at a distance and thus unable to see the difference of colour it is impossible to make out which are Pastors and which Starlings.

Wait found them shy birds in Ceylon but we haven't found them particularly so. Their flight is swift and strong. Much of their time is spent on the ground feeding on various kinds of insects. They do much service to the agriculturist by killing large numbers of locusts; many of these are, apparently, killed as a form of amusement or sport as they are not eaten. Rosy Pastors are also said to kill that pernicious pest of grain *Chloridea obsoleta* F. Unfortunately a very large amount of good they do is counteracted by the great damage they do to grain crops, especially millets such as Jowari (*Andropogon sorghum*) though, perhaps, not more so than is done by Mynas and Crows. They are often called the Jowari Bird. They feed much on fruit, mulberries, grapes and dates. Mason examined the stomachs of half a dozen Bihar specimens and found they contained only *Ficus* fruit. They perhaps help in the propagation of that obnoxious bush the Lantana as they feed on its berries. Along with many other birds they very largely frequent the Silk Cotton tree (*Bombax malabaricum*), Flame of the Forest (*Butea frondosa*) and Coral trees (*Erythrina* sp.) and partake of the nectar which their blossoms contain, also, possibly on the insect life found in the flowers; grass seeds also form part of their diet.

It is uncertain whether the Rosy Pastor can be considered beneficial or otherwise to the farmer.

Their note resembles that of the Starlings. Ticehurst describes the song "as a jumble of discordant grating noises with some melodious warbles intermixed".

Before migrating the Rosy Pastors become very fat and are then eagerly sought for by Pathans and others who

shoot large numbers of them and get a good price for them. The native sportsmen wait until they can be sure of getting a good number at small expenditure of ammunition, they believe in shooting into the "brown". The flesh of these birds is said to be excellent.

The breeding-season is in May and June and they breed in vast colonies. The sites they select for their nests are holes in old buildings, trees, rocks, banks and sometimes, according to Dresser, they nest on the ground.

The nest is a clumsy structure composed of straw, grass, rags, leaves and is lined with roots and feathers.

The eggs number from 3 to 5 and are pointed ovals, very glossy and pale skim-milk blue in colour.

They measure 1.10 x 0.80 inches.

According to Sanyal they do not thrive well in Lower Bengal in captivity. There were some birds which had already been four years in the Alipore Zoo but they never attained perfect plumage and were listless and inactive. In the Ghiza Zoological Gardens in Egypt, a Rosy Pastor lived for 12 years 5 months and 4 days.

This bird is known as *Golabi Maina* (Hindi in North *Tilyer* (Hindi in South) *Lal Maina* (West Bengal).

(To be continued.)

The Long-eared Owl (*Asio otus otus* Linn.)
in the Darjeeling District.

On the 7th March 1936 Lt. Col. G. A. Webb shot a specimen of this beautiful Owl near the Mirik Polo ground (5200 ft.) in the Darjeeling District. He was after Woodcock at the time in a bog surrounded by trees. There were about four or five pairs of these Owls of which he shot one, when the beat was over, as it flew from the trees into the open, unfortunately further specimens were not secured.

This is a most interesting, and valuable, record, as Stevens who worked these hills and Sikkim very thoroughly makes no mention of it in his Paper "*Notes on the birds of the Sikkim Himalayas*" and we can find no record of this bird from this side of India. In India it is only a winter visitor except in Kashmir, where Lt. Shelley found a nest in June. Stuart Baker gives the distribution in India as "Extends into the plains of the Punjab, Sind and Cutch but it probably breeds in the higher Himalayas from Gilgit to Sikkim". So far there is no evidence to confirm this last statement.

Outside India Stuart Baker says it is found in "Practically all Europe and North Asia ; North-West Africa to the Azores ; Central West Asia to Persia and Kashmir. In Britain it is commonest in the fir woods of Scotland.

The birds seen by Lt. Col. Webb, from which the specimen was secured were, no doubt, resting while on migration as Blanford found them in Sind assembling in flocks at that period, though Ticehurst says that pairs and single birds are commonest.

The favourite haunts of the Long-eared Owl are fir woods though they may be found in open forest and patches of forest in open country. They roost during the day, sitting bolt upright on a branch close to the trunk of the tree, their colouration blending with the bark of the bole and thus rendering them most difficult to see. Young birds sit close together on the branch and form a very beautiful sight.

In habits they are crepuscular and nocturnal, sallying forth at dark, with buoyant flight, in search of their prey. This consists largely of small birds which they take from their perches, but small mammals such as voles, field mice large moths and beetles etc. are captured and devoured. Lord Lilford found this, and all other Owls, were fond of fish.

The call has been variously described, Dresser called it a deep hoot. Butler writes that "others state that it utters a note like the barking of a spaniel while the young birds make a noise somewhat similar to the mewling of a young Kitten". Witherby syllabizes it as "00-00-00."

The nest found by Lt. Shelley in Kashmir was taken on the 4th June at an elevation of about 9000 feet. It was situated in a Sycamore tree about 12 feet from the ground and was, probably, one used, formerly, by a Crow. It contained 4 eggs on the point of hatching.

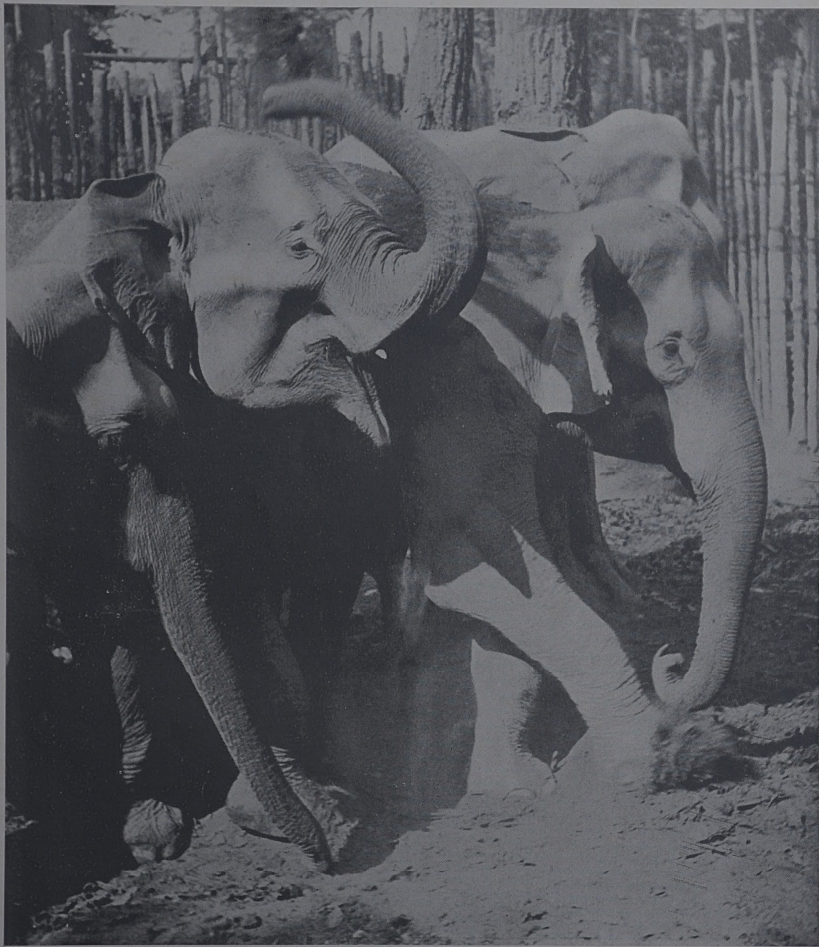
In Europe these birds also use the old nests of Jays, Magpies, Wood-Pigeons, Sparrow-Hawks and sometimes a Squirrel's drey, lining these with down and feathers. They have also been known to nest on the ground.

The usual number of eggs is 4 but up to 7 have been found. They are white, slightly glossy broad ovals and those obtained by Lt. Shelley measured 1.62 x 1.35 inches.

We are greatly indebted to Lt. Col. Webb for this valuable specimen, which is too rare to risk being spoilt by exposure to light. We are trying to get a specimen to place on exhibit.

Chas. M. Inglis, F.Z.S., F.R.E.S., B.E.M.B.O.U.

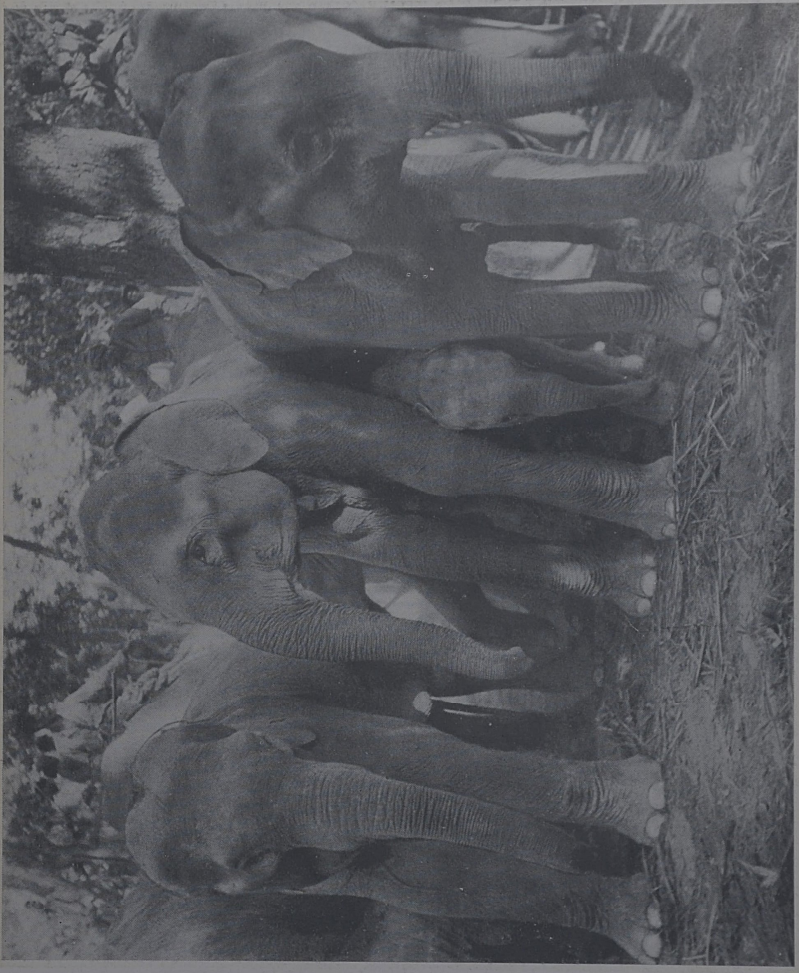
Plate IV.



Elephants in a Khedda

Copyright

H. E. Tyndale, Hatipotha, P. O.



Wild Elephants in a Khedda
Kunkis coming in behind

Copyright
H. E. Tyndale, A.R.P.S.,
Hatipocha P. O., N. Bengal.

Plate VI

H. E. Tyndale, A.R.P.S.,
Hatipocha P. O., N. Bengal.



Khedda
Kunkis & Fundis
At Work

Copyright
H. E. Tyndale, Hatipotha P. O.

A



"Taking The Captive to Water"

Copyright
H. E. Tyndale,
Hatipohai, P. O. N. Betsai.

An Elephant Catching Syndicate

BY

E. O. SHEBBEARE.

(Continued from Page 46.)

PART II.

*Preparation of Stockade details of the drive with
resulting failures and ultimate capture of
small part of Patiya herd.*

Having chosen a stockade site, usually within the surround, it is necessary to modify the lines at that point, so that they converge, like a funnel, into the gateway. With this object a pair of "wing-lines" are cut, starting from the gate-posts and diverging to meet the boundaries of the surround. These lines are not necessarily absolutely straight; advantage is taken of any high land that is met with, and they are made to follow ridges as far as possible. When the stockade is ready, the wings are "driven in," that is to say any elephants cut off by the wing-lines must be driven into the enclosed area. The lines are then posted and become simply a part of the surround, the superfluous portion of the old line being abandoned.

As the wing-lines approach the gate, they are reinforced by fences, the "wing-walls". The length of these varies with the nature of the ground; they seldom need be more than a hundred yards long. They increase in strength as they approach the gate, until, where they join it, they are almost as solid as the walls of the stockade itself.

The stockade is usually a ten-sided figure. Each side is fifteen feet long, but, allowing for its interlocking with the adjoining sides, the inside measurement is a bare twelve, making the inside circumference of the stockade about a hundred and twenty feet, or, roughly speaking, a circle forty feet across.

The walls are about nine feet high and built of stout posts, standing alternately two and three deep, lashed to horizontal poles and well strutted on the outside. Up to a

height of three feet from the ground the horizontals are omitted, so as to leave loopholes all round through which men can slip during tying-up operations, which here are conducted partly on foot, not entirely from the backs of tame elephants as in the north.

On seeing a stockade of this kind for the first time, spectators are almost invariably disappointed in its size, and frankly incredulous when told that it will easily hold sixty elephants. Actually the floor-space is about the same as that of the stockades used in the north, but in these, there is a ditch inside the wall which makes them look larger. Very large stockades are used in southern Bengal when the other method, that of building the stockade before surrounding the herd, is employed. In this case it is customary to engage no tame elephants until a catch has been made, and the wild elephants have therefore to be left for a considerable time in the stockade, which is rather in the nature of a paddock than a corral, and always includes a stream of running water.

The gate ordinarily used in Chittagong is a sort of portcullis, raised with tackle-blocks, and dropped by cutting the retaining rope. In this case, however, I introduced the swing gate used by the Assamese in the north. This is simply a big brother to the ordinary five-barred-gate, about nine feet square and heavier in proportion. I built it with the help of a local carpenter and, though it weighed about eighteen hundredweight, we managed to hang it so that it would swing to with one push. This was the only departure from local practice that I allowed myself and, I am thankful to say, it worked perfectly when the time came. The advantages of a swing gate are that it can be opened and shut to admit strangglers, while keeping in the early comers. It sometimes happens that a few elephants, finding themselves shut out after their fellows have entered the stockade, will push the gate open on their own account.

At last, after four days strenuous work, the stockade was finished and the day of the drive arrived. We spent the morning in putting the finishing touches to our work,

camouflaging the whole of the inside of the stockade and "wing-walls" with green branches, preparing the fire-lines and, last but not least, in performing the religious ceremonies without which no business dependent on luck can take place in India.

The fire-lines are a series of about four parallel paths running across the V-shaped approach to the stockade from wing to wing. Only just so much jungle is cut on these paths as will allow a man to run quickly and quietly along them in the dark; too much clearing would arouse the suspicions of the elephants. At intervals bonfires are stacked and carefully primed with wisps of jute soaked in paraffin. At either end of each fire-line an experienced man is posted with a torch. Once the herd has passed their line, these men, communicating with one another by whistles, meet in the middle of the line and proceed to light the bonfires from the centre outwards. The charge of the outer fire-line is perhaps the most responsible post in the whole drive as well as the one requiring most nerve.

In the afternoon we took our places along the side of the surround opposite the stockade. Eight sahibs and about a hundred and twenty beaters took part, for the line, at the start, was about two miles long; much too long for proper control. All went well at first and, from my position on the right flank, I was surprised at the excellence of the line they kept, although, in order to do so, they were obliged to make more noise than I should have liked. The right flank was on high ground almost all the way and I was able to follow the proceedings throughout. The left flank put up the herd, which moved away nicely in front of the line to within a little over half a mile of the stockade. At this point the ever increasing noise of the beaters behind them caused the elephants to *mill*, that is to bunch together and move round like a whirlpool. Several shots were fired, much more than were necessary, for our men were beginning to get excited, and gun firing is infectious. M. who was posted at the end of the wing-wall on my side, came back to me and told me to stop the beat, and order everybody to clear a line from man to man. This line was to be held till nightfall if

necessary, or until such time as the elephants should choose to move of their own accord. To my surprise, I was able to get this order through and had the satisfaction of hearing the pandemonium gradually subside. The soundness of M's. tactics was proved at once. No sooner was the line reduced to silence, than the herd began to move forward again.

It was now my business to run on ahead of the beaters to a danger-point, where a stream crossed the wing that I was guarding, and it was from here that I saw, with delight, a procession of great forms moving quietly through the jungle in the right direction. Only one elephant, an old tusker, even challenged my post at the weak spot, and three clicks of the watchman's rattle which I carried were sufficient to send him, blowing and squeaking, after his fellows. All seemed perfect, except for the rapidly approaching roar of the beating line, in which each man seemed bent on making more noise than his neighbour. The herd was now confronted by the high bank of the stream on which I stood. I saw three elephants go up defiles towards the higher ground, but my orders were to stick to my post until the last of them were up the bank, and I was afraid that the horrible din would cause the majority to *mill* once more instead of facing the obstacle. Something of this sort must have occurred on the left, for there the din increased to an almost incredible hullabaloo of shouting, rattles and guns, above which a sort of motor-horn instrument, used to mark the centre of the line, kept up a solemn *honk-honk* which, in other circumstances, would have been comic. M. had again passed orders to me to keep the line quiet, but, this time, it was beyond my power, indeed I had already been trying to do so for some time. My efforts only caused those who could hear me to cease the everlasting cry of *La-la-la* and each man bellow to his neighbour to make less noise, resulting in an even more appalling din. Just as I was about to give it up as hopeless, the noise-makers were successful, and the herd stampeded up the bank and in the direction of the stockade, though not at all in the frame of mind in which elephants should be at this stage in the proceedings.

I managed to climb the hill in time to see the last of them plunging along ahead of me, but I was soon out of the hunt, and could only hope that all would go well and that I should soon hear the gong that announces the shutting of the gate.

Quite what happened is not clear, but all agree that the herd was well within the "wing-walls" when a gun or bomb went off somewhere in front, and the whole panic-stricken mob turned in their tracks. Who the offender was has, luckily for him, never come to light. It may have been malice, but, considering the mad state that some of our men had worked themselves up into, I should not be surprised to learn that it was unintentional.

I heard these details afterwards, at the time I was engaged in a neck-and-neck race with a terrified cow and her calf which were trying to cross out of the surround. Luckily none of the herd succeeded in doing this, so that, except for having scared our elephants nearly out of their wits, we were in the same position as when we started.

There was nothing more to be done but to search out M. and offer him our condolences. One by one the leaders of the venture collected round him and the downcast little group moved back to camp in the gathering dusk.

That night and most of the next day was devoted to discussing our mistakes, and how to avoid them in future. We were well aware that, to create a wild riot behind a herd, was not the way to drive it. On the other hand, the size of the surround and inexperience of so many of our men were against us. We resolved that we would not serve out guns with such a free hand in future. Anyone to whom we had entrusted fire-arms, had been instructed that they were only to be used in the event, either of a determined charge, or in the case of one stubborn animal holding up the whole drive. Instead of this, they had fired merely because they heard or saw elephants, and the *feu-de-joie* was carried on down the line by nervous souls

who, knowing that there were elephants about, took this opportunity of warning them not to come their way.

We began to have doubts about our stockade site. It was too near a road that carries a good deal of foot-traffic at certain seasons, and elephants might hesitate to approach it in daylight. We decided to time our next drive to end after dark, a plan which has the double advantage of making such artificialities as camouflaged "wing-walls" less obvious, and increasing the effect of torches and bonfires.

I will pass over our next two attempts, each of which ended in the elephants breaking back; in one case passing M. within touching distance. He was half way up a bamboo-clad precipice and could, of course, do nothing, as a procession of the great beasts tobogganned by.

We were thoroughly discouraged; the herd stubbornly refused to be headed towards our stockade, and we had already pegged out the site for another. Our intention was to give the elephants a chance to settle down, while we built the new stockade. This plan, which I still believe was the correct one, was brought to nought by the Mahomedan leaders of the venture coming up in a body and begging for one more attempt to drive into the old stockade. They pointed out that the following day was Friday, the Mahomedan holy day, and that, if special prayers were kept up until mid-day, and the *mollahs* duly rewarded, a drive in the afternoon could not fail to be successful. This request, coming as it did from men, many of whom had been catching elephants while I was in the nursery, could not be ignored. I consented, only stipulating that the whole arrangement should be in the hands of the Mahomedans, the Europeans being for the occasion merely spectators. To tell the truth, I was getting tired of pushing my way through that mile and a half of dense, hilly jungle, only to learn, about dusk, that the herd had broken to my right or left, as the case might be.

The beat was excellently organized, and our friends brought their elephants up to the high land in good style, timing their efforts so that darkness had just fallen as the

beating line reached the top of the bank. Here they halted and proceeded to light torches. We had rehearsed this manoeuvre in daylight, and once, in one of the unsuccessful drives, had actually carried through the torchlight part of the programme right up to the stockade, in ignorance of the fact that the herd had already broken back. Everything was therefore in readiness, and I was beginning to feel that the herd was as good as in the stockade. Unfortunately, at this stage, the elephants split into two parties. The right half of the beating line, wild with excitement, dashed after the smaller party, spreading out as they went, so as to fill the whole space from wing to wing, leaving the left half of the line, with its flank in the air, endeavouring to push the main herd forward, and unaware that they were cut off from the stockade by a line of torches.

From my position, in the *machan* reserved for spectators, I could see what was happening. I climbed down and ran across the dark space vacated by the right half of the beaters, with the idea of trying to spread the remaining torchbearers across the gap, only to hear the herd crashing back through the black ravine at my feet. At the same time the firelines in front of the stockade blazed up in quick succession, and the gong on the gate rang out to announce the capture of, as it turned out, six animals.

I headed for the blaze of light which marked the direction of the stockade, keeping my ears and eyes alert for any stray elephants that might have evaded capture and be coming my way in the dark. M. and Ma. who had long since given up the attempt to remain spectators, had taken part in the final stages and assisted in the barring of the gate, near which I found them.

In the flickering torchlight it was impossible to count heads among the writhing mass of elephants below us, but a tusker stood up high above the rest, and the whole structure, including our perch, rocked when he charged.

By this time most of the experts had collected, and we held a council of war. The question was whether the tusker was of manageable size and would settle down, or whether

he ought to be shot, on account of the damage which he might do to the rest of the catch. We decided to let the catch settle down for an hour before coming to a conclusion on this point, and meanwhile adjourn for dinner—another mistake. We had hardly finished a hurried meal, when a messenger arrived from the stockade to say that the tusker was attacking the other elephants. We lost no time in getting to the spot, a few hundred yards away, and climbing up beside the gate, saw the brute apparently pick up a small elephant in his mouth and swing him in the air. I have no doubt that this feat was achieved by getting a fore-leg and a tusk beneath the victim, but, in the uncertain light, it looked like a terrier with a rat. Elephants, especially males, are apt to turn on their fellows in a stockade; it usually takes the form of biting off tails. Two males will often fight savagely when caught, and one may kill the other, but I never saw such a murderous brute as this tusker.

There was no time to lose. Telling those on the far side to stand clear, I twisted a leg round the top of a post to brace myself for the recoil, somebody flashed a brilliant electric torch on the tusker's head and I fired, giving him a second as he sank to his knees, and a third, to make sure, as soon as I could reload.

We returned at dawn and saw our catch properly for the first time. One little elephant was down, evidently dying from the injuries received from the tusker, and had to be shot. We found afterwards that the great brute's tusk had entered behind the off ear and nearly come out by the throat on the near side. Of the remaining four, an oldish cow and her yearling calf, likely enough the mother and brother of the dead tusker, had come off without a scratch, showing how well a cow can protect her young. The others were a "*sarin*" (heifer) about six foot at the shoulder and a tusker about four and a half feet high. The former had a gash in her side, and the latter injuries to his mouth and ear. Although their wounds did not appear serious, both these little elephants died within a fortnight—so much for my delay in shooting the tusker.



While we were getting our tame elephants ready to take out the catch, we paid out some rewards. One man, an old hand who had been catching elephants since he was a boy, had met the tusker coming out of the stockade and boldly driven him back by plunging a torch into his face. His pluck had to be rewarded, though, as things turned out, he would have saved us several thousand rupees had he been less daring.

(To be continued.)

A Week End on Chilka Lake.

By

"DAK—PAKI".

It is not generally known that this enormous inland lake is only partly in British India. At least half—the half which holds the majority of birds—is the property of a local Zemindar who, for the most part, places no restrictions on visitors with, or without, guns. Several places, however, are reserved but a polite request to him will usually obtain permission for a day or two's sport in these areas.

The area of Chilka is between 40 and 50 square miles and ducks are to be seen as soon as one sets foot in the boat. By far the greater number is, however, to be found on the South Eastern shore or the seaward side and to say that there are hundreds of thousands would be no exaggeration. No visitor could in one day see a hundredth part of what the lake really holds.

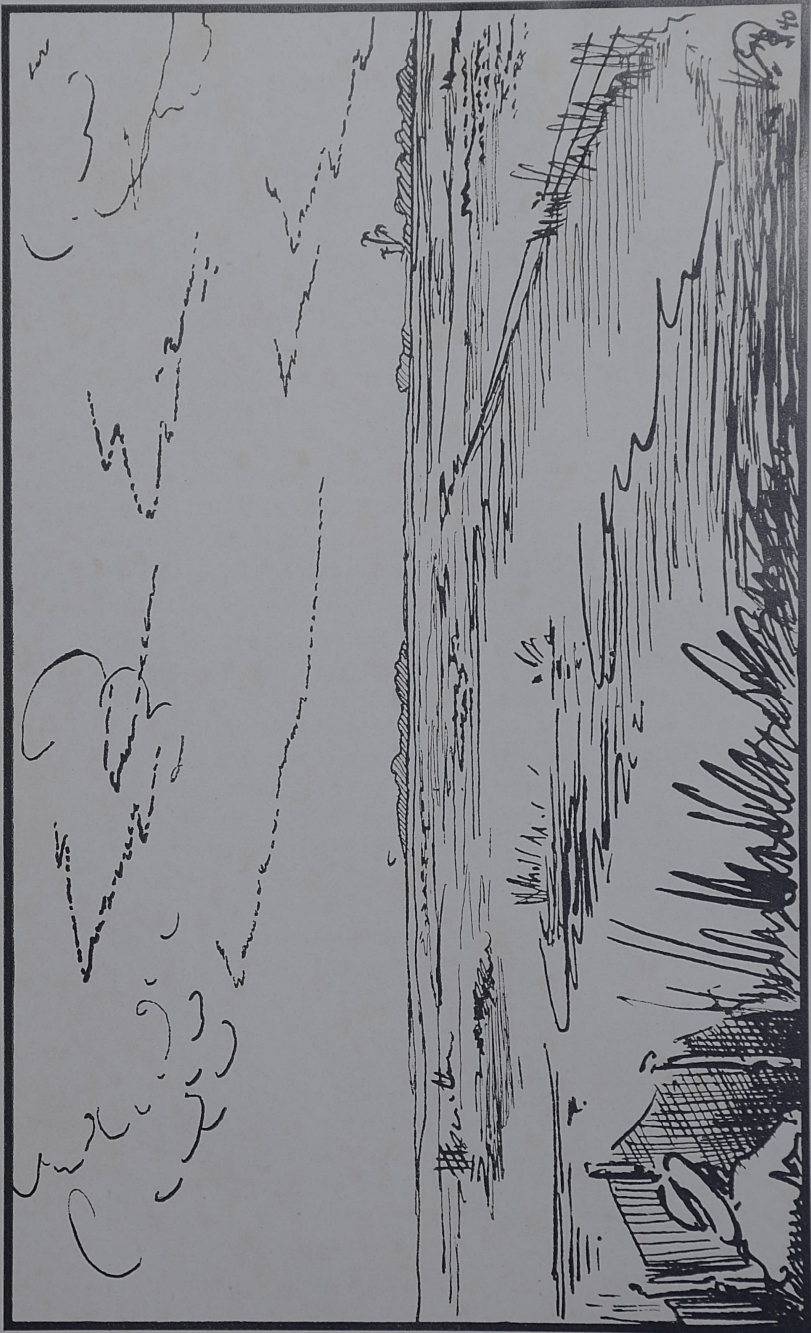
It is a curious fact that the Bar-head and Greylag Goose keep very much to their own territory separated by as much as ten or twelve miles. Various species of duck also are partially migratory, no doubt owing to their shifting food supply, yet some varieties remain in one small area during the whole of their stay. In addition to the vast concourse of duck, innumerable waders in huge flocks fly and whirl round one with spectacular flashes of wings or solidify the shallows with their numbers. Wedges of flamingoes trail

across the sky and flights of pelicans with their heads tucked well back flap overhead. The whistle of wings, the "wheoo" of widgeon, the "houk kerhouk" of geese and calls both known and unknown, the splash of landing duck bring back memories of England and a colder atmosphere and more wintry landscape, while the pastel shades of the sky merging into the mauve of distant palm-capped hills can belong nowhere but to the Orient.

To most sportsmen the sight of thousands of birds brings a certainty of a well-filled bag but alas, many is the time when I have met returning Nimrods with nothing much to show for a long week-end except perhaps a very painfully burned epidermis and bloodshot eyeballs from the reflection off the water. As is the case in most "shikar," it pays to study the "enemy" for as long a period as possible and I have found this axiom has repaid me times out of number at Chilka. Study your morning flight but DO NOT shoot; watch the movement of duck from pack to pack until 11 o'clock, then lie back with an iced Lager in one hand and a book in the other. Between mid-day and two o'clock there is a lull in the movement of all birds and it is about 1 o'clock that one should prepare to take up position for the forerunners and scouts. About three o'clock matters should be moving faster and by 4 o'clock guns should be hot and becoming hotter every minute.

Decoys are unnecessary though they undoubtedly add to the quantity of the bag. Who, however, wishes to add another thirty or forty birds to a bag already containing over fifty? I have on several occasions killed between eighty and one hundred but I found that collecting them, cleaning, tying together and despatching them to the station eight miles away was not worth the trouble and bother involved, apart from the fact that birds shot early arrived in Calcutta slightly high and were refused by my friends on the grounds that a fresh duck cost twelve annas while one of my Chilka duck might cost Rs. 16/- for a visit to the doctor!

Duck at Chilka are continually on the move, for the most part disturbed by fishing boats or the innumerable



The Commencement of the Evening Flight.

raptorial birds which are continually stooping at them. I think it should be possible, in one day out of two, to obtain a hundred or more birds provided Shoveller, Ruddy Shelduck, Teal, etc., were taken and no opportunity refused. There is always an enormous number of Shoveller about and no one can deny that they offer very pretty shots. The next in quantity are Gadwall, then possibly Widgeon, Garganey Teal, Common Teal, White Eye and Common Pochard, Tufted, Spotbill, two kinds of Geese and I forgot to mention the Pintail of which there are always thousands. These latter always come in high, on fast beating wings, but when nearing their feeding grounds their wings beat more and more slowly until they eventually slant direct on to their selected position. Widgeon, on the other hand, come in fast the whole way and circle round at high speed before they settle. Most ducks cease calling just before they settle and, after pitching, appear to indulge in all the scandal which was pent up during their period of silence !

To return to our shooting, it has been my experience that it is invariably better to allow the first few packs to pass without firing, then take the next and following, then again give them a rest. In this way the birds remain within range. If one keeps on banging away, birds get higher and higher and finally change their fighting line. This method pays when a number of guns are shooting a comparatively small "jheel" but it is usually frowned on by one's companions.

As regards accommodation, I have found the pleasantest and most economical method is to make headquarters on one of the local boats some 30 or 35 feet long with a beam of 4 feet. Two boats should be used, the first as sleeping quarters, reading and drawing room and the second as cookhouse and servants' quarters. This mobility of quarters has the advantage over shore quarters of a great saving of valuable time otherwise lost moving from place to place during the night. By anchoring well of shore mosquitoes are avoided but not the ubiquitous green fly. It is a good idea to suspend one's lamps from a pole stuck in the mud some 15

to 20 yards from the boats. If tied sufficiently high there will be no lack of light and one also has the pleasure of observing a large variety of fish, sea snakes and assorted crustaceans coming to the surface. I have beguiled many an evening by catching these visitors in an inverted "morah" slung from the end of a pole.

Before passing on to the question of stores, supplies and armaments, it would be as well to mention, for the benefit of those who have not already suffered, that the Ooriyah, particularly the Chilka Ooriyah, has a world beating snore and it is consequently essential that the cook boat be ordered at least a full half mile downwind of one's bedroom. To the snores are added ear-shattering regurgitations, induced no doubt by a diet of a dozen duck on a stomach brought up on the weaker flesh of fish. However, a nod is as good as a wink, etcetera.

The cost of the boats is Rs. 5/- per day including crew, but a servant should be sent down a day before to remove rotten fish heads from the crevices and have the bottom boards lifted so that the stale water and its odiferous inmates can be baled out.

It is suggested that none of the self-styled local "Shikaris" be taken, at least as "shikaris", but that one should rely on one's own ability, common sense and eyesight. A "shikari's" remuneration is Rs. 2/- per day if there is a bag and gun boys, or human retrievers, -/8/- a piece. At least two of the latter are necessary and the boatmen can usually be induced to lend a hand. Avoid also, like poison, the vicinity of any old hides you may see. It is often possible to have quite good shooting by remaining completely unconcealed. Birds do not appear to shy off a definitely visible object as they do from one partly concealed. It is as well to take with one 5 or 6 yards of 40" wide hessian or gunny—the more ragged and dirty, the better. This can be tied to 4 bamboo poles and is easily transportable. A coating of local green slime and mud will make your hide almost invisible. Two "morahs" are a necessity; one to sit on and the other for cameras and cartridges though I have found it preferable to hang one's cartridge bags on a small tripod of

sticks or on the hidepoles. A floor board from the boat is a great asset and enables one to turn quickly. The mud at Chilka is exceedingly glutinous and when both feet are embedded to over the ankles it is more than annoying not to be able to alter the position of one's feet just as a gaggle of geese appears from behind.

Essential supplies are fresh water and wood, both of which can be obtained on the mainland as can also potatoes, vegetables in season, salt, sugar and kerosene oil, though the quality of the latter is execrable. "Chattis" should be taken to hold the water. A camp bed, though pleasant, is in no way essential as one's bed roll can be spread on two annas worth of paddy straw in the bottom of the boat. A tarpaulin or two is more than useful, both as a carpet and a roof, although the local mat sails afford excellent overhead protection.

The armoury need consist of no more than one 12 bore, chambered for the ordinary $2\frac{1}{2}$ " case, though a 3" chamber is useful on occasions if birds are wild. 200 cartridges per day should be allowed for the size of shot according to individual fancy and the skill of the man behind the gun. It is both cruel and unprofitable to use No. 7 shot unless one is reasonable certain of being able to hold well forward. In addition, a .22 with three or four boxes of cartridges is most useful in stopping cripples before they swim out of range though they are exceedingly difficult to hit when half submerged. A second old 12 bore is useful if one has a trustworthy bearer or shikari as, with a handful of cartridges, he can be sent round to disturb any large packs of duck in the vicinity.

If you are at all keen on fishing, do not forget a hand line and half a dozen hooks. Such morsels as appear unpalatable during dinner can be impaled on a hook and slung overboard with occasionally surprising results.

Ornithologists will find a paradise and Frank Finn's "How to tell the Indian Waders" should most certainly be taken. Unfortunately, I omitted to do this on one occasion and wishing to vary the camp diet, shot a couple of godwit

other is a row of two or three tall slender trees the names of which I am unaware. Most of the specimens seen by me were flying round the tops of this group of trees with their curious jerky characteristic flight and the sun showing up the yellow patches on the hindwings to perfection. They never descended from the trees and never came within reach of the net.

On Birch Hill they fly from about an hour after dawn and were still to be seen up to 11-45 A.M. which was the latest I stayed, though by then they were in smaller numbers. They were in company of many specimens of *Hestina nama*, Db. *Limenitis daraxa*, Db. & Hew.; and *Papilio arcturus* Wd. *arcturus*, besides what looked to be *Zetides cloanthus*, Wd. chasing each other round and round.

As far as Birch Hill is concerned the habits of this species agree with the observations of Elwes in the Transactions of the Entomological Society of London in 1888 where he refers to its habits of resting on high trees and but rarely coming near the ground.

(2) On Tiger Hill, however, its habits agree closely with those recorded in your Journal Vol. XIV No. 4 p. p. 123-124 by Lt. Col. F. M. Bailey. Up to date I have secured 15 specimens of this species there; nearly all of them being in perfect condition; besides others which I succeeded in netting but let go owing to their being damaged.

These 15 specimens were secured out of the many seen there—I give below details of the specimens obtained:—

24th June 1940—Two perfect males out of about eight specimens seen.

29th June, 1940—Five males (two slightly damaged; and one freshly hatched and perfect female besides a number of damaged males; but these latter were liberated. 25 specimens were seen.

16th July 1940—Five perfect males out of 11 specimens seen. No attempts were made to catch damaged specimens.

26th July 1940—One almost perfect male out of 7 specimens seen (Two damaged males released).

7th August 1940—One damaged male specimen caught but released. On this date I saw about a dozen others which did not come within reach. Two badly damaged dead specimens were brought to me on the same day having been caught by a local Gurkha two days previously. I was very annoyed with him and told him not to try and catch any more since he had no net and merely broke the insects to pieces in catching them with his fingers.

22nd August 1940—One male obtained out of six or seven seen.

With regard to the female caught on 29th June 1940 a few remarks are necessary. This specimen was flying in the same locality as the males which contradicts Elwes. I netted it without any difficulty while it was flying. At the time of its appearance the weather was quite foggy and it circled round where I was standing several times in the mist before coming within reach.

The flight of the female is very much slower than that of the male, possibly on account of the heavier and longer wings, but retains the same jerky "flittering" motion of the male. It could only have emerged from the pupa that morning for it was in absolutely perfect condition.

The flight on Tiger Hill lasts from shortly after dawn up till 10 A.M. after which the species retires to the tops of the trees where it settles and remains. If disturbed with a stone thrown into the branches it circles round the tree once or twice and settles once more, remaining there unless disturbed again when the same process is repeated.

The difference in habits of the species observed at Birch Hill and Tiger Hill is in my opinion due to the growth of the trees at the two places. On Tiger Hill the tops of the trees (which have been cut back) are, for the most part, below the level of the top of the hill, whereas at Birch Hill the tops of the trees (which have not been cut back to any great extent) are well above the top of the hill. Where the tops of the trees are above the summit of the hill the species

prefers to remain on the trees to bask in the sun. But where the tops of the trees lie below or on a level with the summit of the hill it will frequently drop to the ground or on to a low bush or fence with the suddenness mentioned by Lt. Col. Bailey and bask with wings out spread. I found on Tiger Hill that it much preferred to bask in this way on any warm flat piece of rock or cement; though I secured one specimen on a corrugated iron roof and several on posts covered with moss and orchids. The orchids were not in flower. One or two I obtained while they flew past me. It is essential for the actual top of the hill to be cleared of all trees leaving only grass and low bushes if this species is to be obtained in any numbers. The best weather in which to obtain it appears to be when there is fog along with bright sunny intervals. A hot sunny morning appears to keep them to the tree tops. I have also caught them while settled on low bushes—a habit also mentioned by Lt. Col. Bailey.

I furthermore confirm his observations that, once the species has settled, it sits very tight like a snipe on a hot day and it is easy to put the net over it without disturbing it. On several occasions I tried experiments with damaged specimens which alighted within reach. It was easy to touch them and on one occasion I lifted up the forewing of one specimen to see if the hindwing was damaged, with the tip of my finger. Finding it was not damaged I secured the specimen with my finger and thumb without tearing or damaging the wings in the slightest.

(3) On 16.8.40 on a somewhat misty morning at 11-10 a.m. I was walking along Auckland Road, Darjeeling about a mile beyond the offices of the Darjeeling Times newspaper in the direction of Ghoom, when I observed, to my astonishment, another female of *imperialis* fluttering round a bush of *Daphne cannabina* Wall. with its usual slow flight. I had my net with me, but unfortunately did not have the handle. The hillside was very steep also, so I could only make an awkward sweep and although I touched it with the edge of the net I failed to secure it

though it was kind enough to give me two further chances before disappearing into the mist! I searched the bush for eggs but found none.

In ending this note I would state that, unless 1940 happens to be a most exceptional year, *imperialis* is not a really rare insect in Darjeeling and its neighbourhood at all; but that its reputation as a rarity has arisen purely from the fact that it is most local in its occurrence and at the same time it is very difficult to catch if its habits are not thoroughly studied. There is, in my opinion, not the slightest fear that this butterfly has a poor chance of survival in and around Darjeeling; since it is too difficult to catch in any but one of its localities near Darjeeling. Furthermore the occurrence of the female on Auckland Road shows, I think, that Elwes is correct in stating that it does not fly in the same locality as the male; but prefers dense jungle where it has every chance of survival and moreover the capture of males will not affect the species since the latter apparently far out number the females. The female has therefore many males from which to find a mate. My capture of a female on Tiger Hill in the same locality as the males is, in my opinion quite an exceptional occurrence.

I have been the only person after this species in Darjeeling so far as I can find out this summer though some body else did try in May but it was apparently too early in the year. Neither have I been able to find any local hunters who have been selling specimens of this species. Its status here therefore seems assured.

R. E. PARSONS, F.R.E.S.

DARJEELING,
2nd September, 1940.

Indian Police.

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