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BENGAL NATURAL HISTORY SOCIETY

EDITED BY

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

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three diagrams, one map and eight
illustrations in the text.*

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An Appeal to all.

This is an urgent appeal to all to help us with articles, and notes, for our Journal. We have almost reached the end of our material and so urge our Members to help us and keep our little Journal from vanishing altogether.

We wish to thank those few, very few unfortunately, who continually help us but it is unfair that the burden, and it is a burden, of keeping the covers apart should fall wholly on their shoulders and those of the Editor.

Most of our members are sportsmen, either fishing or shooting and all must have had some good days sport or interesting experiences and facts worth recording. Also notes on the local fauna and flora of the Districts in which members reside, or papers on any subject in which they specialize will all be most welcome. A fire cannot be kept burning without fuel nor can a Journal, however small, be carried on without material. We will be most grateful to all who take this appeal to heart.

Editor.

For Sale.

We are still booking orders for Shebbeare's and Shaw's "*Fishes of Northern Bengal*" fully illustrated at Rs. 2/- per copy. plus postage, by V. P. P.

We also have for sale copies of "*The Kingfishers of the Darjeeling and Jalpaiguri Districts of Bengal and Sikkim*" neatly bound in red cloth and with gold lettering. All the Kingfishers of those areas are illustrated in 6 coloured and 3 half-tone plates. Price to members Rs. 2/- per copy, plus postage, by V. P. P.

Editor.



ROSTRATULA BENGHALENSIS BENGHALENSIS.

The Painted Snipe.

Female on right. Cock on left.

$\frac{1}{4}$ Nat. Size.

JOURNAL
OF THE
BENGAL NATURAL HISTORY SOCIETY.

Vol. XV.—No. 1.

The Painted Snipe.

Rostratula benghalensis benghalensis (Linn).

By

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

The proper place which this bird should occupy is not very easy to determine. It has been placed with the Snipes, in a separate family. It has affinities with the Sandpipers and may be an aberrant one and it also resembles the Rails very closely. It is quite unlike the Snipes in habits, flight, note and colouration. Its eyes are very large, and expressive, and placed further forward than those of the Snipes also its plumage is softer and more lax. The sexes differ in colour whereas in the Snipes they are the same.

The windpipe in the female is long and looped whereas that of the male is short and straight.

Stuart Baker places it in a separate Sub-Order *Rostratulæ* of the Order *Grallæ* (Rails, Jacanas, Cranes and Bustards). It is placed in a family of its own. *Rostratulidæ*, in which there is only one genus *Rostratula*. There are three species, one each found in South America and Australia, including Tasmania, and our bird which occurs in Africa, Madagascar, India and stretches as far as Japan.

By European sportsmen, in India, it is generally known as the "Painter". The natives of Southern India are said to call it "Peacock Snippet" and it is known as *Ohari* in Nepalese (we have also heard this name used in Bihar), and *Baggarji* in Lower Bengal. When Finn enquired what it was called, in the Calcutta market, he was told "Yih Jack E-shnipe hai, Sahib."

Field identification.—The Painted Snipe is easily recognized by its heavy Rail-like flight and handsome,

distinctive colouration. It frequents, usually, marshy land with plenty of cover.

The Plate shows, sufficiently, the colouration of adults of both sexes. There is an error on the plate so please correct " $\frac{1}{4}$ " to " $\frac{1}{2}$ " *natural size*.

The colour of the bill varies but is, typically, fleshy-brown, greenish at the base. We have, generally, found the bills of the adult females fleshier and those of the males browner in colour; the iris varies from hazel to deep brown. The colour of the legs varies a lot; some are as grey as in the plate, others yellowish or olive-green or just dull, pale green.

The length of the *male* is about 10"; wing 5"; tail $1\frac{1}{2}$ "; bill $1\frac{3}{4}$ "; weight 3.5 to 4.9 ozs., according to Hume.

The *young male* has the throat white, lower throat and fore-neck washed with brown and streaked with that colour.

The *adult female* is larger than the male and, according to Hume, weighs from 4.4 to 6.42 ozs.

Young females, according to Oates, can always be recognized by some white scapular feathers. She soon shows signs of adult plumage but the chestnut is much duller than in the adult.

Nestling "dull grey or buffy-grey with broad coronal and eye-streaks of rich brown; centre of back rich rufous, with broad bands of black on either side and lateral bands of purplish-brown from the wings to the thighs." (*Stuart Baker*).

In a chick, which we procured in Bihar on the 17th May 1923, the bill was brown; iris brown and legs and feet, which seemed much too large for the size of the body, were Hooker's green No. 1.

Distribution:—This beautiful bird has a very wide range. Its distribution, is given, by Stuart Baker as:—"Africa, South of the Sahara to Egypt. Madagascar, Southern Asia to Southern and Central China and Japan; Malay Peninsula to Sumatra, Java, Borneo; the Philippines



Copyright

Corvus leuillanti leuillanti Lesson
The Northern Indian Jungle Crow. *Juvenile*

H. E. Tyndale



Corvus leucillanti Lesson
The Northern Indian Jungle Crow, *Adult*

H. V. O'Donell

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and Formosa. In India, Ceylon and Burma it is found wherever the country is suitable, throughout the plains, and also, in the swamps and lakes of the Himalayas up to some 5,000 ft."

So far as we know it does not ascend the hills in Bengal. Stevens makes no mention of it in his "*Birds of the Sikkim Himalayas*". It ascends the Khasia Hills up to about 5,000 ft. and Major Phythian Adams obtained one at Ootacamund, on the Nilgiris, Woolaston said he fired at one on Mt. Everest at 17,000 ft, but this seems very doubtful. Ludlow, in his "*Birds of Bhutan*" thinks it may have been a Wood-Snipe.

Habits etc. :—The Painted Snipe can hardly be called a migrant, although it may be absent from a part of its haunts during a portion of the year. That this should be so is only natural seeing it requires marshy ground and when this dries up it moves to more suitable quarters.

They delight in soft, marshy ground, old river beds and streams with plenty of cover. Water and good cover are their principal needs, but they may be found where there is no cover at all as the late H. A. Hole and Stuart Baker found birds, in Cachar, on newly ploughed fields on which there was no vegetation at all or water either, except in the ditches. In flooded land they seem to prefer the drier portions. They have a predeliction for certain spots and are very tenacious of these, returning to them again and again even when harassed by the sportsman and their number depleted. They should, however, never be shot as they are neither sporting birds nor good to eat. In their favourite spots they are very tame, sometimes, rising at one's very feet, but when found on more open ground they, often, get up at a distance.

They are found in pairs, or small parties of 10 or 12, males predominating; sometimes they are found in greater numbers. Stuart Baker says in the Sunderbans "some thirty to forty birds may be seen in a days trudge."

They are excellent walkers and when walking, at their ease, the feathers over the eye are raised to above the level of the crown; according to Finn "the bird looks tall and

graceful and moves its hindquarters up and down like some Sandpipers but much more slowly." On being disturbed they behave very like Rails creeping into the vegetation with lowered head. Hume said that they are fond of "running along the small turf-clothed ridges dividing paddy fields, and that many are snared in horse-hair nooses on these." They can both swim and dive and are great skulkers though less so than many Rails.

Their flight is slow, heavy and low, with irregular flappings, and they seldom fly far but drop into cover and run. Hume remarked that if they drop into a small patch of cover they will be found where they dropped but of into a larger one they may travel as far as 50 yards before being flushed a second time. He also observed that if only touched up with a shot or two "they, sometimes, give a little shoot into the air, and put on a spurt, carrying them double the distance they usually go." Their flight much resembles that of the Rails, especially in the way they hang their legs at the start, these are only raised after going a short distance.

The females have a challenge call which resembles the sound produced by blowing into a bottle. They, also, utter, while displaying, a hissing note which Finn describes as like a hot iron plunged into water. The male is said to jerk out a sharp squeak at irregular intervals and there is, also, a low, rich, purring note used by both sexes.

The Painted Snipe is, almost, omnivorous, its food consisting of insects, tiny crustacea, worms, grubs and caterpillars, also crickets and grasshoppers which Stuart Baker says are much sought after. Besides this animal food they also partake of vegetable matter, leaves, shoots, grass seeds and grain. They are crepuscular in habits feeding in the early mornings and evenings and also, probably, at night. They spend the hottest hours of the day in the vegetation.

These birds breed all the year round but most eggs are to be found from June to September, that being the period when their haunts and food, are at their best.

The females challenge each other, during the breeding season, using that note already described, and fight, furiously, for the males. She, also, displays her beautiful plumage, crouching on the ground, bill upraised, and wings, and tail, expanded to their fullest extent like a fan over her back, thus showing off their beautiful markings and uttering that hissing note already mentioned. This display is, also, used to intimidate an enemy. Finn saw a Golden Plover and a Bantam hen frightened by it and knew of one escaping death when some other birds, in an aviary, were killed by a rat.

Stuart Baker says, "The female is polyandrous, pugnacious, an unpleasant wife and a mother who, entirely, neglects all her duties." This is very true and her role, in life, is to attract, to herself, husbands, even to the extent of fighting for them, and laying the eggs. She does not even appear to go to the trouble of helping to make the nest. Stuart Baker also remarks that she "probably limits her husbands to the number of clutches of eggs she can produce for them to hatch. Upon him falls the task of bringing up the young, this isn't an ideal married life." The Bustard Quails have, also, the same habits, the males being degenerates and the females dominant and truculent.

The situations in which nests may be found are various. Stuart Baker, in his "*Nidification of Birds in the Indian Empire*", (Vol. IV, page 324) mentions many of these isolated pools, with a few sedges and a sheltering bush or two or an islet, above flood level, situated in the middle of a vast area of water, and jungle, stretching for miles all round; in a dense cane-brake bordering swamps far away from civilization and also in a ditch, in the station of Silchar, only 30 yards from the nearest house; under the protection of a big clod in a bare, recently ploughed, field. Butler found them amongst the grass on the raised divisions between paddy fields and Livesey on floating weeds on a lake in the Shan States.

The nest is composed of weeds, rushes, paddy straw etc. formed into a fairly, compact pad but it may be cup-shaped if placed in a hollow. The nests measure about 6 inches in diameter and from 1 to 3 inches in depth.

The normal full clutch of eggs is 4 but, very occasionally, 3 or 5 have been taken. They are, in shape, moderately broad ovals, not as pinched out at the thin end as those of the Common Snipe. The shell is hard and close in texture but with little gloss; the ground colour is yellowish-stone or rich buff and covered with blotches, spots, streaks and twisted lines either black or deep sienna-brown in colour. They average, in size, 1.40 by 0.99 inches.

Finn kept many of these birds in captivity but didn't find them very lovable pets. He kept a young bird until fully fledged but it didn't respond any more to care than old ones. Three specimens he sent to the London Zoo arrived safely. He found the Painted Snipe never bored for its food like the Snipes but searched for it both in water, and sand, after the manner of a Spoon bill. Paddy, and canary-seed, were readily eaten; the former by preference but the latter was better assimilated. It also devours maggots but though worms form a part of its natural food, in captivity they weren't cared for.

He didn't find them difficult to keep, the only trouble was that they would fly against the netting and abrade their bills. He wrote:—"If kept in a cage with upright bars it is certain to hurt itself, but in a hutch with netted front, or a good sized aviary, it will do well, and some have survived for a year at the Calcutta Zoological Gardens, though several succumbed after this on getting access to unsoaked grain."

From an edible point of view the Painted Snipe is not one which an epicure would choose. It is very inferior for the table, often having a muddy taste, and, wholly, lacks the delicious flavour of the Snipes. On the table it may easily be recognized by its bill being slightly curved towards the end, which is not the case in the Snipes, and, also, by the absence of pits which are so noticeable in the dry bill of a Snipe.

The Northern Indian Jungle-Crow *Corvus leuillanti*
leuillanti Lesson. This is a Crow of the plains. An
article on this species appeared in Vol. VI p. 49 of our
Journal.

These photographs will help to illustrate it. The
excellent one of the young bird was taken by Mr. H. E.
Tyndale and that of the adult by the late Mr. H. V. O'Donel.

Editor.

The Woodcock (*Scolopax r. rusticola*, Linn) in the
Duars.

Records of the Woodcock in the plains are, always, of interest. Although the Duars lie along the base of the hills Woodcock are rarer than one would expect; few, apparently, visiting this District during the winter.

The only records I know of are:—The late Mr. R. S. Hutchinson, when D. I. G. of Police, Jalpaiguri recorded ten birds put up in a Tiger beat at Gorumara in the Tondu Forest, on the 11th and 12th April 1920, a rather late date for them to be still in the plains. Travers saw one and Whitmore shot one in the Nagrakata District.

In recent years the only records I know of are one shot near a stream in the Moraghat Forest on the 31st March 1928 and another, one of two, shot in a damp spot, near the same stream, on the 22nd January 1939. These were both shot by our Museum collector.

I would be glad to have any other records; there are none from the Eastern Duars.

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

DARJEELING,
1st July 1939.

My Adventure with a Tigress

By

A. V. PULLAN

On Saturday January 28th 1939 some unknown person, using a .12 bore and slugs, fired at, and wounded, a tigress near the tea garden of which I was Manager.

My first intimation was an urgent note, on the Monday, from the Manager of a neighbouring Indian garden telling me the foregoing, and adding that one of a party of coolies, sent out to bring in the, presumably, dead tigress, had been mauled and had since succumbed to his injuries. Please would I go and destroy the tigress?

It was after mid-day when the two elephants I was able to borrow arrived on the scene, and as nobody with a gun was willing to ride on the second elephant I put up my car boy on the pad as a passenger. A coolie who thought he could locate the tigress came on the pad with me.

After searching the scrub jungle for some considerable time the tigress suddenly appeared with a roar which put both the elephants to flight. My elephant bolted for some distance with the tigress galloping alongside just below me, but, with my very wide experience and knowledge of both elephants and carnivora, I concentrated on hanging on to the ropes rather than firing and risking a fall and thereby emulating the young lady of Riga.

It is not easy to say with any precision what really happened next, but I believe that the elephant turned with the idea of crushing the tigress with her head, or of kneeling on her. However, turn very sharply she did and came down, although at this stage she had not rolled completely over on her side, and I was still astride the pad behind the mahout.

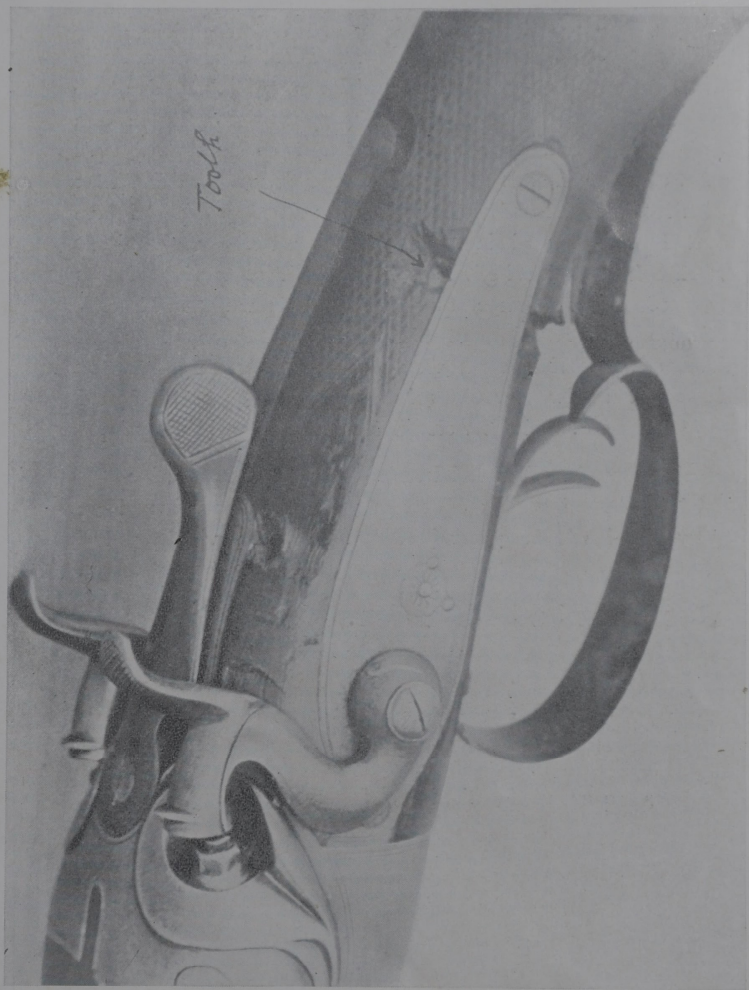
This brought me more or less level with the tigress which caught hold of my right foot and bit through it. This was very painful indeed, and I thrust at it with my rifle, a .470 which she grabbed. Both barrels went off and my impression was that I had instinctively fired, but later events proved, as the accompanying photographs show, that



The Tigress shot after being wounded for four days.



Damage to trigger-guard of rifle.



The rifle showing broken tooth.

the tigress had released my foot and seized the rifle by the small of the butt in her mouth, twisting the trigger guard, and releasing both hammers. The force of this explosion and the strength of her bite was sufficient to break off one of her canine teeth which can be seen in the stock just by the lock, and I believe that it is to the concussion caused by this explosion that I, eventually, owed my life.

In the meanwhile the elephant had come right down on its side, throwing the mahout, the coolie and myself on to the ground round the tigress, which again seized me, by the left leg this time and which it chewed up badly, biting right through the shin bone. Strangely enough I felt little of this compared with the pain of the first biting of my right foot.

These events, and those of the next few seconds, happened so rapidly that what follows must be largely conjecture.

While I was being mauled the mahout managed to climb a small tree, and the coolie escaped to safety. The elephant must have knocked the tigress off me, and, in doing so or in getting up, have trodden on my right arm causing compound fractures above the wrist, and adding no little to my disabilities.

When the elephant moved off I found the tigress standing snarling at me about 25 yards away, and the mahout perched in a tree above. I called to the mahout for help but his position was not much better than mine and there was little he could do. I felt quite certain that my first movement would bring the tigress on top of me again to give me the quietus, but equally well I realised that if I remained where I lay I should quickly bleed to death. My mind was painfully clear at this period and all the time I crawled slowly away, with my left leg dragging from the knee and my right arm useless, I expected to find myself seized again. The mahout, from his tree, kept telling me to move slowly and directed me to where we thought help should be; all this time we both kept calling for the second elephant to be

brought up. The tigress made no further move to attack me, and must, I think, have been dazed by the shock of having a double '470 go off in its mouth.

After dragging myself 40 or 50 yards the second elephant was manoeuvred alongside and I was dragged up on to the pad. By now I had practically no sense of pain and actually felt very pleased with myself on having, as I thought, got off so lightly. I was very lucky in that I retained full consciousness the whole time as I had to take complete charge of all operations after the accident, both in the jungle and after I was deposited in my car. I had myself driven to the bungalow of the local Medical Officer, who did heroic work in patching up a nasty mess. It was too late to catch that day's train to Calcutta and, on the suggestion of the Medical Officer, I was driven to the Civil Hospital at Jalpaiguri, 100 miles distant, where the next day my left leg was amputated below the knee.

It is interesting to note that I felt little pain until about an hour after the mauling, apart from the pain of the initial biting of my right foot. The jarring of the lorry was, however, very painful.

The tigress was destroyed the following day by a party lead by the Divisional Forest Officer.

The mahaut who was responsible for my rescue was later awarded the Medal of the Order of the British Empire and a reward of Rs. 100/-.

The tigress measured 8 ft. 6 inches, between pegs.

A Birds-Eye View of a Goose Shoot.

"Write a story from the guests point of view" said mine host of the Goose Shoots., and so here it is.

The Cold Weather descends upon Behar in October and it is then we begin to get anxious. Admittedly there is no shooting of geese until January and plenty of game to be had in the meantime, duck of endless varieties, snipe, quail and partridge, but during the next few months there is a subconscious wondering "shall we get an invite this year to shoot geese across the river". Just because we never have been left out, or the fact that the host is the most fair and indiscriminating creature that ever was, this does not dispel the uncertain feeling that perhaps by some unhappy fluke this season our names will not appear on the list of those invited. Despite the none too happy times that appear ahead of the Sugar Planter and the consequently decreasing European population, when one tots up the number of enthusiasts in the district to be fitted into the 3 or 4 shoots of the Season one grows gloomier and gloomier (a second Eye-ore in fact) at the alarming proportions that the list rises to.

However, on a day unexpectedly, as come most good things, there's a card, letter or wire, no matter which, with the blessed invite. Terse, yet a mine of information. "Goose Shoot on such and such a date. Can fit you into Camp if don't mind sharing tent with two to three others. Bring bedding, mosquito nets and camp bed. 700 geese feeding, should get bag of 60 to 100". Do we mind? The evening before the chosen date we pack ourselves into the car (Skipper himself never wasted less space than we do). Driver, bearer, guns, rolls of bedding, suitcases and hurricane lamps, together with a basket of fruit, bread and vegetables to help swell the camp Commisariat, and off we go. But wait—there is a shriek from down the drive as the Khansammah comes hurtling after us with two morahs, precious articles which must accompany us whatever else we leave behind.

Twenty to thirty miles is generally the distance to Camp, but the roads are bad at that time of the year thanks to the Cane traffic, and we have plenty of time in which to speculate on the chances of good sport on the morrow. We eventually spy the camp pitched under a huge mango orchard and on arriving find there is a ring of tents, sleeping one, kitchens, servants quarters etc. and in the centre a dining or living tent, from the inside of which issue strains of music. Civilization has gate-crashed even into this sylvan retreat and that banshee wail so peculiar to wireless bursts forth as our host, on hearing our car's approach, turns off the set and comes out to greet us. Although in camp, we sit down to a full course dinner, the only concession being that we waive the dressing problem. There are twelve to fifteen of us, and the talk is rapid and piercing. Our host (who from henceforth must be known as Ferrers) was born with what one might term "an accommodating voice" for no matter how loud the din he can always rise above it. Soon we give up the unequal struggle to make ourselves heard and find ourselves listening to a discourse on the do's and don'ts for the next day. Yearly we have these injunctions and yearly we listen to them meekly. "Don't make a noise, don't smoke (a rule I fear that we all break quite nonchalantly), don't stick your heads above the butt, or move a quarter of an inch when the geese are coming over (though how one is to raise a gun in this fashion always defeats me), and only fire at those birds directly over your own butt, and for the love of Mike don't anyone fire until I have let off the first shot." Needless to remark Ferrers is not allowed to get this all off in one breath for there are facetious as well as well-intentioned queries thrown at him. "May we cough? Supposing the geese fly over the next butt to me and the occupant is asleep? May we shoot? De we fire in the centre of the flight or ahead?"

It is a hilarious meal, not so much because there is anything extraordinary about shooting a few geese, but our host's schoolboyish enthusiasm grips us all. After dinner the guns draw for their places in the butts. These

are in a circle with 30 to 40 yards distance between each butt, inside which ring for the past month Ferrers has been scattering food daily, making it a veritable feeding ground for the geese. On the face of it, it would seem that it does not really matter much whether one draws No. 2 or No. 8 butt, but it definitely does, for this determines at which particular point of the compass one will be facing. For weeks the birds may have been fighting in from one direction only, say the north, and it will be the northern butt that will get the most shooting—perhaps! Even geese have their little idiosyncrasies, and it is ten to one that having drawn the northern butt and feeling rather cock-a-hoop about it you will find that for some inexplicable reason, known only to the geese themselves, that on the appointed day they will come in from the south, east or west. Truly this might be the origin of the expression “silly Goose”.

We retire to bed immediately after dinner, and as promptly get up again! In fact it seems that hardly has one scrambled under the mosquito net before the pestering voice of the Bearer is saying “Hazoor, Hazoor” and there is a clink of china announcing the arrival of the morning tea as he places it on the table beside the bed. Can it really be 2-30 a.m. already? Any doubts are immediately dispelled by the horribly cheerful and wide-awake shouting of Ferrers outside each tent, insisting that we show a leg. His wife having been out before him to wake the servants. Sleepily we rise and clad ourselves in an unusual amount of garments, for their’s a sharp frost outside that penetrates even the stoutest breeches, pullovers and coats that we struggle into, and crossing the river will be a colder affair still. If one wasn’t in quite such a comatose state one would pause to marvel at the servants, for not only is the washing water hot, but there in the dining tent is breakfast waiting, complete with toast, porridge, sausages and coffee. It is not everyone who can face a breakfast at this hour of the morning, but the thought of the long gap till lunch-time spurs us on, and our host in the meantime hurries us all, pressing marmalade on us before we have tackled the sausages. “Musn’t be late—ruin the whole show—must be

in our butts before dawn" he babbles on, and at last has us martialled (some still chewing an apple) into our respective cars. Like a long procession of grey ghosts we leave camp, following Ferrers who leads the way in the first car. Strangely empty the roads are, no hoards of naked children rolling in the dust as we pass through the silent villages, no goats and their tethering ropes blocking our way, or village dogs bounding after us, only a large Brahmany bull watches us from the cart-leek. Perhaps he knows the context to "Mad dogs and Englishmen...", but this moonlight flitting is quite beyond his powers of comprehension. After a matter of 8 miles or so the first car abruptly turns to the right and when it is our turn to come to the corner we find a chuprassi standing with a lantern and arm outstretched pointing the way across what looks like trackless sandy wastes. Once again we pay homage to the forethought of Ferrers for the "road" is demarcated by small sticks of bamboo from which flutter little paper flags, all rather reminiscent of the village fete at home where such objects protect the vicar's precious croquet lawn. Across the uneven sand we bump for a mile or so, when suddenly there is a halt, for straight ahead of our front wheel is a drop, and the other cars have parted to left and right at the river's edge, and are disgorging their occupants. Joining another party who have arrived from a neighbouring planter's bungalow, we gather together on the bank of the river, the Gundak (probably the largest and most truculent tributary of the Gangees). Collecting our paraphernalia from the cars we hand them over to waiting coolies who pile the morahs into the four or five little country boats moored alongside the brink of the water.

Here I must digress for a moment on the "morah"—for no shoot in India is complete without this cane stool-cum-basket contraption. Made by the Domes for eight annas each their utility resources are legion. The baby begins his first footsteps by perilously pushing it along the verandah. Grandfather gingerly lowers himself on to it in his bathroom and with a sigh of relief is now able to dry his toes, whilst Mother drapes it in cretonne to match her dressing

room curtains, and perched upon it before her mirror applies the many unguents necessary to combat the ravages caused by the Eastern sun. But it is Father who really brings the morah into its own, for to him it is an indispensable as all his other shikar accoutrements. Ere leaving camp it is packed with everything needed for the day, boxes of cartridges, cartridge belt, cigarettes or tobacco, a rug, topee and flasks.

It would seem that the business of getting to the shooting ground is a protracted one, and so it is, but probably the more enjoyable in consequence, I am not certain that the next stage in the journey is not the better part of the whole shikar bundobust. There is something bordering on the fantastic about crossing a wide river in the night, whether in bright moonlight when the opposite bank can just be discerned, or when the moon is illusive and prevaratory and the only clue to the direction to be taken is a tiny signal light twinkling across the water. This point we have to reach after humouring the river and its many currents and by making detours round the sand banks amid-stream. Ferrers directs us to our various boats and we step in them to find that these long, wide, but low and flat bottomed dingies are strewn with straw for our special comfort, and four or five of us stretch ourselves out whilst perhaps the last and not so fortunate man sits huddled with his nose on a level with his knees. The morahs are packed in the bows and when the Mallah (fisherman) has received a signal from the man with the light on the opposite bank he stands in the stern and with a long bamboo pole punts us across the river. When it is particularly cold Ferrers has a soft heart for the females of the party and has a chatai (or grass mat) fixed in a semi-circle over the centre of the boat which in the faint light gives the appearance of a gondola with a lantern tied as its riding light. Personally I prefer not to be under cover, but to lie and watch the stars or the out line of the other boats as we glide past each other, and to listen to the bamboo dipping and swishing in the water. All too soon it is over, a mere twenty minutes or so, but sometimes

more and sometimes less according to the mood of the river. So we come to the sandy bank once more and find another batch of waiting coolies who take care of our luggage. We take one last hasty look to see that nothing has been left behind, and in twos or threes, or single file we silently walk over the sand for a quarter of a mile or so until at last we come to the "magic circle".

We know the position of our own particular butt and quietly make our way to it, but to the uninitiated this is not so easy for to them there seems a limitless range of sand intercepted at strangely regular intervals, in the formation of a ring, by little clumps of jhowa (the shrub that grows like tamarisk amongst the English sand-dunes). Inspecting these more closely it is soon perceived that there is a hole in the centre of the greenery and that the jhowa is just a camouflage around the butts. Dug in the sand to a depth of 4 feet, with a 6 ft. diameter, this hole is to be our abode for the next five or six hours. It is by now 4-30 a.m. and necessary for us to hurry. We find a bamboo ladder in the pit and descend. Although the sides of the pit are damp sand it is pleasant to find that at the bottom a board surrounded by straw has been placed, thus making a hard but dry flooring. Carefully the coolie hands us down the precious morah and the guns are propped up against the side with a cloth over the end of the barrels to keep out the ever shifting sand. We unpack the morah, spreading the rug over the boarding, fill the cartridge belt and place spares in the cartridge bag and also see that it is in just the right spot where it can be reached immediately. Then, with a final peep out through the barricade to see the position of the other butts, we settle down to wait, the morah now turned on its side and used as a back rest. Invariably at this juncture Ferrers comes along with last minute queries or instructions rather like an A. R. P. Warden inspecting his outposts. "A good butt you've got my boy—you'll get all the shooting" and he dashes off around the circle encouraging and admonishing in a hoarse whisper loud enough to disturb the dead.

Sometimes there is only half an hour's wait before, from afar off, there comes the "honk-honk" of the geese as they approach, but at other times one just waits and listens whilst nothing happens for an age and one unwittingly dozes only to be rudely wakened by a mighty rush of wings; and the first flight is above us like a bolt from the sky. Once, when nodding quite peacefully, Ferrer's first opening shot shattered my dreams and before I could move from my recumbent position my husband's foot was firmly planted on my chest and I lay squirming on the floor whilst he took aim at the now scattering geese as they flew out of the ring in all directions. However, I do not often transgress in this manner for that first flight is too wonderful a sight to miss. The birds come sweeping in a hundred or so at a time, their huge wings expanded, and after circling once or twice over the feeding ground they hover with softly fluttering wings like a host of angels. If only one could cry out and warn them of the danger that is threatening, for they look so beautiful and unsuspecting, and I invariably close my eyes as the first gun barks out and is closely followed up by all the others in the circle. This sentimental moment passes and as the geese redress their scattered ranks and fly away to north and south I peer out as excitedly as the rest of us to see how many of the mighty have fallen. Two, Four, Six perhaps, they lie dotted around like large shapeless blobs, very white and still in the moonlight. Ferrer is now out of his butt in a trice, crouching low and collecting, and then placing them in a more realistic position in the centre of the food belt with the hope that the next batch will surmise that the vanguard flight are peacefully feeding and that all is well. Is a goose so easily duped? After all his sight is remarkable, he spots the slightest movement in a butt, the smoke of a cigarette or the glint on a gun barrel, so why should he be so foolishly taken in, and not imagine that these brothers lying quite lifeless with their beaks dug into the sand are anything but decoys?

The following moments are quite tense ones for the second flight generally follows quickly on the first, smaller

in number, perhaps thirty to forty only. Each subsequent flight drops proportionately until finally the stragglers come in, either single or in twos and threes, by which time the sun has taken a firm hold in the sky and by 9-30 a.m. to all intents and purposes the shooting is over. One of the redeeming features of goose shooting is that rarely a wounded bird gets away, he is as large enough target for a second shot once on terra-firma (though not an easy one when in mid-air due to the speed and height at which he flies) also there is no cover on the sand for him to hide under as does the wily partridge once he is disturbed. About 7 a.m. Ferrers will make a round of the butts bringing hot tea and sandwiches, and how welcome they are! It is no uncommon sight between one butt and another to see him drop on all fours, drink and food abandoned, as he yells "look out—coming in from the east". Feverishly we swallow the mouthful of sandwich and for a blank moment wonder which is the East after all this while; having been in a circular hole for the best part of two hours all bump of direction has quite deserted us and with the radius of vision so limited it is generally from pure luck, and guided by the sound of their approach, that we are in time to locate their direction when within range. Even then we do not always hear the lone silent bird and not until we hear Ferrer's anguished appeal "Fire, you idiot, fire" do we realize that there is something to fire at. Amazing but undeniably true it is that though the geese appear to intercept our slightest whisper, they take no notice whatsoever of Ferrer's penetrating voice or his prone position midway between the butts. Nor do they heed the intermittent yells of "No 3, you are firing low" or "No. 6. don't bag No. 7's birds".

It requires a poet to describe the loveliness of the dawn as it spreads towards us from across the river, and even the less impressionable of us welcome the approach of the sun and a little warmth. The flights get less frequent and enthusiasm diminishes a little as we become conscious of being cramped in such confined quarters. We count the dead lying around, twenty, thirty, forty perhaps, and that odd

one just behind our butt which fell with such a terrific thud. It would be no picnic to be struck by a falling goose for they weigh at least 5 lbs each. We may not have beaten the record this time but the shooting has been good and the bag is not one of which to be ashamed. One or two of us heave ourselves out of our dug-outs and stroll over to visit the less energetic, exchanging cigarettes and chaff. Called sharply to order by Ferrers we scramble back to our butts just as a pair of geese come into sight over the horizon, but they pass up the river well out of range. Rather reluctantly Ferrers gives the order "all clear", for he knows we are hungry and perhaps getting a trifle out of control. Like rabbits from our burrows we emerge to level ground and in the glaring sunshine contemplate the results of the SHOOTING. Some of us have cameras with us and snaps are taken of the bag; the guns and the bag; the female element and the bag; and finally the total number of men, women and geese, and these snaps are creditable additions to our collection of shikar records. We exchange our heavy coats for topees and glare glasses and make our way back to the boats, arguing as we go as to who had bagged whose bird and so forth, whilst with guns still handy the men pot at *chakwas*, as they range up and down the river, so that the coolies and mallahs may have a titbit from the day's spoils. Miles away there is a speck in the sky and nearly upsetting the boat with excitement Ferrers shouts "There goes a sheldrake".....and although we dispute the fact we really honour his knowledge, there being no feathered creature in Behar that he cannot name, or quote its habits and haunts.

By 11-30 a.m. we are back at Camp, hot, dishevelled and triumphant, and we gather in the dining tent ready to do justice to the first goose shot, for this had been early despatched by our host, by coolie, to be cleaned and roasted, and to await our return. I think there is no game to touch goose cooked before it has had time to turn cold (once cold of course it must hang as long as the weather permits)—and we tackle it with great relish. Nothing will hurry or perturb us now for we have earned our lunch, not even

Ferrer's reiteration "Hurry now or we will miss all the duck" has any effect, though we know by this he has bundobusted a duck shoot for us in the late afternoon on a nearby jheel. But that is another story.

M. E.

The Cicadas of Northern Bengal and Sikkim.

By

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PART II.

(Continued from Vol XIII P. 165)

In my last paper dealing with these insects, I proposed to describe individual species as I received them from collectors in the district, and since then a small, but very representative collection, has been sent to me by Mr. Oscar Lindgren to whom I, and the readers of this Journal, are duly grateful.

It is the ten species and nine genera which compose this collection which form the subject of the present paper.

Genus *Pyena* Amy and Serv.

Pyena.—Amy and Serv., 1843, Hem., 463. Distant, 1904, Ann. Mag. Nat. Hist. (7) 14: 298. Genotype—*P. strix* Brulle (Madagascar.)

Forewing with eight marginal cells, largely opaque but with some hyaline areas in the outer half; costa markedly arched near its base where it is dilated as a membrane; hindwings opaque save the extreme margins; head not produced but truncate in front, considerably less wide than prothorax; abdomen very short, conical. The genus is closely allied to *Platypheura*, a much more dominant genus, from which it is distinguished by its narrower head and the

marked arching of the base of costa. Only a single species is found within Indian limits.

Pyena repanda (Linn). (Fig. 1)



Pyena repanda (Linn).
(Fig. 1.)

Cicada repanda Linn, 1767,
Syst. Nat. : 2 : 707, 17 ; Oliv.,
1790, Enc. Meth. 5 : 754 ;
Germ. 1830, Ent. Arch. 11,
2 : 2.

Tettigonia repanda Fabr.
1781, Sp. Ins. 2 : 321, 16.

Platypleura repanda : Atkins, 1886, J. Asia. Soc.
Bengal, 55 : 150 ; Dist. 1889, Mon. Orient. Cicad. 19, pl. 1,
f. 7, a, b. ; Id. 1906, Fauna Br. India, Rhynchota, 3 : 71.

Platypleura phalaenoides Walker, 1850, List Hom.
1 : 4 ; Atkins, 1885, l.c. 53 : 211.

Platypleura interna Walker, 1852, l.c. 4 : 1119.

Pyena repanda Dist., 1906, Fauna Br. India, 3 :
71, f. 36.

Expanse of wings 68-78 mm. Length of body 21-23 mm,
breadth 12 mm.

General colour olivaceous green or ochreous marked with black. Head striated with black in front, with a transverse black fascia and some small spots above ; prothorax with a narrow medial line and three sinuous fine lateral lines on dorsum, the former expanded behind but stopping short of the posterior margin ; thorax with a three limbed spot on middle of dorsum, two subrounded spots and two long tongue-shaped spots on their outer side on anterior margin, finally a lateral and a posterior black streak. Abdomen black coated sparsely with short golden hairs and with the segments margined posteriorly with ochreous. Forewings olivaceous green along costa and at base, traversed by a very broad black irregular fascia which has an anterior, two medial and a posterior hyaline spot on it, the inner one very minute ; outer half of wings hyaline with a

transverse black or dark brown fascia extending from costal margin into the fifth marginal cell, and beyond this a triple row of similar coloured spots, the inner three anterior ones of which are much larger than the rest. Hindwings rich ochreous with a broad black margin with sinuous inner border, but greatly constricted at the level of vein Cuii. The outer margin hyaline, uncoloured. Sexes similar and only distinguished by the presence of the opercula in the male and genitalia of female. Opercula broadly semilunar, overlapping medially and short, black narrowly margined with ochreous. Legs pale castaneous.

Distribution: Kashmir, N. Bengal and Sikkim, Assam and Burma. There is a single male specimen in Mr. Lindgren's collection. When at rest on the trunks of trees, this species best exhibits its cryptic colouring, the olive green and darker brown and black markings blending with the lichen-coated tree trunk. The species usually occurs in big colonies, so that it is quite easy to obtain a large series should one come on such a colony. A small series which I possess from Kashmir have the black margin of the hindwing conspicuously cut up by the traversing veins which are bright ochreous; in the Kalimpong specimens this area is black and very finely veined with ochreous.

Genus *Cryptotympana* Stal.

Cryptotympana Stal. 1861, Ann. Soc. Ent. France, 613; Id. 1866, Hem. Africa 4: 6; Distant, 1891, Mon. Orient. Cicadas, 83; Id. 1906, Fauna of British India, Rhynchota, 2; 80.

Genotype: *C. pustulata* Fabr. (Malaysia and E. Asia.) Head very broad, as wide as any part of body, transversely truncate between the eyes, the front but slightly produced; ocelli twice as far from each other as from the eyes; prothorax about as long as thorax, its sides rather oblique, its posterior border sinuous; abdomen conical, about as long as thorax and head together. Opercula well developed, variable in size and shape. Forewings hyaline or semi-opaque at

base, with eight marginal cells, costa evenly and broadly convex, not expanded as a membrane at base.

Cryptotympana corvus Walker. (Fig. 2 and 2a.)



Cryptotympana corvus Walker. (Fig. 2 and 2a.)

Fidicina corvus Walker, 1850, List. Hem. 1: 86;
Atkins, 1885, J. Asia. Soc. Bengal, 53: 231.

Cryptotympanum corvus: Stal., 1862, Ofv. Vet-Ak.
Fork, 483; Distant 1891, Mon. Cicad. 87, pl. 10, f. 11a, b.

Fidicina invarians Walker, 1858, Ins. Saund. Hem. 11.

Cryptotympana corvus Dist., 1906, Fauna Br. India,
3: 81, f. 41.

Expanse of wings 117-130. Length of body 45-47 mm.

General colouration glossy black; a chain of five large ochraceous spots on front of head, four obscure spots of the same colour on dorsum of prothorax and two other rounded spots on margins of dorsum of thorax. A small area on each side of prothorax, two on anterior margin of dorsum of thorax and the two spots at sides of thorax coated with short golden hairs. A chain of spots on the mid line of dorsum of abdomen, the sides and whole of underside of same coated thickly with the same short golden hairs. The femora beneath, a medial spot on middle tibiae and the whole of hind tibiae and tarsi ochreous. Fore and hind-wings hyaline but bases of both broadly black with a bordering suffusion of amber tinting. Hyaline areas faintly striated with greyish. Basal half of subcosta and Radius

bright ochreous, rest of venation black. Opercula elongately triangular, with straight outer edge and strongly bevelled inner, bright ochreous with blackish base.

Distribution : Bengal, Sikkim, Assam and the Western Ghats. A single female of this magnificent species is contained in Mr. Lindgren's collection. I have never succeeded in taking it myself although I have frequently heard its raucous clanging song in Coorg and once found the empty larval case (exuvium) clinging to the trunk of a tree. Unlike all other larvæ I know of, which are uniformly yellowish in colour, this species is broadly marked and banded with black and is a very striking and enormous larva. When first emerging, the imago shows a greater extent of ochreous markings but these are quickly obscured with age. The species is easily determined from all others by its general glossy black colouring and enormous size. The only species larger than it is *Toxaena melanoptera* and its relations, which however have the wings all black traversed by a medial band of white, etc.

Genus *Haphsa* Distant.

Haphsa Dist., 1905, Ann. Mag. Nat. Hist. (7) 15 : 64 ;
Id, 1906, Fauna Br. India. 3 : 99.

Head about as broad as thorax, triangular as seen from above and with the eyes projecting very prominently ; prothorax shorter but slightly wider than thorax and with the lateral margins oblique and furnished with a small spine ; abdomen about as long as head and thorax taken together ; opercula broadly oval, rather more than half the length of abdomen, bluntly rounded at apex ; tympanal flaps covering tympanum ; wings hyaline, with eight marginal cells.

Only a single species is found within our limits.

Haphsa nicomache Walker. (Fig. 3)



Haphsa nicomache Walker.
(Fig. 3.)

Dundubia nicomache
Walker, 1850, List Hom. 1 :
67 ; Atkins, 1885. J. Asia,
Soc. Bengal, 53 : 224.

Cosmopsaltria nicomache : Distant, 1890, Mon.
Orient. Cicad. 57, pl.4,f.
12,a,b.

Cicada delineata : Walker, Ins. Saund., Hom. 17.

Haphsa nicomache : Distant, 1906, Fauna Br. India,
Rhynchota, 3 : 99,f.46.

Expanse of wings 78-82 mm. Length of body 25-28 mm.

Head, prothorax and thorax olivaceous green fading to ochreous after death, with an intricate system of black markings. Wings hyaline, clavus ashy white, venation ochreous but costa olivaceous green and the base of the 2nd median cell black as well as the marginal venation of hindwing. A black irroration on the transverse gradate veins closing the 2nd and 3rd marginal cells internally. Ocelli reddish ; front of head finely striated with black and a black fleur-de-lys on its dorsum ; eight fine sinuous black lines on dorsum of prothorax and a row of three round black spots on each side ; thorax with a median black line, followed by a shorter one, then by a short triangular anterior spot and finally by an irregular stripe enclosing a spot of the ground colour. Abdomen broadly, transversely striped with black, the segments margined with bright ochreous and thickly coated with short golden hairs beneath, including operculae a dirty yellow, with legs of the same colour.

Distribution : Sikkim, N. Bengal, Assam, Naga Hills and Mussouri. This species occurs in great numbers where found and is usually seen on the under sides of branches, less often on the trunks of trees. Its song is of the "fiddling" variety and consists of four notes running down the scale

and rapidly and for long repeated. It is rather high-pitched and musical and, unlike most other cicadal songs, not unpleasant to the ear. There are eight males of this species in Mr. Lindgren's collection.

Genus *Platylomia* Distant.

Platylomia: Distant, 1905, Ann. Mag. Nat. Hist. (7) 15: 65; Id. 1906, Fauna Br. India, Rhynchota, 3: 103.

Head about as wide as thorax and as deep as breadth between the eyes; prothorax distinctly shorter than thorax, lateral margins gently rounded and with one or two small teeth on the border; abdomen distinctly longer than the rest of head and body taken together, tapering and rather abruptly so at apex. Tympanum entirely covered; opercula of great length, with rounded or slightly bluntly angulated inner border, extremely sinuous outer and with apex subacutely pointed. Wings hyaline with black points or spots at distal ends of veins and on the gradate, transverse veins.

Only one species is found within our limits. Genotype: *Cicada flavida* Guerin. Although the name was proposed by Stal, it does not actually apply to the description of the genotype and so may be regarded as a *nomen nudum*. I therefore assign the authorship to Distant.

Platylomia umbrata (Distant). (Fig. 4 & 4a).



Platylomia umbrata (Distant). (Fig. 4 & 4a).

Cosmopsaltria umbrata : Distant, 1888, Ann. Mag. Nat. Hist. (6) 1 : 293 ; I 293 ; Id. 1890, Mon. Orient. Cicada, 53, pl. 5, f. 11, a, b. ; Id. 1906, Fauna of Br. India, 3 : 103, f. 47.

Expanse of wings 120 mm. Length of body 46 mm.

Head, prothorax and thorax olivaceous green with a broad subdorsal fascia on latter brown or dark ochreous, marked with black as follows : a large spot on each side of front, the area of the ocelli and adjacent parts with an irregularly stellate black spot and a smaller spot against the eyes ; prothorax with a large anterior triangular spot enclosing a fusiform spot of the ground colour on each side, two triangular spots posteriorly to the central dorsal area, confluent across the middle line and extending out as a fine black bordering to this area to as far as the eyes, and lastly, a large subquadrate spot at each postero-lateral angle. Thorax with a narrow central fusiform spot, two elongate triangular spots on anterior part of dorsum, and two spots bordering the front of the cruciform elevation at posterior part of dorsum. Abdomen largely black, the central parts of the segments more or less narrowly ochreous. Beneath body, including the operculae, yellowish olive. Legs reddish mottled with black. Wings hyaline, venation ochreous but costa olivaceous green basally, as also are most of the main veins. Outer end of costa in hindwing bright pale ochreous ; distal ends of all veins and basal veinlets of marginal cells 2, 3, 5 and 7 with small black spots ; clavus in both wings dark ashy grey.

Distribution : N. Bengal, Sikkim, Assam and Upper Burma. A single male of this fine species, which is but slightly smaller than *Cryptotympana corvus*, is present in Mr. Lindgren's collection. This species occurs in small colonies and has but a brief season. It has a loud raucous, clanging song, which is deafening when the insect is in any numbers. It rests on tree trunks, with which its cryptic colouring closely blends. In general appearance, it closely resembles a very large specimen of *Haphsa nicomache*.

Genus *Meimuna* Distant.

Meimuna : Distant, 1905, Ann. Mag. Nat. Hist. (7) 15 : 67 ; Id. 1906, Fauna of Br. India, Rhynchota, 3 : 107.

Head narrowly triangular, eyes projecting markedly, breadth a little less than that of body and appearing rather small for the size of the insect ; prothorax considerably shorter than thorax, sides oblique and with a moderately robust spine at the middles ; abdomen very large and expanded, narrowing towards thorax and, abruptly so at apex. Tympanum entirely covered in ; opercula of great size and length, narrowly triangular, with inner side slightly convex and outer slightly sinuous, apex pointed and extending to base of segment 5. Wings hyaline, unmarked, with eight marginal cells.

Genotype : *Dundubia tripurasura* Distant.

Meimuna tripurasura (Distant (Fig. 5).



Dundubia tripurasura
Distant, 1881, Trans. ent. Soc. Lond. 635 ; Atkin, 1885, J. Asia. Soc. Bengal, 53 : 225.

Cosmopsaltria tripurasura : Distant, 1890, Mon. Orient. Cicad. 55, pl. 4, f. 8, a. b.

Meimuna tripurasura : (Distant) (Fig. 5).

Meimuna tripurasura : Distant, 1906, Rhynchota, Fauna of Br. India, 3 : 107, f. 48.

Expanse of wings 88 mm. Length of body 33 mm.

Head, prothorax and thorax olivaceous green ; abdomen bright reddish ochreous, all with extensive black markings as follows : head transversely striated with black in front and with whole of dorsum black save for two small posterior spots of the ground colour near the ocelli and a narrow margin against the eyes. Central part of prothorax with a pair of medial fine lines, expanding anteriorly and posteriorly, and two fine lines each side meeting at their

ends to enclose a spot of the ground colour. Thorax with a narrow median line expanding broadly posteriorly, a triangular spot on each side of this with its base on the anterior border of thorax, a much smaller but similar shaped spot to its outer side and finally a very broad irregular fascia enclosing partly, spots of the ground colour. Abdomen with a row of dorsal spots on the first six segments, somewhat T-shaped but with the stem of the T greatly thickened; outwardly, on segments 2 to 5, irregular small spots. Beneath unicolorous ochreous. Legs greenish, pale with black spines. Wings hyaline, costa and basal half of venation olive green, outer venation black; clavus cinereous.

Distribution: Sikkim, N. Bengal and Assam. I have not seen this species in the living state, so that it is possible that the abdomen is more reddish than it appears after death. There are seven males in Mr. Lindgren's collection, all closely similar in markings. It is easily distinguished by its swollen, reddish yellow abdomen, so conspicuously marked with black spots. Nothing is known of its song or habits, so that it is hoped that notes may be made of these by the Society's members in the future.

The remaining genera and species of Mr. Lindgren's collection will be described in Part 3.

(To be continued).

Explanation of text-figures.

- Fig. 1. *Pycna repanda* (Lin).
 Fig. 2. *Cryptotympana corvus* (Walker), 2a, Opercula of same.
 Fig. 3. *Haphsa nicomache* (Walker).
 Fig. 4. *Platylomia umbrata* (Distant), 4a, Opercula of same.
 Fig. 5. *Meimuna tripurasura* (Distant).
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