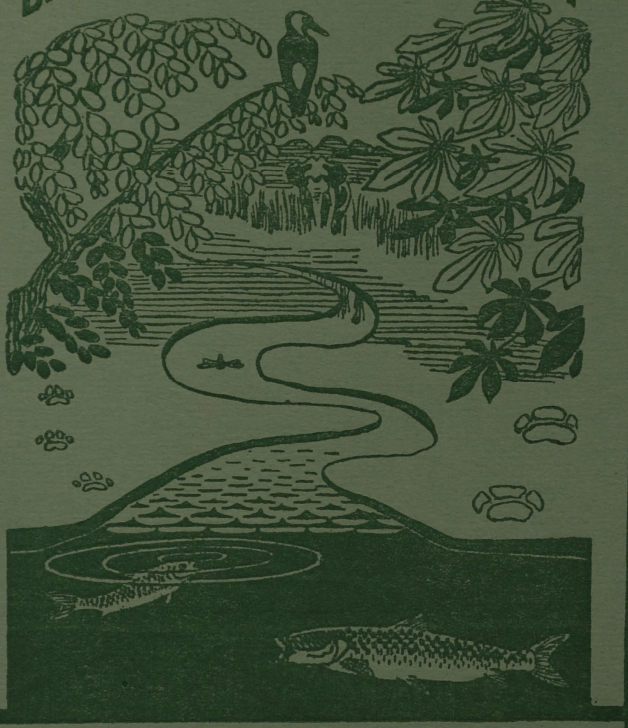
THE JOURNAL OF THE DARJEELING NATURAL HISTORY SOCIETY



VOL. VIII. - - - - NO. 2.

Issued October 1933.

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

9

DARJEELING NATURAL HISTORY SOCIETY.

The 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 Darjeeling and the State of Sikkim", as well as what could be procured from the neighbouring countries of Tibet, Bhutan and Nepal.

The Government and Municipal grants not being sufficient for our purpose, it was proposed to enrol members so as to increase our funds, 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.

The annual subscription is only Rs. 10.

Application for membership should be mad eto :—

THE CURATOR,

Natural History Museum,

Darjeeling.

John Bale, Sons & Danielsson, Ltd. London

FRANCOLINUS FRANCOLINUS MELANOTUS

The Assam Black Partridge

2/5 Nat. size.

JOURNAL

OF THE

DARJEELING NATURAL HISTORY SOCIETY.

Vol. VIII. No. 2.

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

By

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

(Continued from page 6.)

Our next genus *Coturnix* contains the true Quails. In this genus the sexes though different in colour do not differ so much as in *Excalfactoria* ; the tail too consists of 10 to 12 feathers. The wing is long and pointed ; the legs have no spurs. The genus is represented by three species and subspecies in India but only two of these are recorded from our area and one of these is doubtful.

(35) The Common or Grey Quail.

Coturnix coturnix coturnix (Linn).

The cock has the crown brown banded with black and with a narrow buff stripe down the centre and a broader one over the eye. The upper plumage is light brown with broad pointed buff streaks and blotched with black and banded with rufous-buff.

The wing-quills are light brown barred on the outer webs with rufous-buff, except the first primary which has

the outer web pale buff without markings. The tail is blackish-brown with buff streaks and bars. There is a brownish-black line above the ear-coverts and another of the same colour from the gape to behind the eye. A broad blackish-brown band runs from the chin down the centre of the throat joining another, of the same colour, across the throat and produced up to the ear-coverts ; these form a sort of anchor mark ; remainder of throat white separated from the breast by an ill-defined gorget of blackish-brown spots. The breast is rufous-buff. with pale narrow shaft-streaks, shading into creamy-white or deep fulvous on the rest of the lower plumage. The flanks are rufous spotted with black and with broad whitish, black-edged shaft-streaks.

The colour, especially on the lower plumage, varies greatly in different individuals. In some the throat is rusty and the bands deeper rufous ; in others the throat is more or less fulvous but with rufous bands ; in others the bands are blackish-brown but the rest of the throat is much marked with rufous ; in still others the whole of the lower plumage is much suffused with grey with only the breast slightly fulvous.

The colour of the bill varies a good deal ; it may be yellowish-brown ; brownish-horny above and bluish below etc. : the iris varies from light brown, through hazel to dark brown and the legs are fleshy-yellow.

This Quail measures from just over 7 to 8½ inches long and has a wing about 4 to 4½ inches ; the tail is up to 2¼ inches. The weight varies from 2½ to 4·62 ozs.

Young cocks "resemble the adult female but the chest has only a few black spots. *(Cat. British Mus. Vol. XXII).*

The chick in down has the "Crown rufous-brown, a broad central black streak from the anterior crown,

bifurcating on the posterior crown and nape, enclosing a buff central patch ; back rufous-buff with a broad black central streak ; wings buff with black patches ; below pale fulvous." *(Stuart Baker).*

The hen differs from the cock in having no blackish-brown band down the centre of the throat and the cross band is only represented at the side the whole of the chin and throat being creamy-buff. The breast is generally spotted with black, these spots sometime extending to the sides of the body. Young birds are more profusely spotted, in some old hens the spots are absent.

The colours of the soft parts and measurements are the same as for the cock.

The distribution of this Quail is, according to Stuart Baker. "Central and South Europe ; North Africa ; North and Central Asia to Lake Baikal, South to Arabia, Persia, Afghanistan, Baluchistan and North-West India, breeding birds occurring East to Purnea, Mymensingh and Manipur and South Sattara in the Bombay Presidency and Hoshangabad in the Central Provinces. In the winter it wanders South to Madras and Travancore. It has also been frequently recorded from Burma but, though it may occur there, most of these records refer to the next race." The next race mentioned is the Japanese Grey Quail. *(Coturnix coturnix japonica).*

Within our area Stevens records it as "a cold season visitor to elevations of from 5,000'—6,000' on their descent to the plains ; they mostly disappear as it becomes colder with the advancement of this period. The numbers vary each year and sometimes it may be regarded as plentiful. A few birds are generally met in the roughly cut 'makai' 'baris' around Gopaldhara. Unfortunately, very few specimens have been examined and none actually compared, so that it is uncertain whether *C. c. japonica* Temm. and

Schleg. is to be also found. This Eastern Quail has been recorded on the evidence of a female skin from Bhotan." This specimen is in the British Museum and Stuart Baker, who has examined it, considers it to be the common Western form.

In the Duars, according to O'Donel, they are mostly seen in October on their downward migration when they, apparently, only remain a short time probably about a fortnight or so. This year (1933) there were quite a number in the Duars in suitable places like Binnaguri. Travers writes in July 1933 :—" Last cold weather I bagged 9. There were a few about. For two years previously there were hardly any. I saw none. Once about 30 years ago there was a large influx, when 12 and 15 couple were shot on an afternoon."

These Quail have been found at considerable heights, occuring in the Himalayas up to 8,000 feet and Ludlow found it near Gyantse at 12,000 feet.

The huge numbers of Grey Quail seen in this country are mostly migratory entering India on the west from Africa and Arabia, also through Afghanistan and Baluchistan, as well as from the North, near the Himalayas, from Central and Northern Asia. Baker thinks that few, if any, cross the Himalayas East of Nepal. Hume considers that the birds that come from the West are the earliest to reach India, arriving there in August and those that cross the Himalayas from Central Asia arrive in September most of these early arrivals move Southwards and Eastwards reaching districts in Bengal such as Dacca, Faridpur, etc., sometime in October. Later migrations take place large numbers reaching Karachi from seawards in November and December. Ludlow got one at 12,000 ft. at Gyantse in December possibly one that had got left behind during migration.

The number of Qnail which arrive in India and the distance to which they spread over the country appears to depend on the supply of food on their breeding grounds and in the intervening country so that in some places where huge numbers are seen in some years, few or none are seen in others, even if the food supply happens to be good, apparently because the food supply has been sufficient for them in those intervening areas. Rainfall seems to have nothing to do with their migration as, in Bihar, in two years with the same rainfall one was a very bad and the other an exceptionally good year for Quail. We kept data of this for a period of seven years.

As already noticed most of our Quail are only visitors and appear to migrate wholly at night. Hume wrote, " on one moonlight night, abont the third week in April, standing on the top of Benog, a few miles from Mussooree, a dense cloud, many hundred yards in length and fifty yards I suppose in breadth, of small birds swept over me with the sound of a rushing wind. They were not, I believe, twenty yards above the level of my head, and their unmistakeable call was uttered by several of those nearest me as they passed.

The Grey Quail may he found in dry rice stubble, they eschew damp situations, in standing crops, either high or low, and in grass or scrub jungle, but above all they seem to prefer crops and it is in those parts of the country which are highly cultivated that Quail will be seen in vast numbers.

They feed mostly in thc morning and evening, resting in the middle of the day and if one walks quietly through rice stubble they may be seen running here and there, picking up grain, etc., or standing straight up to listen. scuttling off to thicker cover at the first sign of danger. Their food consists of grain, grass-seeds and small insects.

The usual note heard, the call of the cock, is a long, loud whistle followed by two shorter notes, like *wet-my-feet*, which as Whistler says, is better still represented by the Kashgari name *Watwalak*. They have, however, other notes such as a sharp harsh note of alarm, a low chirping whistle uttered when feeding and a note resembling *beebewe* when calling each other.

Where numerous they form most excellent sport. They fly fast and very straight, just skimming the tops of the crops and then dropping suddenly into cover. They will rise, with a whirr, practically at one's feet and seldom fly further than 50 yards or so. They never keep in coveys, but several birds may be seen together. They rise and fly singly but where large numbers occur they are continually rising and rights and lefts are generally got. In the old days in Bihar when they had Quail shoots the guns got too hot to hold with the continual bombardment. Huge bags were made but we have no records of them, Hume, however, mentions a hundred brace being bagged in one day by a single sportsman. We think it is pleasanter, however, to stroll out of an evening, either with a few boys or a dog on a long leash, work through the paddy-stubble, chillies or other crops and pick up whatever birds one can. Big bags are not to be made like this but one can return home with half a dozen birds quite sufficient, surely, to content any sports man.

Hume found it excellent sport shooting Quail from a *machan* in high crops. We have never tried this so quote his account.

"First you look out for the *machan* whence the people watch the crops to keep off the birds, which is almost always at one edge of the field, and where that abuts on some barren plot or bare field intended for the spring crops. If this particuliar one is not so situated, you move on to

one that is. Then you put your beaters—and they should be numerous and each have a stick—in at the opposite side of the field. Then you ascend the "*machan*," light a cigar, and, as the Walrus says to the Oysters, "admire the view."

"In the meantime the beaters, if they know their trade, will beat very slowly through the field in a more or less semicircular order, the concavity towards the *machan*, not talking, but rustling vigorously about with their sticks at the bases of the dry stalks. Probably the first thing that distracts your attention from the surrounding scenery is a tremendous rush and a general hoorush (the best trained beaters are but men !), and, swiftly parting the waving stems, you see an old black buck coming at a headlong pace towards you, his nose straight in front of him, and his horns laid well back on his shoulder. You don't move (and even if you did, when he was close to you he would see nothing above him), but just as he emerges in the open, if not more than twenty-five yards distant, you roll him over with a buck-shot or S. S. G. cartridge in the neck. If further and you have a rifle, it ought to come (though it sometimes *don't*) to the same thing. Then your Pathan, who has been crouching at the base of the *machan*, glides out and solemnly cut's that buck's throat in the name of the Almighty.

"The beaters have by this time repented of their enthusiasm ; they are dimly conscious that, that "hoorush" may not be viewed in a favourable light, and that it would be well for them if the "Protector of the Poor" aloft (on the *machan* I mean) got a good many more shots before they again interviewed him. As they advance perhaps two or three greys, a whole brood of Pea-chicks, or possibly a black or two (I mean Partridges, shooting the other kind *est expressiment défendu*), and almost certainly a hare or two make their appearance, the former skimming along about the level of the *machan*, lovely cross shots (some of course, but not many with well trained beaters, out of range), the latter

tippety tap, without the faintest conception of looking up, halting probably to listen with ears erect just outside the field, perhaps not five yards from the *machan*.

"And now the flank beaters have got down to the edge of the field where your station is, and now the Quail begin to rise and whirr past, and nine out of ten birds will pass within shot if the thing has been properly managed. You are now in the warm corner, and the birds will rise much quicker than you can load and fire, unless you have a rule that at each shot every man halts and keeps perfectly still until you whistle. Even then, as the semicircle contracts, the Quail whirr up in threes and fours, end many will get past without running the gauntlet of your fire.

"If, as often happens, there are a few scattered bushes here and there dotted over the fallow field, 5, 10, 15 yards away from the edge of the field, and you whistle a halt, get down and yourself walk through them, quietly, putting your foot into each, you will probably find that, despite the terrific fusilade you have been keeping up, almost every tiny patch contains one or more Quails.

"I have thus occasionally killed over a dozen brace, besides other game, from one platform ; but even if you get only five or six brace all told, there is "a rapture of repose" about the arrangement, which I confess has always had many charms for me."

Large numbers of Quails are snared alive and sold for food or the cocks often for fighting purposes these being very pugnacious. We wrote two accounts in *Vols. XXVII & XXIX* of the *Bombay Natural History Society's Journal* on snaring Quail in North Bihar which we will transcribe.

"In the Darbhanga District the Quail catcher makes use of a slightly different method to that given by Sterndale and

quoted by Hume in his Game Birds of India (Vol. II. p. 145). It is probably the method Jerdon writes about as follows :—

"The Nepalese have an ingenious way of catching Quail. They put a pair of imitation horns on their heads, and walk slowly about the stubble fields twisting some blades of grass in their hands in a way to imitate the champing of grass by cattle, and as these birds are not alarmed by cattle, they succeed in driving any Quail they see under a small net, which they then drop and secure the bird." This account does not quite correspond with the method employed here. The Quail catcher, as described by Hume, made use of a bullock to drive the birds up to the net and "his traps consisted of a series of rectangular frames, made of laths, about two feet long by one foot broad (a tightly stretched net occupying the interior of each frame) joined at the ends and folding up like a long map. There were about a dozen of these frames and the centre one had an aperture in the net large enough to admit a Partridge."

Here the man, as described by Jerdon, is both bullock and snarer and he only uses a single net.

In this District Quail are snared by several castes of people but principally by the *mallahs* (fishermen) and it is only some of them who go in for it. The birds caught are practically all the common or Grey Quail (*Coturnix communis*) with very occasionally a Rain or Black-breasted (*Coturnix coromandelica*) one or else the Little Button-Quail (*Turnix dussumieri*) although the Indian Button-Quail (*Turnix t. tanki*) is also got here, I have had none brought to me by these men. The following is the proportion of each species, out of a total of 128 brought to me by the snarers up to the time of writing :—Grey Quail 120, Black-breasted Quail 1 and Little Button-Quail 7.

In the paddy stubble and where the Khesari (*Latyrus sativus*) is small, the snarer only goes after the Quail in the

early morning and in the evening as these are their feeding times and the birds move about freely them ; but where the Khesari or gram (*Cicer arietinum*) is higher, he snares till later in the morning, as there the cover is shadier and the birds will scuttle about a bit and are not frightened of birds of prey as they are in the thinner cover in the late morning.

On reaching the spot he intends to work, the catcher first of all takes a sheet and rolls up two corners of it for about six inches, those he ties with a piece of straw or grass to keep them from unrolling ; the rolled up corners are meant to represent a cow's horns ; then he gets two thinnish pieces of bamboo about two feet seven inches long, and about five inches from the ends he ties them together cross ways ; the long ends are inserted into the horns and the short ones rest against his chest ; the sheet is now thrown over his head and down his back reaching to his ankles and the end with the horns sticks out like a canopy in front of his head ; he ties the sheet round his neck and this keeps the canopy taut ; the rest of the sheet is wrapped round the body.

The net he uses is made of six strands of cotton twisted into thread and is six feet long by two feet seven inches broad and its mesh has a diameter of about an inch ; it is weighted with baked clay pellets along one side of its length and at the ends of the opposite side a couple of pointed sticks, about eighteen inches long, are tied ; another stick of about the same length being fastened midway between these two.

The net is shung over his shoulder and he draws the sheet round him, covering his arms. He is now ready and the sport begins. With the cloth well wrapped round his body, the snarer stalks, with short steps and very slowly, through the field, every now and then bowing so as to imitate the motion of a cow's head. When a Quail is seen, he heads it off and at a short distance in front of it fixes

his net the weighted end lying flat on the ground, the opposite side being raised about one foot in the middle and rather lower at the sides, and kept in this position by the three sticks ; this open side is set facing the direction in which the Quail is to be driven. The man now circles round the bird so as to get behind it and then the driving commences. Now he moves slowly forward, now sideways, bowing at intervals and very quietly working the Quail towards the net. If the bird appears rather wild, he slowly assumes a crouching position and crawls along with his head towards the ground to represent a cow grazing ; in this way he guides the Quail to the net. Should the Quail be fairly tame he does not require to crouch but can work the bird into the net in an erect position. When under the net the Quail tries to burst headlong through the meshes instead of running to the side where it could easily escape as the net does not drop. As soon as the snarer sees the bird is inside he rushes forward and captures it and ties it up in his loin cloth. Should the bird pass by the net, it is headed back again or else the catcher takes up the net and fixes it in another position. It is wonderful seeing the Quail being worked up to the net, this being done in a most skilful manner. Occasionally more than one bird is captured at a time but as a rule the snarer contents himself with working one unless several keep well together. The birds seldom seem to rise, except in newly worked fields where no cattle are grazed, and if one does fly off the catcher does not as a rule followed it up unless birds are scarce. While stalking the men have a most weird and ghost-like appearance.

In Hume's day Quail sold even in cities like Lucknow for Rs. 2 to Rs. 2-8-0 a hundred and he bought them in small stations for Re. 1 per hundred. Those days have now gone and like everything else the price of Quail has more than doubled. Here in the mofussil they now sell for Rs. 6 to Rs. 11 a hundred."

These notes were written ten years ago and probably the price of Quail has gone up considerably since then.

Two years later I had an opportunity of studying the snarer's methods in tall crops such as *rahar (Cajanus indics)* to which Quail retire during the heat of the day.

No preparation is required in the way of dress in snaring by the following method, but more people are generally necessary, the number varying from three to eight. On arriving at the spot where the *rahar* fields are situated, the men, if the fields are not of any large extent, skirt round them, crouching and looking into them to see if they hold any birds; they then fix a site for their nets, selecting a spot in which the crop is thin or absent. The nets used are the ordinary fishing ones. They are stretched out, the ends being tied to the crop or any jungle that may be handy, and the portion resting on the ground is weighted down with clods, except in those nets, such as casting nets, which are already weighted. On the flanks of these nets, the smaller nets (as described in my previous article) are fixed, the whole extending for about 11 yards. Any crop that may come under the net is bent down and the net passed over it and this keeps the nets in a raised position.

The driving now begins. If there are several fields of *rahar* adjoining each other, the snarers usually try to drive the Quail into one plot. The driving is done by wriggling along in a squatting position, every now and then gently shaking the crop and the whole time keeping up a low whistle. The Quail either run or walk along in front of the beaters and are headed towards the nets and finally captured. Sometimes a dozen or twenty birds are snared at one time and sometimes a blank is drawn. I have been with the men several hours when nothing was caught, this being generally due to the Quail having been disturbed by grazing

cattle and made very wild. Sometimes other birds besides Quail are captured and on one occasion these consisted of a pipit and a water hen ; a mongoose also got into the net but got away. I once chased away a fox, fearing the damage it would do to the nets if it got entangled in them.

This season was an exceptionally good one for Quail, hundreds being snared. Of the large number I saw, all, except about a dozen Little Button—Quail *(Turnix dussumieri)* and one Black-breasted Quail *(Coturnix coromandelica)* were the common species *(Coturnix coturnix coturrnix)*.

We used to keep the snared Quails in Quaileries, fatten them up and keep them through the hot-weather and rains, but this custom seems to be dying out. The Quailery should be kept fairly dark otherwise the cocks fight continually. It is only those who have kept Quail like this that know what a delicious morsel a fat Quail can be.

Sparrow-Hawks and Shikras used to be flown at Quail but it must have been very poor sport as if the hawk found the quarry outdistanced it, it just sat on a clod and waited to be picked up.

These Quail are, except in captivity and possibly where they breed in large numbers, monogamous, and the hen is a very close sitter. Hume once caught a "female on the nest, examined the eggs, found the points of the bills protuding in two, so put them carefully back, and replaced the mother gently on the nest, where she sat winking at us in a most unbecoming manner, but never attempting to leave the nest."

Numbers of these Quail are resident and breed in India and eggs have been taken at various places from Sind in the West to Purneah in the East and Baker has shot breeding birds in Dacca and Mymensingh. The principal breeding months appear to be March and April.

The nest is a mere depression scratched in the ground by the bird and lined with a few bits of dry grass and situated

in crops, amongst grass, especially where there are thorny bushes. They lay from 3 to 14 eggs but apparently 10 is the most they lay in India. They are broad ovals, a good deal pointed at one end. The colour varies considerably. Stuart Baker describes them as follows :—"The ground varies from palest creamy to a warm buff, reddish brown or yellow stone-colour. In some eggs the whole surface is covered with innumerable speeks and freckles of dark brown, in others these freckles are fewer and are intermixed with a few small spots and blotches : in others there are no freckles and the blotches are very large, bold and almost black ; in others again the freckles are so tiny and pale that at a little distance the eggs look pale clay-yellow, brownish-grey, or olive-brown. Between these variations there is every degree of intermediate colouration." They average in size about 1.18 × 0.89 inches.

These Quail are uninteresting birds to keep except for food or to those who enjoy Quail fighting as a sport. Large prices are paid for stand-out cocks, Stuart Baker mentions as much as Rs. 50 having been paid for one of these in Bihar. They are very pugnacious and will sometimes fight to the death.

The Israelites are supposed to have lived on Quail in the Wilderness. Some authors think they lived on Sand-grouse, locusts or flying-fish but there seems no reason to suppose that they were not Quail judging from the description and the vast numbers in which they migrate. Yarrel mentions as many as 160,000 being netted, in one season, on Goat-Island, a small island at the entrance to the Bay of Naples and Temminck wrote that 100,000 had been captured in one day nearNettuno in the Kingdom of Naples.

The maximum life of these birds in captivity is 7 years 11 months and 16 days.

(To be continued.)

The Assam Black Partridge.

Francolinus francolinus melanotus Hume.

BY

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

(With a coloured plate.)

There is no necessity to give a description of this bird as our plate shows that. The cock bird is represented calling from a stump and the hen at rest. Hume mentions an albino obtained by Hodgson in Nepal which was "a sort of delicate lilac grey ; the ear-coverts and body spots greyish-white ; the back, rump and upper tail-coverts barred as usual, but with greyish dusky ; but the broad neck ring dull chestnut, and the lower tail-coverts bright ferruginous chestnut."

This handsome Partridge used to be common in the Duars but they have sadly decreased, partly owing to the opening out of savannah land and greatly due to the tea garden coolies, especially the Sonthals, who love shikar and who, according to Travers, run down many and many a Partridge.

The distribution of this race of Black Partridge, which differs from the other two races found in India by being much darker in colour, is given by Stuart Baker as :— "Eastern Nepal, Sikkim, the whole of Assam and Eastern Bengal, Manipur, Lushai, the Hill Tracts of Chittagong and Tippera. Birds from Central and Central West Bengal are also rearest this race, as are those from Orissa, though somewhat intermediate."

Stevens doesn't give it in his *"Birds of the Sikkim Himalayas"* nor do there appear to be any Sikkim specimens in the British Museum ; there is one collected by Mandelli in the Darjeeling Terai in March and we have heard of its occurrence there.

They are principally found in grass lands, either in the thatch grass in the tea gardens or in the larger stretches of savannah where these are still to be found ; they may also sometimes be seen in the tea. Their cheery call rings out morning and evening and also at other times during the day. They are most vociferous during the breeding season. The cock calls from some eminence such as a stump of a tree, an ant-hill etc. and the call has been syllabalized in various ways such as *"lashun, piaj, adruk"* (garlic, onion, ginger) or *"Subhan, tere Kudrut"* (Oh ! Omnipotent, thy power) or in English by "Be quick, pay your debts." It is unusual for them to perch at any height from the ground but, in Hume's time, Mr. Greig wrote that, in Garhwal, he had "seen them high up in Chir trees (*Pinus longifolia)*" and recently Mr. Riches saw two perched about 15 feet up in a Siris tree in the tea.

They are monogamous and probably pair for life and, except after the breeding-season, coveys are not usually seen. They are peaceful birds, even when breeding, the cocks, apparently never fight each other as is so common in most game birds.

They give good sport, rising perpendicularly and flying strongly and straight though slower than the English Partridge. They are shot either by walking through the thatch with a string of beaters or from an elephant in the tall savannah or other high cover.

They feed generally in the morning and evening on seeds, grain, insects, the shoots of grass, etc.

O'Donel told me about a curious accident which happened to one of these birds. It was startled from the tea by a plucking coolie and, on flying off, hit its head against the branch of a tree and was killed.

They are resident birds and breed from April to July. In the Duars they lay in May and June but Cripps once took

five fresh eggs from a nest, in the Western Duars, on the 16th July. Where found in the hills (as high as 6000 ft., in some places according to Stuart Baker) they breed in April. The nest is usually an ill-formed pad of grass and leaves placed in a hollow in grass or under a tea bush. They lay from 3 to 10 eggs, usually from 4 to 6, which may vary much in colour from stone colour to olive chocolate-brown or dark olive-green. The average measurement of 100 eggs, according to Stuart Baker, is 36·5 × 30·9 m.m.

As table birds Black Partridge are quite good eating though if only roasted they are apt to be rather dry.

They do well in captivity and can be allowed a good deal of freedom. They have lived for over ten years in the Alipur Zoological Gardens.

The Episode of the Darjeeling Bison,

By

E. O. Shebbeare, I.F.S.

That a wild Bison, of it's own accord, should wander into the heart of Darjeeling and actualy quench it's thirst at the fountain in the middle of the Chowrasta seems incredible. It is worth putting the facts on record while it is still possible to collect them lest the whole incident be written down a myth by sceptics in years to come.

In the early hours of Monday the 8th May 1922, some Dukpas bringing milk into the station saw the Bison lying under the *Cryptomeria* trees below St. Paul's School. As the habitat of the Dukpa and the Indian Bison do not ordinarily overlap they probably took it for a giant bull or perhaps for a tame buffalo. They proceeded to pelt the beast with stones and so got it on the move down the Jalapahar road, jumping

the railings in places, until it reached the compound of Campbell Cottage, the Police Superintendent's bungalow, where it remained among some ornamental bamboos for a time. Later, according to the Darjeeling Advertiser for May the 10th, 1922, it crossed the Chowrasta and went down Thorn Road, up to the Alliance Bank and back along the Mall to the Chowrasta where it drank at the fountain. From the Chowrasta it went down the footpath to Lebong, past Dant Kothi where it overtook Mr. Price going down to train his ponies at Lebong. Continuing down the Lebong road it met an unfortunate stone-mason, Kurbir Gurung, below the N. B. M. R. headquarters and killed him on the spot with a blow on the neck. Keeping on downhill, past the Monastery, it crossed the cart-road and stopped in the forest land on Phubsering Tea Estate. Meanwhile Mr. Price had told Mr. Bird-Wilson, who happened to be on leave from the Duars and was stopping at the Drum-Druid Hotel, and he and Mr. Allan Pascal went after the animal and got him in the Phubsering forest. There was some dispute between these gentlemen over the trophies and the head was eventually given, by the Deputy Commissioner, to Mr. Bird-Wilson. It is now in his bungalow at Bagrakote in the Duars.

How this, a full grown but youngish herd-bull Bison, came to perform it's extraordinary exploit is a mystery but it seems possible that the epidemic of Rinderpest, which almost exterminated the magnificent herds of Bison in the Terai that year, was responsible in some way. Before 1922 we estimated the Bison between Sukna and Sivoke at about two hundred head, a mere guess of course, but it was possible to get among the herd on an elephant at any time. In the cold weather they could almost always be found at the foot of the hills in the neighbourhood of the saltlicks, especially in the Chocklong gorge, while, during the rains it was not necessary to go so far as there were generally a few in the Panchenai close to Sukna bungalow. I have sometimes shown the herd to

visitors to Darjeeling between the times of the up mail and the up mixed trains.

Then came the epidemic spreading no doubt from the herds of tame cattle in the adjoining Baikuntopur forest and caught at their common drinking pools. In November 1922 Mr. Trigg and I, marking over a square mile of sal forest, came on no less than seven skeletons of Bison in this small area. The following cold weather it was rare to come on any tracks of Bison in the area and they mostly solitary. The herds are only beginning to recover now. It seems possible that the sole survivor of a small herd might have pushed on blindly in the hope of coming up with his companions again.

The Darjeeling Advertiser *loc. cit.* gives an account of the movements of the solitary beast up to the date of his appearance in Darjeeling as follows :—"Came up the Balasan valley, up to Nagri spur, and stayed there two months, from there it took a line nearly straight across and went to the reserved forest above Chuttuckpur siding and stayed there a week, then went to Senshal, stopped another week and then came along the Calcutta road and slept in St. Paul's School compound."

It seems a pity that it did not survive to propagate it's species, none too plentiful here nowadays.

Mr Price's account.

"Shortly after dawn on the 8th May 1922, while on my way from the Club to Lebong to supervise the training of my ponies for the races, I was held up by the sentry at the Chowrasta, who tried to persuade me not to proceed as there was, he said, a "pugla Hauthi" in the locality doing a lot of damage which might, in it's fury, attack and hurt me." The sentry said "he had fiired at it with a shot gun and that a sahib from the hotel on the Mall also had fired at it with a rifle which had annoyed the animal." Excited, disheveled hill-men, perched on the Chowrasta bank, confirmed the

sentry's statements and urged me to seek personal safety in the band stand there. I ridiculed their warning taking them to be late night revellers, still under the influence of alcohol, for who had ever heard of a wild elephant or any such beast roaming about Darjeeling, so I proceeded walking to Lebong.

I was abreast of "Dant Koti", which is only about 300 yards from the Chowrasta, when I heard shouts of "*Sahib bhago.*" I paused and looking back saw a huge beast, bigger than anything I had ever seen in the hills, rushing down the narrow Rungeet road and making for me. Whether it was presence of mind, or deadly funk, that influenced me I do not know, but I vaulted the road-side railing to get out of the way of the beast instead of trying to climb the bank which was my first momentary impulse. It was as well that I jumped the railing otherwise I would have been killed, for about fifty yards in front of me was a stone mason who, hearing the shouting of the people on the Mall road above, tried to get out of the way of the animal by climbing the steep bank. Before he could do so he was knocked down and ripped up by the "mad Hauthi" which would have been my fate had I not got out of it's way by performing the acrobatic feat above mentioned. I landed on a beautiful artificial bank of orchids in the Dentist's garden. My heavy weight of fourteen stone dismantled the bank, off which I rolled, unhurt, into a bed of choice poppies. The irate dentist instead of writing to congratulate me on my escape from bodily injury, if not death, served me with the bill of cost for renovating his darned old orchid bank and Rs. 5 for the damage to his bed of poppies! On recovering from the shock of the fall, which, as I have said, did me no harm, I continued on the way to Lebong, the body of the labourer killed being conveyed to the hospital dead house. About half a mile further down the road I came upon a crowd around another sad sight, that of a aged man, who had been tossed by the "Mad Elephant" on to the sloping roof of a house about twenty feet below the road.

The poor fellow rolled off the roof about ten feet down the khud-side where he was picked up dead. No one dared to arrest the progress of the wild beast, bigger and more furious than anything that had ever been seen in the hills. When I got to the Police outpost, about half a mile from the scene of the second murder, I was again stopped by the police who said it would be dangerous for me to proceed as the "Mad Elephant" was in the Lebong forest between the police outpost and the Cantonment. After much persuasion and some bucksheesh I got the loan of a pony from one of the Bhutia Busti "ghora wallahs" and made my way by a circuitous route to the Lebong race course. On arrival there and just as I had dismounted from the pony, I heard shouts again that the wild beast was coming down the road. I had time to get onto the grand stand, from where I had a good view of the animal. It was not a mad elephant but a magnificent Bison that had probably gone "Must". Opposite the race stand it jumped the parapet wall and disappeared into the Phubsering forest. By this time armed and enthusiastic sportsman from Darjeeling began to arrived at Lebong. They followed the track of the Bison and Mr. Pascal (Jr.), a local resident of Darjeeling, shot it at 3 o' clock in the afternoon somewhere in the forest. The head however was claimed and awarded by a tribunal to Mr. Bird-Wilson of the Duars who put in the first shot.

Fishing in India and in Europe.

By

Col. H. S. Wood, I.M.S.

(Continued from page 38.)

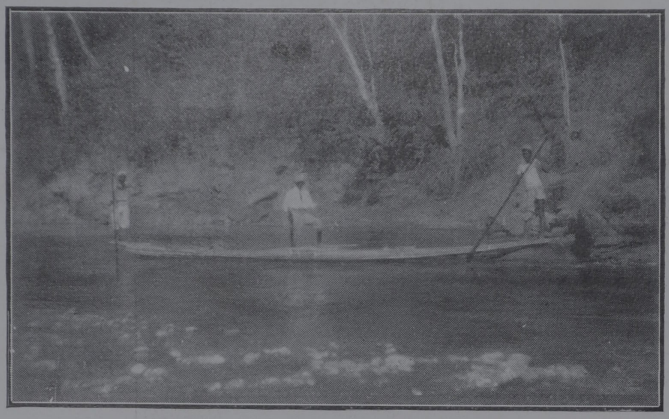
(With two half-tone plates.)

The Mahseer and what I know of him.

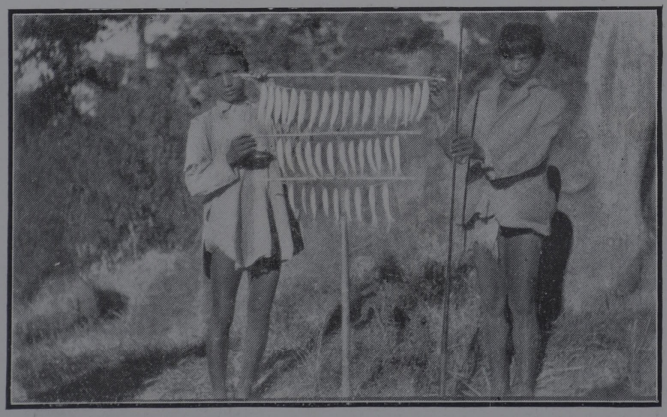
I do not know what the derivation of the word is, whether it means "big head" or "big weight". The Khasia name is *Matrol* and the Assamese *Petia Mas*. The Mahseer

is found in all the rivers in Assam, in the hills and in the mountains. Very large ones have been caught in the Brahmaputra near Gauhati and Tezpur with *atta* or flour paste. The Mahseer is found in Burma, North-West Provinces and in Mysore, the Cauvery being a good river there and where, I believe, the record Mahseer of 119 lbs. was caught by Rivett-Carnac. Those officers who had the luck to go into the Abor and Mishmi country and into the Hukong Valley report grand fishing in those places ; but one requires Government permission and an escort to enter those countries. The Dhansiri as it debouched from the Naga Hills was a grand place. I fished the pools for only an hour on my way down to Golaghat and got several heavy fish. This river is sometimes called the Doyang and becomes the Dhansiri lower down. For my part I do not wish for better fishing than that obtainable in the Sylhet waters mentioned previously. The fishing in the Teesta near Darjeeling and in the Sankos between the Duars and Assam are good from the records published in the Journal.

The Mahseer is the fish to go for in India, he is really the King of fishes and affords grand sport, besides this the scenery round his habitat is very beautiful. Every Mahseer fisherman has listened to the joyous sound of the screeching reel and felt the thrill of the rush of the mighty Mahseer as he takes out yard after yard of line, sometimes as much as 120 yards are taken before he stops. His rush is stronger than that of the salmon some of them will fight and be game to the end. I have found the long torpedo shaped fish the strongest and pluckiest. Your tackle must be strong and running freely when he rushes or else there will be a break and for God's sake keep your fingers off the running line or you will be cut to the bone, as once, happened to me. What a beautiful fish he is too with his scales of burnished gold, silver and copper and red fins, but alas ! these colours soon fade.

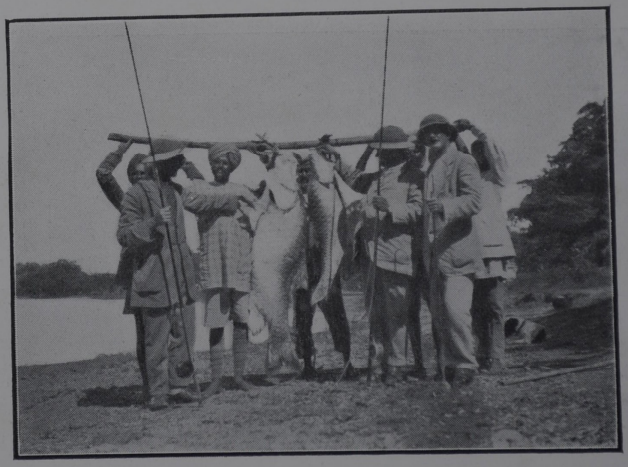


Our Fishing Boat.



A bag of CHILWA.

SOME FINE SPECIMENS OF
Barilius bola.



RECORD MAHSEER OF 119 lbs. CAUGHT IN THE CAUVERY
BY RIVETT-CARNAC.

The scientific name for the Mahseer is *Barbus tor*, he belongs to the Carp family and may be recognized by the barbels projecting from the lips and by the pharyngeal teeth. With regard to the varieties of the Mahseer I know many will not agree with what I say but I give my opinion and what I learnt from the Khasias. They distinguish 4 varieties :—

1. One with two kinds of mouths, *i.e.*, a variety with a long mouth which can be pulled out and one with a short one. These are the true *Barbus tor*, the fish with the elongated mouth being the female. These two fish have red fins.

2. The *Booka* or snub-nosed Mahseer. This is a true Carp and the colour is duller than in the last ; the fins are bluish-red and the pharyngeal teeth are broader and flatter. As the *Booka* is not such a cannibal as the true Mahseer, feeding more on falling fruits, weeds, grasses etc., it does not attain to a very great size, 12½ lbs. being the heaviest I ever got. A curious thing about him is that his fins are never entire, pieces, especially in the candal fin being bitten out. The Khasias have told me that this is done by a little fish with a beak like a parrot and which can blow itself out. They call it the *Poothla Mas*. I have seen little boys blowing these fish up as one does a toy balloon. Sometimes when bathing these fish will nip your legs. The Khasias hate the *Booka* and many will not eat them, as they say they devour the excrement of monkeys. I fancy there is something in this. A fruit which they are very fond of, a species of small fig is often found on trees overhanging the water. I have seen hosts of monkeys feeding on the berries and when the fruit fell into the pool below it was eaten by the *Booka* and other fish ; the excrement also dropped into the water and I do not think the *Booka* wold object to eating this. The *Booka* does not make the terrific rush like the Mahseer, he rather bores down into the depths of the water and shakes the line like a

bull dog. By this feeling you can always tell you have a *Booka* on. They take a G and S spoon well but one has to spin deep for them and in a pool they soon get scared of a spoon. During a sudden heavy spate, when the river gets muddy like pea soup, I have seen *Booka* spring into the air to get more oxygen. The teeth of the true Mahseer are much longer and pointed than those of the *Booka*, some having a distinct notch. They play on a hinge system and the teeth point downwards into the pharynx. They are admirably adapted for cutting purposes and their strength can be gauged by putting one's fingers down the throat of a small Mahseer. The teeth when taken out, dried and cleaned, look very well mounted on a large wooden shield. The teeth are composed entirely of enamel and apparently never get carious. The gill plates make nice wine labels for decanters.

3. *The Black Mahseer.* I have only caught one fish of this variety, it was a very strong fish and took me all my time to land him ; it weighed 14 lbs. The colour was dark greenish-black, with beautiful orange lips. It had barbels and was broad and thick with very large scales and more carp-like than the Mahseer. I caught it on a spoon in very rapid water, amongst rocks and very large boulders, I imagine this fish is rare. It had the pharyngeal teeth.

4. There is a Mahseer found in the North Cachar rivers with yellow or yellowish-red fins ; in other respects it resembles true *Barbus tor.*

Food of the Mahseer. The Mahseer is omnivorous. He will take *atta* paste flavoured with garlic, also crabs, prawns, crickets, grasshoppers and fish of all kinds, but he prefers and pursues *Chilwa* relentlessly ; fruit, weeds and acorns are also eaten and they are very fond of the flowers of Kuchnar *(Bauhinia).* When these fall from the trees and float down stream they are snapped up by the Mahseer.

I have caught them by baiting a hook with the petals and letting the current take it down. A hook baited with the berries of a round fig-like fruit which Green pigeons are very fond of is very deadly. I think Mahseer feed on frogs and water rats. It is said they eat the fruit of the Strychnea tree *(Strychnos nux vomica)*. I imagine it only eats the fleshy outside rejecting the seed which contains almost all the deadly alkaloid. I do not know what it is but sometimes eating Mahseer produces distressing symptoms and once in camp every one of us went down. My wife, who ate very little, was the least affected but myself and servants were seized with alarming symptoms, colic, vomiting and a feeling as if someone was squeezing one's heart, almost producing collapse. It was a large fish which caused this and after that we only ate the smaller ones. The flesh of a Mahseer over 16 lbs. is not worth eating. Once in the Verati river in N. E. Manipur I saw Mahseer darting at and snapping up the yellow withered leaves of the *Bauhinia*. They were so occupied that they would not look at a spoon. The baits that are used to catch Mahseer are numerous and I will not enter into any great details. To my mind, nothing can beat the spoon, using it trolling from a boat or casting it. I cannot say which is the best spoon, sometimes a gold and silver at other times an all gold and silver will do execution. I have caught them on a copper one. Taken all round I think a gold and silver is the best and different sizes used according to the size of the fish present. I used a No. 10 for large and 2, 3 and 4 for smaller. No. 4 is a very good all round size. The $1\frac{1}{2}''$ silver spoon, thrown like a fly, in very deadly for *Booka*. When casting a spoon there is nothing like the "Silex" Hardy reel. As regards spoons never have split rings but always solid ones, brazed treble hooks strongly made and wire mounts, not made of gimp, but twisted piano wire. I do not like gut mounts, as the gut gets frayed in no time ; it only does for the smaller spoons. I like Luscombe's hog-back spoons the best. It is surprising what strength

the Mahseer has to distort one's spoon and straighten out the hooks, so that everything must be of the strongest. I do not believe that the Mahseer does all this mischief by compression of his mouth but by rubbing it against rocks and I have actually seen one trying to get rid of a spoon in this manner. Don't have your spoons overpolished, rubbing with "Selvyt" cloth, before using in quite sufficient.

Why a Mahseer goes for a spoon is not exactly known. In some cases he, probably, mistakes it for a fish but generally, I think, the glistening and flashing arouses curiosity and anger and he dashes at it. I do not believe in weighting the spoons as this interferes with the spin. One can regulate the depth at which to spin by the speed of the boat and by raising or lowering the point of the rod. Of course spare mounts should be taken for all sizes of spoons and do not forget a pair of pliers and some fine strong wire and silk, also a bottle of varnish. I I prefer flying mounts, not trebles fixed to head and tail of spoon. A spoon with single hook at narrow end does well sometimes, as it does not interfere with the spinning of the spoon. Avoid thin spoons and flimsy hooks. The traces I used were Punjaub wire of various thicknesses (Hardy's) and I want nothing better. At first I used gimp but found it frayed and kinked. The traces should be well dried after use, and sunned and put into oiled paper, so that no rust can form. The attachment for the spoon in Hardy's traces is very good and easily and rapidly fixed. Punjaub wire can be used single or twisted double or treble ; it is also excellent for flying mounts.

The line is very important and get it of the very best. All the dressed lines deteriorate very quickly in the Indian climate so I always used an undressed one. The best is the "Kingfisher" brand, it is very strong and does not show much in the water. One hundred and fifty yards of this

spliced on to 50 yards of Khakhi hempen line is enough. This is put on to a 4½" "Silex" Hardy reel and can be used for trolling or casting. Hardy's preparation of "Ceroline" for preserving lines ought to be used occasionally as it prolongs the life of a line. Every day after returning from fishing reel off the wet line on to the back of a chair to dry and once a month reel off all the line and thoroughly clean and oil the reel. One will want a smaller reel and lighter line for *Chilwa* and other small fish.

Rods : I had two rods both by Hardy, one 11 feet and the other 9½ feet, in three pieces, with a spare trolling top. They were both steel split cane and were excellent and served me for years. I have had a steel split cane rod bend almost double and it still held. I know it is the fashion to dery steel split cane rods, but I put my faith in them. If they get crooked or out of alignment the makers can easily put this right. Never leave the rod longer in the sun than you can help and always take it to pieces at the end af the days' fishing and thoroughly dry it with a piece of clean "Selvyt" another thing is not to let grease of any sort touch the weoden parts or bindings of the rod, any grease at all salty ruins a rod. Always replace the wooden plugs in the holes of the rod and before putting it up use very little almond oil on the brass ferrules to prevent sticking. When dismantling the rod grasp the joint with hands on either side as close up as possible and then pull. Keep your rod hanging up when not in use, a reel of silk and a bottle of varnish are useful for renovating bindings I like spiral agate rings on my rod ; it is at these rings that the silk bindings are apt to give way. Sometimes on a very hot day great difficulty is experienced in taking the rod to pieces, don't use force but put the rod away and the parts will loosen in the cool. Look after your rod yourself I can assure you it is worth the trouble.

Besides the spoon there are many other baits used, lures, artificial prawns etc., but for clear water the spoon is best

and for dirty or coloured water. "Alligator tackle" mounted with a Chilwa is very deadly. Flies are, I know used, but in the Assam rivers I had no success with the "Blackamoor." Baits I have already alluded to both natural and artificial. The berries I alluded to were very deadly.

The best times to fish are between 9 a.m. and midday and then between 3 p.m. and sunset ; some days may be successful, others blank, it depends a good deal as to whether the fish are on the feed or not. I do not like a very bright day ; moderate sun, with a warm wind, is best. I always used a Khasia boat to fish from and when trolling sat on a broad-bottomed *morah* with a cushion on it. Dugouts are most uncomfortable and are generally very leaky. Never try to play a big Mahseer from a boat but always land. I have found the head of rapids the best spot for Mahseer. I always kept my boat some distance above them and let the current carry my spoon down. There might be a rush and away down the rapids would we go with the fish on until he stopped at the next pool. One's line often gets fouled on the rocks and snags and then there is a break and the fish is lost. The deep pools also hold good fish but one must spin deep. Always tell your boatman to paddle silently without a splash as the Mahseer is easily scared. Once when I was out with J. We struck a good pool, *Chilwa* were dashing all over it. I advised J. to get on shore as quickly as he could when he struck a fish but he ignored my advice and there he was shouting out "Major, what can I do with this fish" and with his rod bent under his boat on one side and the Mahseer on the other. I took the rod from him but the strain had been too much and pulled the hook out of the fish's mouth.

Very little is known about the migration of Mahseer but I know that, like the salmon, at the beginning of the first rains, when the rivers rose, they ascended into the higher

reaches to spawn. It is wonderful how they leap and get up the rapids and cataracts. When the rivers are falling, at the end of the rains, all fish descend to the warmer waters and the Mahseer have to follow. How the eggs hatch-out in the rushing waters where there is no sand I cannot understand.

A Mahseer's age can be roughly told by the number of rings on the largest scales, in the same way as the rings of a tree. I have counted 23 rings but Mahseer must live to 50 or 60 years as all the Carp family live long. Man is really the Mahseer's only enemy as everything else in the water is afraid of him though otters and birds prey on the smaller ones. If the rings are broken and rough in their continuity this shows bad condition ; but I have not noticed this as much as in Salmon's scales, when these fish get very much reduced, just before proceeding to the sea to recuperate.

I have found Mahseer, like other fish, are affected by tapeworm and I have caught fish with fungoid masses like tumours on them.

In Assam casting for Mahseer is done from a boat as the banks of the rivers there have cliffs and the jungle comes down to the water's edge.

Those who wish to acquire perfection in the delightful sport of casting a spoon should take lessons from an expert they will find it well worth while.

The next best fish to try for is the Baril or Indian Trout (*Barilius bola*). It is a very sporting fish rising to fly. When small they are caught with *Chilwa* flies, for larger ones a fly with a quill body and Florican hackle is deadly. Many of these fish swim together so that if you get one you are sure to get others. I once caught five running out of a rapid where two streams met. The largest I ever got was 3½ lbs. They fight well and jump right out of the water

when, of course, the rod point has to be lowered. The larger fish have a beautiful silvery-blue colour, the small fry are silvery with faint blue band markings. They are excellent eating.

(To be continued.)

The Trinomial system of Nomenclature examined.

As I can distinctly remember the great interest a bird, beast or insect aroused in my mind, even as a child, and the innumerable questions I used to ask my elders concerning its "proper name," habits, etc. I believe the taste for the study of natural history, together with a miscellaneous lot of less desirable characteristics, have been congenital in my case.

Up to my early days I was unable to definitely decide on my favourite branch of study in the field naturalists' line. First of all I took up beetles, then butterflies, then oology all claimed my fancy, but finally ornithology became my favourite hobby and the study of it enthralled me for many a year. When still in my teens I was fortunate enough to be thrown in the company of my brother the late Alex. M. P., than whom, a keener or more observant naturalist it would, indeed, be hard to find. Of course he possessed Oates and Blanford's volumes on Birds and we spent many a happy leisure hour collecting specimens and identifying them by this work. With its aid, and the exercise of a little patience and common sense, we never found any serious difficulty in identifying any of the specimens we obtained, and so pleasantly did the hours spent in collecting birds and their eggs pass, that I often thought that the man who wrote in the Koran "Allah be praised for the diversity of his creatures," must surely have been, like ourselves, a keen field naturalist.

One bird, in the case of which, we considered Oates had been guilty of hair-splitting was *Molpastes hæmorrhous*, but really all he had done was to show there was the typical *M. hæmorrhous* and five other distinct climatic and geographical variations of this same bird. To indicate, to the field naturalist, that this was so, he called them ail "Red-vented" and merely prefixed their approximate geographical area te "Red vented" such as Madras, Burmese, etc. That the "probable human error" is a factor that has to be allowed for in all works done by man is undisputable and Oates was only human. The question is :—Have those who have, with a view to improving on his work by altering the classification used by him, improved the facility of study and reference for the field and museum naturalists ? I consider, and I am sure there are many able field-naturalists who are of my opinion, but afraid to express their views in print, for fear of causing offence, that when the colour and size variations, in any species, are not of such a marked nature as to render its instant identification, when seen in its natural surroundings decidedly difficult, there is no need whatever to puzzle the naturalist by subdivision. Let us return to *Molpastes hæmorrhous*. I have seen it, in its wild state, from Darjeeling to Travancore and from Bombay to Sadiya and Burma, but the sight of one, in its natural surroundings, over any portion of that vast area never made me stare and say "That is no Red-vented Bulbul." To take another case *Corvus macrorhynchus* can any of my readers, who have travelled the length and breadth of India, truthfully say that any specimen of this bird seen by them anywhere made them believe that they had never seen it before or doubt its identity ? Yet in the new trinomial system how many sub species has this bird been divided into ? Let us suppose a dull field-naturalist, whose book of reference was Oates, living in the N. W. Frontier of India and being accustomed to the small form found there, transferred to Burma where the large form occurs. If the size of such should puzzle him somewhat,

a reference to the book would, in a very few minutes, assure him that is was not *Corvus frugilegus, cornix, splendens, insolens* or *umbrinus.* This leaves *corax, corone* and *macrorhynchus. Corax* he finds does not occur in Burma and *corone* is, apparently, confined to the region round Kashmir, so the bird must surely be *macrorhynchus.* On reading the description he finds the bird varies considerably in size and that those occurring in the area in which he is at present are on the large size and there his task ends.

But in the case of the present trinomial system having isolated it as a "Jungle Crow" he has yet to ascertain *which* of the four or more it can be. If he has shot a specimen well and good if he hasn't he must wait till he does so. Now with his specimen in hand he opens his book and his face lights up as he sees the one that is found in Burma and notes that it differs from the last in having the wing umpteen thingumy millimetres, etc. Out come his measuring instruments and the grin on his face alters to a frown when he finds his measurements are of a bird smaller than X Y Z and larger than W Y Z. Fortunately his pal Snooks lives at Prome which is the headquarters of the X Y Z type and is keen on helping faltering young ornithologists. The specimen is duly sent to him and in time the reply received. Alas for his hopes, Snooks who has carefully compared it with his large series of X Y Z is convinced that it can neither be X Y Z nor W Y Z but approaches the latter more closely than the former. He suggests that it should be sent to the British Museum at once for further examination. Now to run up against such snags cannot but dishearten those who intended to devote their spare time to the study of Natural History and I doubt not many have been discouraged thereby. The would be naturalist feels that to name his bid X Y Z is wrong as also to do so W Y Z, gets disgusted and thinks the whole thing is too much like making hard work of a hobby. Even in

dealing with one of the commonest birds he feels he has wasted his time and that some simpler recreation would be more pleasant.

Now it is by the encouragement of such would be field naturalists alone that the museum scientist can hope to receive series of specimens from which, by study and examination, he can accumulate and place on record, for posterity, scientific data. Any system that tends to damp instead of firing the ardour of the field-naturalists can only react adversely on the scientific study of the subject by curtailing the number of field-naturalists and consequently the amount of material sent in to the scientists for examination. Is there an alternative method of classification by which we can encourage the field naturalist to take a keen interest in his hobby without losing sight of the requirements of science? I think there is, A close study of all aspects of Natural History is certainly a desideratum, but is not the placing of the results, attained from such a study, before naturalists, whom force of circumstances prevents from studying the subject equally carefully but who nevertheless from their keen interest in the subject are entitled to be numbered as psendo-scientists, in the simplest, clearest and most interesting form equally desirable?

Can any system that, however well meant, complicates matters for those whose study of the subject must, perforce, be confined to their leisure hours, be said to contain the essential elements of simplicity, clarity and interest? Assuredly not.

The imaginary case mentioned of Snook's friend is, I happen to know, not only not improbable, but actually exercising the mind of a certain naturalist.

The next and pertinent question is. Is there any system of nomenclature that would, whilst retaining the present

high standard of minute detail, owing to its greater simplicity, clarity and interest, appeal more strongly to the field-naturalist ? I say " yes ".

Many of my readers, many is, perhaps, too optimistic a term to be employed by an obscure field naturalist, doubtless consider that to attempt to alter or improve on the work that is being so ably carried out by our leading ormithologists were mere folly. It is because those whose mentality is of "slave" type are in the majority that improvement is not as rapid as might be. Such persons, and as I say they are in the majority, are prepared to change from one system to another without hesitation or thought provided the auther of the "latest" system is a leading scientist on the subject. If asked why they have changed so readily the reply invariably uttered is "because I want to move with the times and be up to date." In a different sphere the same mentality results in men wearing apparel in which they look and, doubtless, feel, though they wont admit it, guys. In the case of Oxford bags and such absurdities the wearer may be able to claim, with some truth, that they afford a modium of comfort. I fear the promising ornithologist, who is placed in the position of Snooks' friend, cannot claim that the trinomial system has afforded him even this.

I would mention here that I hold myself second to none in a proper appreciation of the selfless work done in the past and at present by scientists to further the knowledge of the various subjects they have dealt with. Our debt to these able men is incalculable as by their ungrudging labour alone, often undertaken under very trying conditions, has the valuable knowledge, contained in the literature available on these subjects been accumulated.

No progress in knowledge can be gained without a great deal of hard work and careful and unbiased examination. If the result of such examination be constructive criticism, even though it comes from an obscure and little

known person, then the author of such criticism is working on the right lines and the critieised should feel, if he is sensible, that the system advocated by him has done some good in that it has created sufficient interest in students of the subject to wake them into using their brains.

At the present time, thanks to the advocates of the trinomial system, considerable knowledge has been gained of the climatic and geographical variations in species. The result of the labours of such scientists is a mass of literature of great value in respect to the minute details entered into but which from the large number of subspecies into which one or more of those of the previous standard work on the Indian avifauna have been split, fairly damps the enthusiasm of the average field-naturalist.

It is a well known and established fact, that the fauna of desert areas are lighter in colour than those of the same species inhabiting forested areas of heavy rainfall ; that in India the same species often varies considerably in size between its Northern and Southern limits, the smallest occurring in the South that, when the area covered by a species represents considerable geographical extent, it will be found to vary much in accordance with climatic conditions appertaining in various parts of the said area ; that, between the area inhabited by two varieties of the same species, there will be found a number that are intermediate. Evolution, by natural selection, will, doubtless, in the course of time, eradicate some and alter others of these variations, but having noted their occurrence, and the area in which they are found, we have done our duty to posterity.

The best method to increase the appeal to the average man, keen on the study of any branch of Natural History, seems to me to be easiest accomplished by simplifying the nomenclature used in our standard works, whilst retaining all the valuable information gathered to date.

As we wish to make full use of our knowledge of the variations of each species the use of black and white maps would be of greatest value. I would propose to revert to the binomial system as being less confusing to the field naturalist than the present trinomial system. Let us imagine a specimen page from such a work, and take a bird with marked variations such as *Corvus splendens*. The description would of course be of the type specimen, by which it would be understood that this was the form prevalent over the greatest portion, of the area in which it occurs. Should the bird have been originally described from a locality outside this area, this could be mentioned such as described by so and so from a specimen collected at such and such a place.

First of all the name of the bird (binomially) would be given thus **Corvus splendens.**

Then description of type specimen.

Then description of distinct and marked variations.

A.
B.
C.
D.

Then would come the habits. Although many naturalists have given us notes on the habits yet there is a vast amount still to be learnt about even our commonest birds ; of late years we seem to have learnt more about colour and size variations than about habits. Then the habitat would be shown on the map. The unmarked area being that in which the bird does not occur, the other portions of the map will be so marked as to show at a glance the areas in which the typical and subspecific forms are found.

Even those who have become wedded to the trinomial system are able to see where, what they are pleased to call


INDIAN EMPIRE
English Miles
0 50 100 200 300 400
AFGHANISTAN
KABUL
Chitral
Gilgit
KASHMIR
Srinagar
Peshwar
Indus
A
PUNJAB
Lahore
Quetta
BALUCHISTAN
Bikaner
Delhi
RAJPUTANA
SIND
Karachi
Bhuj
Kathiwar
R. Nerbudda
R. Tapti
CENTRAL INDIA
TYPE
CENTRAL PROVINCES
Nagpur
Jubbulpur
Bombay
Poona
B
Hyderabad
Goa
MYSORE
Madras
Madura
Cochin
Laccadive
Colombo
CEYLON
Trincomali
TIBET
Brahmaputra
Darjeeling
BIHAR AND ORISSA
BENGAL
Ganjam
ASSAM
C
Shillong
BURMA
Mandalay
Myitkina
D
Akyab
Rangoon
Andaman
Mergui
Nicobars
CHINA
SIAM
Bangkok
GULF OF SIAM
ARABIAN SEA
BAY OF BENGAL

Corvus splendens splendens and *Corvus splendens* something else occur and if they like to continue to retain a trinomial complex, they can do so.

In the case of species confined to certain areas, and having no marked variation, a map would not be necessary.

Mr. E. C. Stuart Baker in an article in defence of the trinomial system deprecates the indiscriminate creation of species citing as an example the case of *Corvus splendens* and *insolens* and claiming, and quite rightly, that the last is merely a local colour variation of the former. Yet whilst it is wrong to call them separate species although they are very different even to the unaided eye there is, apparently, no limit to the number of *sub* species that an ornithologist, with the aid of a millimetre scale and a pair of compasses, may *rightly* create. If *insolens* is not entitled to specific separation then why not simplify matters by noting it as variation B or C of *Corvus splendens* in the letter press instead of describing it separately as *Corvus splendens insolens* and to show its distribution on the map. This way will encourage the average naturalist to take a keener interest in the study of Natural history in its different branches.

I feel certain that a return to the binomial system, or a similar or better one that some more able person than myself may evolve, would be welcomed heartily by those who, for the nonce, claim to be ardent trinomialists.

Personally such a revision would not only enable me to believe that Allah should be praised for the diversity of his creatures but would cause me voluntarily to add, Alil Allah. I trust that this article will meet with the approval of some and with the opposition of others and that, as a result, the wiser men of either party may have something to offer for the good of science in general and field naturalists in particular.

C. PRIMROSE.

[We would also like to impress on our fellow naturalists to study the *birds* or whatever else they are interested in rather than their *dry skins*. As Mr. Primrose says there is still a vast amount to be learnt about even our commonest species. In this connection we quote a few lines written by that able world-known naturalist the Rev. F. C. R. Jourdain in a most interesting article on "A study on Parasitism in the Cuckoos." *(Proceedings of the Zoological Society of London 1925 pp. 639 to 667).* He first of all quotes R. Ridgway, who, in the *"Birds of North and Middle America,"* writes :—"There are two essentially different kinds of ornithology ; systematic or scientific, and popular. The former deals with the structure and classification of birds, their synonymies and technical descriptions. The latter treats of their habits, songs, nesting and other facts pertaining to their life-histories.....But systematic ornithology being a component part of biology—the science of life—is the more instructive and therefore more important". Then Jourdain writes :—"It represents with perhaps more frankness than usual what most anatomists and taxonomists feel with regard to the study of other aspects of Bird Life, and discloses some of the weaknesses of present day ornithology. For at the present time there is too great a tendency to work in" water-tight compartments," if one may be allowed to use such a term. The Comparative Anatomist has no knowledge of the bird in life, although every structural development must be closely related to the life-habits of the animals ; serious work on classification and nomenclature can only be carried on by specialists in our great museums where vast series of skins are available for comparison and extensive libraries are at hand ; so that it tends to become more and more the preserve of a close corporation, who regard the naming of subspecific forms as the aim and end of all ornithology, and spend their time in immortalizing one another. All are, however, agreed on one point, and that is the somewhat contemptuous toleration with which all

other branches of "Popular" ornithology are regarded. The study of the life-history of the bird from the egg to its death, its social ceremonies, its breeding-habits, its migrations, its distribution—these are comparatively trivial matters which can be left to the egg collector, the bird photographer, and the bird watcher. Yet a wider and less narrow-minded view of the whole field may induce some qualms as to whether there may not be something to be said on the other side. Possibly the man who by weeks of patient field-work establishes beyond cavil some new law in the history of a species is after all doing quite as good work as a man who pulls out a drawer with 100 skins in it, and after spending an hour or two in arranging them geographically, finds that the northern birds have a slightly yellower tinge on the mantle (invisible of course by artificial light, but perceptible in about 70 per cent., of the specimens by bright daylight)".

[*Editor.*]

The Blue-breasted or Painted Quail.

With regard to this Quail in the Duars, Sir Lancelot Travers writes to me as follows :—"I think this Quail is resident here all the year. One does not see it in the tea as much as the Bustard and Button Quails. Patches of grass near cultivation or on the edge of a thin thatch *barri* are favourite places."

Editor.

Printed by Mr. J. N. GHOSH
at the Star Printing Works, 30, Shibnarain Das Lane, Calcutta
and Published by
Mr. C. M. INGLIS, Natural History Museum,
DARJEELING.