

The

Our New Design

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EDITED BY

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

### Our New Cover Design.

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One member on being shown the design asked our artist whether it was not unusual for a pelican to perch. To avoid the humiliation of similar questions we hasten to explain.

The scene is supposed to be one of those side streams running into a sandy river—the junction of the Indong Jhora with the Murti below Gorumara if you like. The species represented (with scientific names in brackets according to the latest Government circulars) are as follows:—

The bird is not a pelican but meant for the Gurial king-fisher (*Ramphalcyon capensis gurial*) and the object just below intended to be an elephant in the distance; we admit that this requires some imagination. The tree on the left is *Laha-siris* (*Dalbergia assamica*) and on the right the local horse-chestnut (*Aesculus pundwana*). The tracks on the sand are, of course, meant to be tiger and rhino and the fish “reading from left to right” Katli and Mahseer (*Barbus hexastichus* and *B. tor*). The dragon-fly was put in afterwards at the request of the Curator who felt that otherwise entomologists might feel slighted. The identification of the species in this case was left to him and he has so far not succeeded.

The thanks of the designer are due to the Editor-publisher for his help and advice in choosing paper and mixing green ink.

# Journal

OF THE

## Darjeeling Natural History Society.

No. 1.

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

BY

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

(Continued from page 75 Vol. III No. 4).

#### 13. The Tibetan Snow Pigeon.

*Columba leuconota gradaria* Hartert.

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The difference between this and the last are given by Hartert as follows:—"Crown not so dark, more slate-grey, mantle lighter and somewhat greyer, upper wing coverts paler. Wing 239-262 mm. against 230-245 mm. in typical form." On comparing skins of the former from Lahul and of birds from Yumthang in Sikkim the two forms are easily recognized. The latter birds by their rather larger size and especially in being *paler* and much *greyer* on the head, back and wings. The sexes are alike.

Hartert gives the following distribution. "High mountains of Szetschwan in N. W. China and Tibet at least in the Eastern part, apparently to Sikkim. Specimens from Sikkim are difficult to understand. At Darjeeling and Lachung 9000' we still find *C. l. leuconota*; specimens from Gnatong 12400' and Gyantse are larger and brighter. The specimens from "Native Sikkim" in the B. M. are somewhat intermediate." Stuart Baker gives the distribution as:—"North-West China, Szetschwan and Kansu, South Tibet and West to Sikkim; Yunnan."

As stated under the preceding form specimens got by Meinertzhagen at Lachen were this subspecies as were those got by us in October at Yumthang (11,700 ft). We saw flocks at Gyagong (15,000 ft). Bailey thinks this is as high as it ever goes. Ludlow writes that it "is common enough in the Chumbi Valley and I have observed it close to Phari..." and near Momay Samdong (15,000 ft.) but not having obtained specimens can't say for certain to which form they belonged, most probably they were the Tibetan bird. It is curious that the birds got at Lachen (8,800 ft.) in the Lachen Valley and those got at Lachung (8,800 ft.) in the Lachung Valley should prove to be different forms. The two valleys are dissimilar, the Lachen being the bleaker of the two. This may, perhaps, have something to do with it. Meinertzhagen writes in the Ibis, October 1927:—"Common at Lachen (8,800 feet) in mid-October, when several were shot for the pot. Also seen above Chungthang about 6400 feet in late November." We also heard of them at Lachen but got none. Again those seen in both valleys are given as belonging to both races. Those seen by Meinertzhagen above Chungthang in the Lachen Valley, being placed as the Tibetan and those seen by Stevens at about 6000 feet in the Lachung Valley are placed by him under the typical form. This makes a most interesting problem. The birds seen by Hingston in the Rongshar and Gautsa gorges in Tibet may possibly have been the present form. Bailey writing to me says:—"I was surprised to see it in a valley north of the Tsangpo between Lhasa and Samye but I did not get a specimen."

The habits and breeding of both species appear to be similar. Stuart Baker mentions having got eggs from the Chumbi Valley and near Gyantse but this is possibly a mistake. Neither Bailey nor Ludlow have ever seen its nest nor got the eggs there. The latter writing in the Ibis (April 1928) says "Mr. Stuart Baker.....is, I think, wrong in assuming that this bird breeds at Gyantse. Had it occurred there, I could hardly have failed to notice it. The eight birds Colonel Bailey obtained during 1906-09 to which Mr. Stuart Baker refers, were all shot in the Chumbi Valley....." Those we saw, for the most part, hugged the hillside, settling now and again, on the opposite bank to us, of the Lachen river near Gyagong. They flew well alter-

nately showing their backs and bellies the white of the latter making them very noticeable which, otherwise, they were not; they always flew on or back before we could get near them.

Meinertzhagen "found this Pigeon of exquisite flavour, far exceeding that of *livia* or *rupestris*. Stomachs of seven examined contained grain from cultivation and no green food." Those we saw at 15,000 ft were far away from anywhere where they could have obtained grain from cultivation.

(To be continued).

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### THE SNAKES OF NORTHERN BENGAL AND SIKKIM.

BY

G. E. SHAW AND E. O. SHEBBEARE.

(Continued from page 82 Vol. III No. 4)

34. *Dendrophis gorei*. Wall. Gore's Bronze back. Not poisonous.

Wall describes it as "Very like *pictus*. Dorsally bronze brown ending abruptly in the middle of the penultimate row, the overlapped margin of the scales a bright sky blue. A lighter vertebral stripe. Belly, ultimate and lower half of the penultimate rows greenish opalescent. Head ruddy brown above with a well defined black postocular streak continued on to the forebody. Lip and chin greenish opalescent".

The number of costal rows 13 instead of 15 separates it sufficiently from the other Bronze backs.

Costals 13. 13. 9 or 11. Ventrals 187-199.

Subcaudals 139-153. Anal divided (rarely entire)  
Length 2 ft. 8½ inches.

35. *Dendrophis pictus* (Gmelin). Eastern Bronze Back Also called Gmelin's Bronze Back, the Painted Tree Snake and Hindo-Malayan Bronze Back or Tree Snake. Not poisonous.

In the Fauna of India book on Snakes dated 1890 and in all accounts before that this snake is confused with the Indian Bronze Back, our No. 37. It is the first of the three bronze backs whose scaling is figured in E on Plate 2 (Vol. II No. 4) and is distinguished from

theothersby having no band along the sides of the body. Head distinct, rather long. Bronze green above with a lighter vertebral row of enlarged scales. Colour lighter anteriorly and some of the costal scales on the neck are often quite light blue.

The ventrals are light green, but each side of the lateral keels they are much greener and some times even blue.

The keels are marked all along by a fine dark line. A black streak runs faintly marked between nostrils and eye and very distinctly from eye to neck passing sometimes well down the body but is eventually lost in the lateral blue scales. Below this black streak the supra labials are yellow. Vertebral scales about as broad as long, usually till well past the middle of the body they are a little longer, but a darker posterior margin gives a broader appearance. Then for about a third of the length they are as broad as long. Pupil of eye round.

Very timid. Spends most of its time in trees and bushes and is able to spring from one tree to another.

Scaling 15. 15. 11. (rarely 9). Ventrals 190-211.

Subcaudals 115-145. Length to 46 inches.

36. *Dendrophis proarchus*. Wall. Dibrugarh Bronze-back or Wall's Bronze-back. Not poisonous.

Very like the preceding snake but has a black line along the junction of the ventrals and costals beginning at the neck and continuing to the anus and above this the first row of costal scales and about a quarter of the next, are pale yellow and form a light band above the black. There is the same black streak indistinct from nostril to eye and well marked from eye to neck as in the last species. The general colour is perhaps less vivid and the ventrals have not much green in the yellow, nor is there any difference in colour as the lateral keel is passed. The differences from No. 35 are therefore well marked but one could easily confuse it with No. 37 if the two small light patches on the parietals in the latter are missed. Note therefore the well marked black streak from eye to neck, it is very indistinct in 37. Pupil of eye round.

Vertebral scales are distinctly longer than broad. Wall BNHS. 19. 827 says that the anal scale is undivided. We have found that this is not a constant character.

The only other difference he gives is the number of the teeth Maxillary 27-28 in place of 20-21 pictus, the last three perhaps more enlarged than in pictus.

Palatine 15-16 instead of 13-14.

Pterygoid 24-27 instead of 21-26.

Mandibular 25-28 instead of 21-22.

Costals 15. 15. 11. or 9. Ventrals 181-194.

Subcaudals 115-152. Length to 4 feet.

37. *Dendrelaphis tristis*. (Dandin). Indian Bronze-back also Seba's Bronze back. Not poisonous.

As mentioned under No. 36 this snake is to be indentified most easily by the two small light specks on the parietals, figured in D, Plate 3 (Vol. II No. 4). It has on the whole less blue about it than No. 36 and decidedly less than 35. Bronze brown above is a nearer description than the bronze green given for them. From the eye to the neck is the same sharp demarcation between the yellow supralabials and the bronze of the head above, but instead of a jet black streak there, a very slight darkening of the ground colour is all that occurs. The light band along the sides is exactly like that in No. 36 except that it takes in a good half of the second row of costal scales while No. 36 takes in just under half. The lateral keels on the ventrals have the same fine dark line as the other bronze backs. Like all the other bronze backs it lives almost entirely in bushes and trees. It is timid and when disturbed retreats with marvellous rapidity and never shows fight. That it has courage, however, is evinced by the fact that it overcomes most truculent lizards. Its food is generally lizards but frogs, toads, blind snakes, insects and birds eggs have all been recorded.

There is a curious legend in Southern India that its bite is fatal and that after it has bitten a man the snake ascends a tree and watches the burning of the corpse with vindictive satisfaction. Dr. Henderson says he has known a mock funeral, with an effigy, organised to save the bitten subject for when the snake descends from the tree the poison it is supposed to have injected leaves the body and the otherwise doomed person recovers. (Wall. BNHS. 19. 785).

Costals 15. 15. 11. or 9. Ventrals 189-198, but very much more than this over India as a whole. Subcaudals 116-136. Length to 54.3 inches.

**Oligodon.**

The next genus is a large one which was formerly split up into two, *Oligodon* and *Simotes*. Colonel Wall however in 1910 pointed out (B. N. H. S. Vol. 19.) that the differences were insignificant, and combined the two under the earlier named genus.

In these snakes the head is short with no sign of a neck, the eye is rather small with round pupil, the rostral shield large giving a blunt snout. The suture or join between the two internasals is only half or less than half that between these and the prefrontals, while that between the two prefrontals is half or less than half that between the prefrontals and the frontals. This feature is sufficient to identify the genus. They all have some sort of a coloured loop from the neck over the back of the head to the frontal scale and generally others across or partly across the forehead, one modification is figured as J in Plate 3 (Vol. II No. 4). The ventrals all have marbling of some kind or the so-called domino marking.

They are called Kukri snakes because of the blade like character and shape of the posterior *maxillary teeth*.

38. *Oligodon melaneus*. Wall. The Blue-bellied Kukri Snake, or Wall's Kukri Snake. Not poisonous.

We have not found this but the type specimen came from Sukna. It is described by Colonel Wall as "Uniformly blackish above merging to greyish in the flanks. Discerned closely it is seen to be very finely speckled with black on a grey ground. Beneath, the male is uniformly blue grey of a beautiful shade; the female is of the same shade but speckled with black".

Costals 15. Ventrals 152-159 Subcaudals 40-42.

Length 13 inches.

39. *Oligodon arnensis*. (Shaw) formerly *Simotes arnensis*. The Common Kukri Snake. Not poisonous.

This should occur in the Dooars but is not recorded for the hills this side of Nepal. Colonel Wall says it is not an easy snake to identify. Scale characters alone are safe. Having decided it is a Kukri Snake by the 17 rows of costals at mid body the brevity of the sutures between the internasal and prefrontal shields, and the simple type of scaling one should see that the following points co-exist. (1) A divided anal shield (2)

presence of a loreal (3) seven supralabials and (4) more than 40 subcaudals, of course taking care to see that the tail is not imperfect.

The ground colour is some kind of brown fading more or less on the flanks while the back is crossed with black bars which are narrowly but usually distinctly outlined with whitish or pale yellow. They do not reach the ventrals but break up in the flanks into streaks. They vary in width but are always narrower than the intervals between them. The head is adorned by three conspicuous black marks which are often bordered narrowly with white or pale yellow. The anterior mark is crescentic and passes across in front of the eyes to reappear below them. The median and posterior are sagittate the apex of the former reaching to the frontal and the arms to behind the gape while the apex of the latter passes to the parietals and the arms to the sides of the neck.

The posterior sagitta is much the broader one.

An active and voracious little reptile, easily taking alarm and hastily attempting concealment.

Costals 17. 17. 15. Ventrals 164-202. Subcaudals 41-59. Anal divided. Length 24 inches.

( To be continued ).

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### Observations on the Wild Dog.

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During my 36 years of shikar in India I have had many opportunities of observing the habits &c. of this animal and at the request of the Editor of this Journal ( who says he won't get home unless I send him an article !!!! ), I am writing my experiences in the hope that they may be of interest to my brother sportsmen. I have been fortunate in my experience as, owing to the shyness of this animal and its innate fear of man, many Indian sportsmen have never seen it.

The Wild Dog (*Cuon dukhunensis*), native name Ram or *Ban-Kutta*, is found over the greater part of India where there are large tracts of forest, both in the plains and in high hilly country. I have seen it in the hills at an elevation of 7000 feet. They are very

numerous in Assam and in the Jagan Valley in Mysore. I have also seen them in great numbers in the Feudatory States of Orissa. Years ago it was also abundant in the Central Provinces, but owing to the stringent measures taken by Government and the ample reward offered for their destruction they have been considerably reduced so far as this Province is concerned. In Assam the Wild Dog is increasing to an alarming extent and game is being exterminated in some parts. When I left India in 1926 the reward had been discontinued, which will still further lead to an increase of these pests. Nothing keeps them down, no epidemic seems to affect them, trapping and poison are no good, so shooting them is the only means of destruction. Happily, as I will relate hereafter, the Wild Dog has a cannibalistic tendency and I imagine that when game cannot be procured, they destroy and eat each other, I have never seen a dead Wild Dog in my wanderings; perhaps, when one dies, it is eaten by the rest of the pack.

It is curious how often one finds them with one eye destroyed and useless; this, I think, is caused by a stick during the mad rush after game. This is analagous to the number of one-eyed mahouts that one sees, who ride the *koonkies* in *mela* shikar after wild elephants.

The Wild Dog is the most hated animal in the jungles and once they appear in any locality all game, especially deer, is either killed or flies elsewhere. It has been said that elephants, tigers and leopards also dread this marauder, but this I do not believe. Herds of bison and buffalo do not mind them and Wild Dogs would never dare to attack a herd of these animals, though they might, perhaps, pull down a solitary bull. I have never, however, known of an instance of this sort. Their chief victims are deer, principally sambhar and barking-deer, but they also prey on wild pig and, in one case which I will narrate further on, I actually saw 10 or 12 of them attack an enormous solitary boar.

The Wild Dog is always in the pink of training, sound both in limb and body. When the skin is removed there is not a particle of fat and the muscles are perfect marvels. The only other animal that resembles him in muscularity is the Monitor-lizard or *go samp* a very active creature.

There are two varieties of Wild Dog in Assam; one, larger and lighter in colour than the other but there

is no difference in shape. The Wild Dog is a foxy-looking beast and it also resembles the ordinary "pi dog" but the muzzle is more pointed.

They are generally found in packs, but during the breeding season, the dog and bitch go about together.

They hunt silently. An animal is singled out and chased and chased until it is brought down. In most cases the hunted animal takes to water, generally a pool with steep cliffs on one side. In one case I saw what was, evidently, an organized drive. Some of the pack were posted at the top of a nullah and the rest drove the animal up to them, but as one of the former fell to my rifle their little game was stopped.

Every sportsman must be familiar with the native idea that before Wild Dog chase an animal they urinate in a circle some distance away and that the hunted animal will not go beyond this, but breaks back. There is also another story that they urinate into the eyes of their victim and thus blind it; the performer must be a jolly good shoot to do this. I do not believe in either of these yarns.

When attacking any animal the main object is to disembowel the beast. A poor sambhur hind rushed into one of my camps with several feet of intestines protruding from her belly. They also attack the head lacerating it frightfully. I have seen a sambhur fawn with the whole of its muzzle torn and both eyes destroyed.

It is a curious fact that the selected victim is more often a stag than a hind. I think the reason for this is that the stag's antlers must impede it during its blind rush through the dense forest and thus make it the easier animal to bring down. It is a good thing that a stag is selected otherwise there would be no game left. In the Mysore jungles I once came on the "earths" of Wild Dogs and counted no less than 26 antlers lying round the burrows.

I do not know whether Wild Dogs breed in these colonies; the only earth I ever dug out was an isolated one, from which I took a litter of 5 pups, probably 7 weeks old, nasty smelly little beasts; they, however, did not attempt to bite. I brought them to the station where my regiment was stationed and made a present of them to my C. O. He had a large cage made for them, but they proved uninteresting and always appeared dull and depressed at their captivity. When a cow or

goat strayed into the compound they, however, brightened up; a glint of savagery appeared in their eyes and they all crouched down and stared at the animal.

The smell of the Wild Dog is similar to that of the jackal only not so rank. I have heard the Wild Dog make a whining sound like an ordinary dog, especially when one of a pair loses its mate; when shot it yelps just like a "pi dog." They are wonderfully silent when on the move and the tail, which is never raised, is whisked rapidly from side to side. They are adepts at feigning death and when one is shot, be sure that it is dead or else you will never see it again. They are likewise very hardy; one that I shot with a .360 express and which was afterwards hammered with a bamboo by my shikari, very nearly got away while we were not looking.

The Wild Dog prefers fresh meat but if game is scarce, will eat carrion such as the kill of a tiger or leopard several days old. I forgot to mention that sometimes a hole in a rock is chosen for the litter. I once shot a Wild Dog absolutely devoid of hair, it was affected by some skin disease. The hair is generally full of ticks. Many have scars the result of wounds either from fighting or from sticks &c. in their mad pace through the jungle.

I will now relate some of any experiences with these animals.

(1) I got news of a kill and had a *machan* put up. The kill, which was a cow, had dropped her calf in her struggles and this was lying a few feet away. At about 10 p. m. I heard a tearing noise and turning my night light and rifle on to the place I saw as many as 6 or 7 Wild Dogs at the kill, their eyes giving a red reflection when seen by the flash light. They looked up, but were not scared so I let them continue their feast. Four hours later I heard the angry cough of a leopard, the real owner of the kill; shortly afterward there was a rushing noise and again turning my light on to the kill I found the dogs were still there; they had apparently driven the leopard away and would not let him approach the kill. Morning broke and while awaiting the arrival of my men with the rope ladder, I noticed that most of the kill as well as the calf had disappeared. Suddenly I saw a large black animal come over the opposite ridge and took it

to be a bear, then there was a munching sound, but, due to the density of the undergrowth, I could not see what animal was making it. There was a rush down hill and in a clear space not 30 yards from me I saw a huge solitary boar surrounded by 10 or 12, Wild Dogs, some attacking him in front and others in the rear though none actually coming to grips with him. The old boar turned round and round like a top the whole time champing his tusks and at times charging his enemies. I watched the encounter for five minutes and then wishing to secure the boar I shot him. He rolled down the hill and was afterward found dead; a fine massive beast 39 inches at the shoulder with tusks 9" long. The Wild Dogs dispersed and I sat still in the machan. In about a quarter of an hour's time I saw, not far from the scene of the combat, two Wild Dogs carrying off the calf between them. I fired at the nearest one with a .450 soft nosed bullet and although killed, the body stood up for a few seconds before toppling over.

I afterwards discovered that the old boar was making a meal off the stomach of the kill and its contents when he was attacked.

I often wonder how the combat would have ended had I not interfered. I expect it would have been in favour of the old boar as the dogs appeared frightened to get on to him. It was a sight that falls to the lot of few and I would not have missed it for anything. From this incident I learnt the following facts:—

- (1) Wild Dogs are not afraid of the flash-light.
- (2) Their ability to drive and keep a leopard off its kill.
- (3) Wild Dogs don't fear the sound of a rifle so, if you happen to shoot one from a *machan*, sit tight and quiet and you will probably get several.

(2) On this occasion I again sat up over what was, apparently, a leopard's kill judging by the tracks. This time the real owner didn't put in an appearance and at dawn, the kill was still in its original place.

During the night vigil I heard a terrific crashing in the bamboo jungle below me and turning on my "Everready" I saw an elephant which was thoroughly alarmed at the flash and went away crashing through the jungle.

At dawn a couple of Wild Dogs, a dog and a bitch, appeared and made their way to the kill about 40

yards away with noses close to the ground and tails whisking from side to side. I shot the leader which rolled down a few feet into the scrub. I waited and in about 10 minutes time the other dog came along and coming up to the corpse of its mate began worrying it. I fired and it dropped dead lying across the body of its dead mate. They were slung on to a pole and taken to the magistrate. The D. C. possessed a bull-dog which had been up to then, always on very friendly terms with me, but after the exhibition of the Wild Dogs it constantly growled at me and on one occasion attacked me.

(3) In one district where I was stationed there was a celebrated place for bear near some hot springs. There were numerous caves in the vicinity and the only way of dislodging the bears was by means of bombs.

One day while a friend and myself were busy at this game we heard a great splashing in a stream about 100 yards above us. We stopped our bombing operations and proceeded in the direction of the noise. On coming near the place we saw, in a pool, three Sambhar, two hinds and a fawn. They stood with their backs towards a high rocky cliff and on the opposite bank some red objects were seen, evidently Wild Dogs. The two hinds constantly struck the water with their forefeet. We fired at the dogs and dispersed them.

The poor terror-stricken deer allowed us to come within three yards of them. The fawn's head was terribly lacerated so we put it out of its agony. The hinds disappeared into the jungle and we were glad to have saved them from a horrible death. The Wild Dogs were quite silent although they had brought their quarry to bay.

(4) Once, when in Cuttack on leave, I accepted an invitation from a Feudatory Chief, to shoot tiger. I left for the Palace, which was some 20 miles away, on a country-bred and we had to swim a river en route. When we landed on the opposite bank the path lead through dense forest. Proceeding on our journey for a while we then stopped for a rest and while doing this I heard the noise of heavy breathing and turning round saw a pack of Wild Dogs not fifteen yards from us, with tongues lolling out and looking very savage. I was in the saddle at the time and

after watching them for a bit we proceeded at a walk. On looking back I was surprised to see the pack following us: so I gave my nag a dig and we trotted on but still the dogs followed us. It then struck me that the beasts meant mischief so I galloped my horse for the remaining 6 miles not drawing rein till we reached the Palace.

I can't account for the behaviour of this particular pack as the Wild Dog has an innate fear of man. Possibly they had been unfortunate in the chase and were hungry and in an excitable condition. They may only have seen my horse and had designs on it. At any rate they saw "red" and it was a most exciting experience and probably the only instance of a man being chased by Wild Dogs.

(5) I will now show that there exists in Wild Dogs a cannibalistic tendency.

Once, when in camp, my wife and a friend while wandering along the bank of a river came to a spot where had, apparently, been a struggle and fight amongst some animals. Reaching camp they told me that there was a lot of blood and red hair about and my wife also brought back an ear to show me.

Being much interested in what I heard, next morning the three of us visited the spot. The evidence was so plain that I had no difficulty in reconstructing the tragedy. The ear, hair and tracks in the sand were those of Wild Dogs. Apparently the pack had decided on eating one of their number and a struggle ensued and one was killed. The corpse was dragged along the ground into the jungle.

At first I took the ear to be that of a barking-deer but on examining it and the hairs on the spot and the absence of all deer tracks convinced me that only Wild Dogs took part in this tragedy.

I was more certain about it when as already narrated, I saw a female Wild Dog spring on the dead body of her mate and worry it. No doubt she would have eaten it had I not shot her.

Let us hope that as game gets scarcer, this cannibalistic taste will increase, and for want of food they will kill and eat each other.

Before leaving India game was getting so scarce that Wild Dogs took to killing domestic cattle. This is a very serious menace in the future and the

Government of India would do well to consider the problem. The only thing that can be done is to offer ample rewards for the slaying of these vile creatures, the terror of the wild denizens of the jungle and enemy of the sportsman. In the Central Provinces, I understand, the reward is Rs. 15 for each Wild Dog and in Assam where the curse is worst Government should offer the same amount and engage special native hunters to exterminate these pests.

Menaggio,  
Lake of Como, Italy,  
14th April 1928.

H. S. WOOD  
Colonel, I. M. S.  
(retired).

We again turn to Dunbar Brander as we always do when we wish to find out anything about the habits of wild animals. There are two recognized species of Wild Dog. The Indian Wild Dog (*Cuon dukhunensis*) found in suitable localities all over India and the Malay Wild Dog (*Cuon rutilans*) from Burma, Malay Peninsula, Java, Sumatra and it is said, Borneo. The differences between these are given as follows in the Summary of the Indian Mammal Survey.

"A.—Larger and stouter; hair long, with wooly underfur, ferruginous red to tawny; hindfoot over 175 mm. ... 1 *dukhunensis*, Sykes.

B.—Smaller and slighter; hair short, no underfur; bright ferruginous, hindfoot 150 mm. ... 2 *rutilans*, Müller."

They, as stated by Col. Wood, run mute but will also, according to Dunbar Brander, "open" to assemble the pack, and the leaders, especially in long grass, give short sharp "yaps" to indicate the line, when necessary".

Dunbar Brander has never seen them breeding in colonies but considers it "conceivable where the number of suitable breeding places is limited".

With regard to Wild Dogs attacking man, the same author heard of one case "in which a man was regularly attacked. This was reported to have occurred in the Khandwa district.

Wild Dogs do not invariably show a fear of man. A friend and myself once came across one on a forest

road. It was coming towards us and when close up my friend fired at it with a ball cartridge from a collecting gun, the shot went high. The dog did not seem to mind the shot, nor us, a bit and it was only when we waved our arms about that it turned into the forest.

Dunbar Brander also mentions that they "will sometimes remain stationary staring at one even after some of his companions have been shot."

With regard to their numbers in the Central Provinces the same author wrote in 1927 "wild dogs nevertheless are still numerous throughout the Provinces."

We are not at one with Col. Wood where he advocates the extermination of these creatures. We quite agree that their numbers should be thinned considerably but do not believe in the extermination of any wild animal even though it is a pest.—Editor.]

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Note by Mr. E. O. Shebbeare.

"In the Goalpara district, Assam they appear to always pull down their quarry when close to water. I have twice seen a dead-beat deer (once a barking deer doe in kid and once a small sambhar stag followed across a river bed in the first case by a single dog and in the second case by 5 and pulled down just as they reached the water. Also all kills I have seen have been in river beds. In the Pekna river I saw 5 old kills within about a mile. The biggest pack I have counted so far was 7, mostly two and threes.

Teague had a pup practically tame in the C. P. It died, when about half grown, choked by a chicken bone.

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## SAL SATELLITES

by  
Ida Colthurst.

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From the broad belt of the Terai, through the lower and middle forests to the wealth of woodland and thicket which shrouds the nether spurs and buttresses of the snow peaks, the Himalayas provide the tree lover with a constant and peculiarly thrilling interest. "A perennial festival of which the guest sees not how he should

ture,' as Emerson said of the woods; but withal a 'festival' associated with some feeling of awe and shall I say apprehensiveness? A feeling which in some tracts might be an instinct of lurking hidden danger; in others, where the woodways are really nothing more than groves, a sensing of that vague traditional spirit of the forest

"Interfused around  
A thrilling, silent life"—

And nowhere perhaps is this dim, mysterious 'Spirit of the Forest' implied so convincingly as among the close-set, bare unknotted stems of the *Sal* (*Shorea robusta*): the place is so full of life, and if only rooted and stationary, yet a life full of malice and arrogance. Silent and sinister, each tree rears itself up as if it is the Yggdrasil of the Norse conception, that monster whose boughs are through all the heavens and its roots through all the world! Every *Sal* is filled with a tremendous ambition and is a keen competitor in the great race for light, which after all, only a certain number can capture: the others bide their time, vigilant always and waiting for the first physical failing of their elder brethren to rush up relentlessly and secure a place in the light. Nor has the *Sal* a silent growth: the first impression of the forest, that of profound repose, is quickly dispelled and there is a multitude of half defined small sounds of constant movement, the slur of a falling leaf, the restless swaying of branches, the stealthy grating of twig upon twig, the sighing of heavy foliage like the wash on far-off shingle-- The *Sal* is an overwhelming growth always bringing to my mind those legendary trees in Waterfields' Fourth Avātra who

"Heard the Creators' word, as when  
His mandate bade them sweep  
O'er hill and desert, rock and fen  
With rapid growth unchecked, till men  
Were forced, into the deep—  
The breezes had no power to blow,  
And all that fearful shade below  
Was silent as the tomb.  
The restless sands did forests know,  
And Himavān his crest of snow  
Veiled with a verdant plume"—

In addition to this characteristic of family redundancy the *Sal* has another remarkable peculiarity, that of showing a decided preference for the company of certain other flora, almost a conscious emotion of one tree set to another, an eclecticism so decided, that it cannot be overlooked. Other Indian trees also collect a following in a small way; the *Sisoo* (*Dalbergia sisoo*); the *Khair* (*Acacia catechu*), the *Rhododendron* and the *Fir*. But the *Sal* is accompanied in his orbit by the greatest number of satellites--

It is not merely a question of ecology, that bond between geological structure, elevation, moisture, latitude and plant life; scores of other vegetable organisms which tolerate the same physical factors are not constant members of this charmed circle of tree friendship. Nor do I mean an association savouring of parasitism where plants, such as the *Orobanchæ*, depend wholly on others for their water and food since their structure is entirely destitute of green (*chlorophyll*) cells; nor of semiparasitism, such as *Loranthus*, where chlorophyll being present in the leaves carbon can be assimilated and a certain amount of food material manufactured, yet it attaches itself by little round tubercles to a host and sends special sucking organs deep down into the sap; nor even those purely symbiotic alliances evidenced in our many *Lichens*, all tiny communities which so beautifully perfect the system of give and take, each being composed of two different organisms, an *Alga* and a *Fungus*, the *Fungus* having no chlorophyll merely acting as a sponge, absorbing moisture from bark or stone, using the organic substance therein for its own nutriment and passing on all inorganic materials to its commensal partner, the *Alga*, which can use them by virtue of its chlorophyll cells. Satellites of certain trees are none of these and include in their number monstrous trees, creepers, shrubs and humble herbs.

The *Sal* is very frequently associated with *Ficus infectoria*, the sacred *Pakhar* of the Hindu Trinity representing Siva the Destroyer, easily recognised by its thin long stalked leaf and small sessile fruit of tiny golden pears; *Ficus rumphii* (*rhabar*) an ally of the *Pipal* and like it often epiphytic and with firm little leaf-buds folded fast, opening at the first rush of spring into a rosy transparency. *Sterculia villosa* (*Udal*) and *S. colorata* (*Phirphiri*) muffled closely while yet

leafless in ochre and brilliant crimson bloom and providing a strong inner bark which the forest people convert into elephant dragging breast bands--*Dillenia Pentagyna* (*Tatri*) an indicator of poor soil but useful for making excellent charcoal. *Garuga pinnata*, (*Dabdabi*) with slender branches hanging down and in the spring swathed with masses of tiny yellow flowers whose short period of bloom is amply compensated for by their wonderful fragrance, flooding the forest so delightfully that one wonders

“What can this wind-blown sweetness be,  
That plays at hide and seek with me?  
Some faint old witch-craft sure it is,  
No earthly flowers smell like this”

The *Bauhinias* are represented by *B. malabarica* (*Taki*) a small white flowered tree whose acid leaves are eaten by the people and that gigantic climber *B. vahlii* (*Borla*) with enormous leaves 18 inches in length so useful for conversion into *ghooms*—*Ochna pumila* with large golden flowers shining like miniature suns is a shrub which colonises rapidly from a perennial rootstock, after the jungle fires—*Desmodiums* form a thick undergrowth of silvery, green softness; *D. Cephalotes* (*Bodle Kuru*) almost a small tree with a silky, hoary triangular stem; *D. pulchellum* with long racemes of yellow flowers guarded by bracts; *D. confertum*, (*Chipti Kuru*) with large blue flowers and silky pods; *D. latifolium* (*Chepe Kuru*), whose velvety leaves and brightly purple flowers, is in constant attendance *D. gyrans*, (*Bolu*) whose two lateral leaflets of the trifoliate leaf work so unwearyingly up and down according to the intensity of the light that it is known as the Telegraph plant; *Indogifera pulchella* (*Hikpi Kung*) appears in sheets of pink and woos many insects but especially the small bees. *Spatholobus roxburghii* (*Debre lara*) climbs to the highest branches with a fluted stem and is very beautiful with white flowers and a gummy red fruit; *Pueraria tuberosa* (*Belari-lara*) a near relation follows suit and is still more attractive when carrying long racemes of pale blue blooms; its large tuberous roots are eaten by the forest folk.

*Flemingias*, tall shrubs, muster strongly; *F. strobilifera* (*Bolu*) recognised by its broad, oval leaves and flowers cased in semi-circular bracts; *F. stricta* (*Batwasi*) with similar but very silky bracts and three angled

tems; *F. congesta* (*Banchwasi*) is on the higher ground and has pink flowers and a small velvety brown pad hiding two black seeds; *F. capitata*, in the flats between the *Sal* jhars displays heads of densely gathered blue flowers. *Dalbergia stipulacea* (*Tatebiri*) a climbing tree also has blue flowers; *Millettia auriculata* (*Gavjo*) is exceedingly common and has white flowers at the ends of sturdy branchlets. *Acacia pennata* (*Arju lara*) gains ascendancy by means of its strong prickles and *A. ferruginea* (*Khour*) waves spikes of pale gold. *Vitis latifolia* (*Pani-lara*) is a true traveller's joy in that it yields a quantity of clear liquid from its softly fibrous wood. Rough-leaved *Grewia vestita* (*Sealposra*) yellow flowered *G. sapida* and tawny, hairy *G. scabrophylla* also occur; the last in the grassy areas where the *Sal* is more open.

More than one variety of the *Leea* family (a close relation of the vines but different in having no tendrils) is found in these forests; *L. Macrophylla* (*Bulyettra*) with large silvery leaves provides in its seeds necklets as charms to hang round the necks of the children; *L. alata* (*Lal galeni*) with rusty flowers and small red berries; and the stiff *L. crispa* (*Phekri galeni*).

*Semecarpus anacardium* (*Bhalai*) the marking nut tree which furnishes a thin gummy substance from the fruit used by dhobis for marking clothes; *Odina wodier* (*Bara dabdabbi*) a near relation, so ugly while leafless, so beautiful when in foliage. *Careya arborea* (*Kumbi*) whose radiant pink and white, but most evil smelling flowers, are scattered at dawn to carpet the ground with beauty. *Alstonia Scholaris* (*Chatiwan*) with smooth grey trunk, outward sweeping branches and tiny white starlike bloom. *Lagerstræmia parviflora* (*Borderi*) with fragrant, crumpled white flowers and a wool the best procurable for charcoal. Several mighty *Terminalia* or country almonds too, trees elegant at all times, whether when brave in their masses of shining green leaves, or when transfigured into a veritable Horeb's bush, burning and flaming in a blaze of amber, orange and scarlet at the time of their fall. *T. balerica* (*Bahera*), *T. chebula* (*Harra*) and *T. tomentosa*. (*Saj*) a monster of the lower hills which provides most of the Kukri handles of the people. *Morinda angustifolia* (*Dala Hurdî*), an ally of the *Cinchona* with fragrant, white globose flowers is a shrub whose roots or rather the

bark of them contain a dye of two colours, a red and yellow which change to crimson under the action of alkalis and is the *Hardi* dye so largely exported from the lower hill forests.

*Symplocos racemosa* (*Chumlani*), another tree satellite is the famous *Lodh* of Indian commerce and possesses not only valuable medicinal properties but a brown dye and is also used as a mordant for other dyes. It furnishes the powder employed at the Holi festival and the fluted, pitcher shaped seeds are strung into rosaries.

*Oroxylum indicam* (*Lotilla*), has unpleasantly smelling, fleshy purple flowers, later changed into large, flat sword-like capsules. *Barleria cristata*, whose blue flowers are prized in our gardens is common; so is the light blue *Clerodendron* (*Chua*). And a lovely little perennial which covers the ground with leafy rosettes and small white flowers is *Premna Herbacea*.

Truly indeed may the *Sal* say:—

“I covet not to wander  
Who hold far lands in fee,  
For where I stand unmoving

The broad world (of vegetation) comes to me”—

NOTE:—The Paharia names are in brackets.

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### Told at the Bar.

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The other evening I wandered into the bar of a certain Club in Calcutta and joined a table at which sat a D. I. G. and seven Policemen spinning shikar yarns. If you want to find any Policeman in Calcutta between the hours of six and nine in the evening, the only place you need look is in this bar.

It's a lucky thing the anarchist party has'nt discovered this. What a bag they could make with one Mills bomb on a Saturday night!

When my turn came, I told them of a little incident that happened in the Sunderbans last cold weather. Towards the end of February duck of many species begin to congregate in enormous flocks, preparatory to their departure north. We came on such a flock of no less than 3000 birds in a wide river.

There was no cover. So it was impossible to get within gun shot range. The two friends I had on the

launch with me decided to try their luck with high velocity rifles. They each fired a shot at a range of about 200 yards and a whistler was seen to fall. We picked it up and I held a post mortem. There were two wounds—one in the neck, the other in the wing. From their position it was difficult to see how they could have been caused by one bullet and the conclusion I came to was that both of my friends had hit the same bird.

Quite an innocent little story, but I saw a suspicion of a smile on several faces and some one called hastily for another round of drinks.

When this had arrived and been duly honoured, the D. I. G. was heard murmuring about something he had done in his early days—many years ago.

(Do D. I. Gs. live for ever? Junior members of that service have been heard to assert that they do)!

"It was in Bihar, boys, a wild country in those days. I was only an assistant then, out with my Bara Sahib chasing a gang of Thugs—been after them for months—travelling night and day—we worked in those days—cutting our way through impenetrable jungle, sleeping in the open. Dak Bungalows? No, there were none in those days. Eaten to bits by mosquitoes and leeches—we had to rough it in those days.

Country almost uninhabited, food difficult to get and—drink? What? No, we couldn't afford whisky. Beer? It didn't exist. Muddy water was all we got. nowadays you travel in luxury—motor cars, tundance boxes—we walked and sweated blood.

I remember one terrible day—a cup of tea before dawn and then we toiled all day through perfectly damnable country. What little food we had left had been lost crossing a river the night before. Dusk was coming on—we were starving—down and out. God alone knew where our next meal was coming from.

Suddenly we saw a flight of duck in the air they came towards us—we seized our 303s and fired as they passed.

A bird fell and we dashed towards it, hoping against hope that it had not been blown to bits and that enough for two remained. Imagine our joy when we found there was no mark on it! Our bullets had passed so close to its head that the shock had been sufficient to kill it.

We roasted it then and there over a wood fire and by Jove it was good! You don't work enough to enjoy your food these days.

Well, would you believe it? Those seven Policemen accepted their D. I. G's story without a word.

Was it fear or esprit-de-corps? If the latter, I take off my hat to them, but anyhow the contest was unequal. I gulped down my drink and fled.

J. H.

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### VARIETIES OF THE MAHSEER.

BY G. E. SHAW AND E. O. SHEBBEARE.

Those who have done much fishing for Mahseer generally distinguish more than one variety of this fish, which appears to be variable, or perhaps it would be more correct to say that it comprises several varieties for we have not noticed intermediate forms between the types which we distinguish. Thomas in his "Rod in India" distinguishes three forms but his types do not tally with those we know in this district and therefore two at least of them must be added to the number we find here. Our experience, confined entirely to the Dooars, the Teesta and North West Assam seem to point to the four following varieties.

1. The usual type with the back and top of the head olive green, the scales between this and the lateral line with increasingly narrow olive green bases while the rest is golden. Below the lateral line the scales are white or silvery and the fins and tail yellow, with or without a reddish tinge.

2. A fish similar in build or possibly slighter heavier in proportion to its length but chiefly distinguished by its colour which approaches that of the Katli, that is to say, coppery rather than golden on the scales of the upper part and slaty rather than yellow on the fins and tail. The colouring is darker throughout.

3. A lighter built fish with a shallower and decidedly longer head; in colour greyer or more silvery than the commonest type. We have always called this the "Greyhound" - a name invented we think by the late Captain Allan who always maintained that this form was the most sporting of all mahseer, as its sprightlier form would lead one to suppose.

MAHSEER (Barbus Tor)

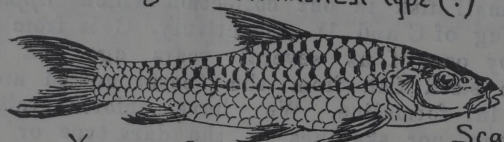
A



Young of Commonest type (?)

Scale  $\frac{1}{2}$

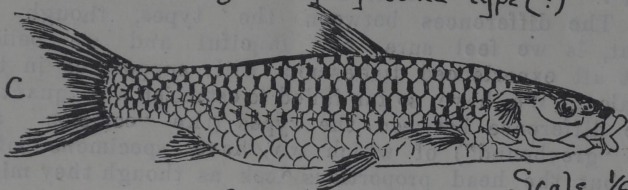
B



Young of "Greyhound" type (?)

Scale  $\frac{1}{2}$

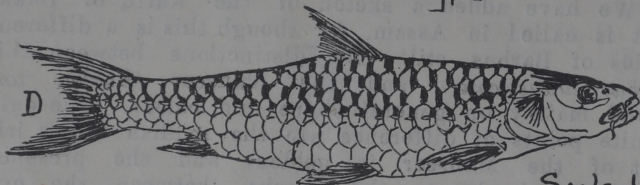
C



Commonest Type

Scale  $\frac{1}{6}$

D



"Greyhound" type.

Scale  $\frac{1}{6}$

KATLI (Barbus hexastichus)

E



Scale  $\frac{3}{8}$

P.S.

4. The very thick-lipped red-finned type, the so called cock-fish and possibly a breeding phase rather than a variety, though, so far as we know, there is no evidence of this.

We are writing this article with a view to eliciting information from fishing members and to stimulate further investigation.

The illustrations are the best we can do with the material at present at our disposal. A and B are drawn from small fish in our collection which appear to be the young of C and D respectively. C is from a sketch made by one of us several years ago and D from a medium sized fish from the Teesta gutted and preserved in formaline. We have unfortunately neither specimens nor sketches of the dark type or the "cock fish".

The differences between the types, though not great, is we feel sure not fanciful and we believe that all experienced fishermen will support us in this opinion. We have so far failed to establish any quantitative difference between the types (the "common" and the "greyhound") of which we have specimens before us, but the head proportions look as though they might provide a key.

We have added a sketch of the Katli, or Bakar as it is called in Assam, for though this is a different species of *Barbus* still the distinctions between this (*Barbus hexastichus*) and the Mahseer (*Barbus tor*) depend mainly on general shape and colour. The only definite points of difference are the reddish brown iris (that of the Mahseer is golden) and the presence of minute pimples on the cheeks, between the eye and the mouth, in the Katli

For the sake of the inexperienced, some of whom we have known to call other large fish Mahseer, we add the information that both the Mahseer and the Katli have four "barbels" or short feelers, one pair from the outer edges of the upper lip and one pair from points higher up and nearer the centre of the lip, from where a moustache would be in fact.

We appeal to fishermen to let us know how far their observations agree with our own and to keep a look out for varieties among their fish in future. Notes on times and places of occurrence of the varieties would be valuable.

A full grown mahseer is not an easy thing to preserve but the head in spirit or formalin together with a note of the total length of the fish would be useful and might serve to determine the difference between the varieties. Another point which may possibly prove of value as a distinction is the distance between the tip of the front pair of fins (pectoral) and the root of the second pair (ventral).

Very little is known of the breeding or feeding habits of the mahseer and any observations bearing on this would also be of value.

