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THE BENGAL NATURAL HISTORY SOCIETY

Estd 1923

The Society under the name Darjeeling Natural History Society was started about the end of 1923, the objects being to maintain the Museum in a proper condition, to promote the study of Natural History and to get together as complete as possible collections of Natural History specimens from a limited area, including "the Civil Districts of Jalpaiguri and Darjeeling and the State of Sikkim", as well as what could be procured from the neighbouring countries of Tibet, Bhutan and Nepal.

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CORRIGENDA

LOCAL LISTS OF LEPIDOPTERA FROM ASSAM

By

D. G. SEVASTOPULO.

Vol. XXVIII, No. 3, 1956.

- P. 117, line 12—(*Syntomis*) *sperbius* for (*Syntomis*)*sperbius*
 " 20—(*Phocodermia*) for *Phocodermia*
 " 25—Lymantriidae for Lymantriidae
 P. 122, line 26—*boeticus* for *voeticus*
 " 33—Add "in 1941" after "One female"
 P. 123, line 30—*katinika* Westw. for *Katinika* Westw.
 P. 124, line 23—*Meganoton* for *Maganoton*
 P. 125, line 27—*troglodytus* for *troglodytus*
 P. 127, line 20—Insert "an" before "unidentified"
 P. 129, line 4—(*Odonestis*) for (*odonestis*)
 " 11—99a for 99a
 " 13—Insert "1015 *Dasychira pennatula* F. (*securis*
 Hbn.)—One in 1938" after record of *Dasychira*
virescens
 " 14—1033 for 1935
 " 29—(*Spilosoma*) for (*spilosoma*)
 P. 130, line 8—*Chionaaema* for *Chionema*
 P. 131, line 17—*Ophidares* for *Ophidores*
 P. 134 Add date "London, 23.xi.47" at foot.

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 The Assam Spotted Babbler.
 The Northern Bay Owl.
 The Grey-winged Blackbird.
 The Indian Scarlet Minivet.
 The Indian Thick-billed Flowerpecker.
 The Indian Short billed Minivet.
 The Yellow-throated Minivet.
 The Burmese Small Minivet.
 The Sikkim Yellow-vented Flowerpecker. }
 The Indian Scarlet-backed Flowerpecker. }
 The Nepal Fire-breasted Flowerpecker. }
 The Indian Lorikeet.
 The Turkestan Stone Chat (Male).
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DECEMBER 1956

Table of Contents

	PAGE
1. Salt licks and Salt earths in forest areas (<i>with one plate</i>)—A. C. Gupta, I.F.S.	143
2. Feeding habits of the Marsh Sandpiper (<i>Tringa stagnatilis</i>)—R. S. Dharmakumarsinhji	146
3. A contribution to the Ornithology of the Sunderbans Dr. S. C. Law, M.A., Ph. D.	149
<i>(Continued from p. 65, Vol. XXVII, No. 2)</i>	
4. Birds of the Duars—(Late) C. M. Inglis, F.Z.S., C.M.B.O.U.	153
<i>(Continued from p. 115, Vol. XXVIII, No. 3)</i>	
5. Tale of a Hare—M. E. Wolfe Murray	161
Miscellaneous Notes:—	
1. The Hodgson's or Orange-bellied Flying-Squirrel (<i>Petaurista magnificus</i>) with one plate—Samir Sen.	
2. Tiger Tracks at high altitude in Northern Sikkim —Major N. D. Jayal. 3. Additions to the list of Mammals of the Rajasthan Desert—Ishwar Prakash.	
4. Brutality or humanity—V. S. Rao. 5. Location of Siliguri Town—A. C. Gupta.	166



Salt-earth at Khumani



Impression of hoof of Gaur
on salt-earth.



Evidence of visit of Tiger at salt-
earth. The stratified mother rock
from which salt-earth is derived
clearly shows up in this picture.

Photos—*Author*.

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**SALT LICKS AND SALT EARTHS IN
FOREST AREAS**

By

A. C. GUPTA, I.F.S.,

*Conservator of Forests & Superintending Engineer (I. & W.),
West Bengal.*

Man is guided mainly by reason and partly by instinct, but for the animal instinct is the sole guide. It is instinct that tells the animal how to rear its young how to protect itself against predators and where to find its food. Instinct even teaches it how to keep itself in condition and how to doctor itself in the case of an ailment or accident. It is common knowledge that when it has eaten something disagreeable the dog swallows a quantity of grass and disgorges the offensive food. In the animal world there are no doctors in our sense of the word, but nature does the doctoring by transmitting an urge which we have chosen to call instinct.

To draw the required amount of its nourishment a herbivorous animal has to consume very large quantities of food and its intestines which are voluminous harbour a great many varieties of worms and bacteria many of which are either parasitic or pathogenic. Such intestinal fauna and flora multiply and often throw the system of the host out of balance. The animal either starts losing strength and vigour or gets sick. It is then that the urge of nature comes into play and the animal is led by instinct to look for salt in its jungle home.

Pure salt does not occur naturally in the jungle, and the form in which it occurs depends on the geological formation and the climate of the region. What the animals seek in the sub-montane region of North Bengal is a soft stratified rock which is generally white, but is occasionally slaty grey and is usually found in a semi-crushed condition. It is restricted to the toe of the foothills and is usually exposed on river banks and occasionally in landslips. The visiting animals actually eat this rock in some quantity and do not lick it, and the places where such rocks are incident are not therefore salt-licks in the correct sense of the term. It would perhaps be more appropriate to call such rocks salt-earth. After having a dose of the salt earth animals generally become lethargic and go off their feed and the excreta they drop looks distinctly black and is rather loose. After a few days, usually 2 to 5, all is well again and the activities of the normal life are resumed. The salt earth being available only in certain parts of the foothills animals in the plains of the Terai and the Dooars and in the middle hills have often to travel far to doctor themselves. Herds of Gaur (*Bos gaurus*) known as *mithun* in Nepalese, which climb to the middle hills in summer to avoid the blood sucking flies have to descend to the foothills periodically. The major salt earths in North Bengal hold a great deal of interest for the naturalist for a great many well-trodden game paths converge to these from all directions, and under peaceful conditions a large concourse of wild life takes place. Apart from the scientific standpoint it is a very pleasing sight to watch from a vantage point an assemblage of wild animals at a salt-earth, and the author has often had that pleasure. Predators, parasites and sometimes the abominable human poacher take the fullest advantage of this large concourse of animals at one place, and either infest or visit the salt-earths. In shady situations ticks infest the salt-earths in very large numbers, and one of the things to be done for the improvement of salt-earths is therefore to remove the shade where it exists. It would be still better if a length of the game paths leading to a salt-earth were periodically sprayed with D.D.T., and a light ground fire put through the surrounding jungle in February or March to kill leeches and other parasites in the resting stage.

As in North Bengal no real salt licks exist in the districts of Chittagong and Chittagong Hill Tracts (now in East Pakistan) where the author served a number of years. The herbivorous animals eat a white sticky earth which occurs in pockets at the foot of the low hills and which is probably the product of weathering in situ of a rock that quickly disintegrates upon exposure. It would be interesting to know if a chemical analysis of this earth was ever attempted.

In the drier parts of India certain rocks in steep banks exude a solution of some salts, which dries up on exposure and forms a dirty saline crust on the vertical face. The animals actually lick this crust with their tongue, and recently the author saw a fine example of this in the Palamau Reserved Forest in Bihar where the marks of licking were clearly discernible. What salts the crust contains is not known to the author. The universal use of the term salt-lick suggests that in the early days the salt eating habit of wild animals was watched and studied in the drier parts where for the reason of thinness of the jungle such study was comparatively easier.

In the tidal swamp of the Sundarbans about 1,200 sq. miles of Reserved Forest still exist, and the animals that abound in these forests include the Cheetal deer and pigs. The water all around is highly saline and there is no sweet water at all. Salt eating much in excess of need is therefore obligatory for all animals, and in fact had it not been a case of survival of the fittest and the application of the method of selection by nature over a long number of years all the animals would have been dead of salt poisoning many years ago. To an animal introduced into the Sundarbans from a sweet water area it would be a case of "Water water everywhere, but not a drop to drink." The problem of animals in these forests is therefore not one of finding salt, but it is one of eliminating salt.

A close study of the natural occurrence of salts in forest areas, collection of samples and their analysis, and the determination of their comparative efficacy in conditioning the bowels of herbivorous animals would constitute a useful item of research for a Zoological Chemist. The result of analysis

of two samples of salt earth collected by the auother in the North Bengal forest is given below. The analysis was undertaken by the late Dr. S. L. Hora, a friend of the author, and may therefore be taken as dependable.

	Total soluble portion in H ₂ O	Bicarbonate.	Total alkalies (Na + K)
<i>Sample I.</i> (Salt earth collected from Kumani).	0.34%	0.24	0.10
	(CaO, MgO, Al ₂ O ₃ Cl', SO ₃ ' CO ₃ - Traces only (BaO, SrO - Nil.		
<i>Sample II.</i> (Salt earth collected from Choklong Block (Gulma)	0.40%	0.27	0.13
	(CaO, MgO, Al ₂ O ₃ Cl' SO ₃ CO ₃ - Traces only (BaO Sro - Nil.		

It would seem that the active pirnciple in the salt earth is composed of the bicarbonate of sodium and potassium, which however is present in very small quantities.

FEEDING HABITS OF THE MARSH SANDPIPER

(*Tringa stagnatilis*) Bechstein

By

R. S. DHARMAKUMARSINHJI.

Last year, on 30th December, 1955 while I was watching Migratory Shore birds in the salt pans near Bhavnagar, I came across a huge flock of Waders which, at first, made me think that they were Knots (*Callidris canutus*) because the birds were packing in such a manner as the Knots. However, approaching the flock of birds which had packed together very closely and were actively feeding, I noticed that the birds had longer shanks than the Knots. Soon I realised that there

were other smaller units of these Waders and identified them as the Marsh Sandpiper (*Iringa stagnatilis*). The large flock, I estimated at about 1,000 birds and they appeared to be feeding in a peculiar manner, in a patch of muddy shallow saline water. The birds were actively probing with their bills and shuffling their legs in almost regimental fashion. All the birds, it is interesting to note, were facing one direction, I think against the wind and in almost a crescent pattern. Here I would like to quote an extract from page 131 of the 'Birds of Kutch' by Salim Ali, about this species :

"Thus, as the bird moves forward he has methodically prospected a band of area instead of just a random probe here and another there."

This gives a sort of idea of the feeding behaviour of the flocks of Marsh Sandpipers I saw, for they were scouring a particular patch only. The smaller units were behaving in a similar manner and as soon as they had covered that particular feeding patch the birds would fly to join the larger group. After sometime I noticed that the larger group had finished feeding in the spot and one by one were slowly flying to join another smaller unit, which consisted of about 300 to 400 birds, thus making the group larger. So dense was the packing of these birds that it appeared to me that they were almost rubbing shoulders and all facing one direction.

I do not know how many people have noticed such large gatherings of Marsh Sandpipers. In "The Birds of West and Equatorial Africa", Volume I, Page 430, David A. Bannerman, writes :—

"It sometimes gathers in immense numbers on the shore. Several thousands together have been identified on the coast of Ondo Province." He further says :—

"It visits such inland localities as the Upper Niger, and reservoirs and inland waterways and pools are more likely to attract it than the coastal areas,

save perhaps during migration or just prior to its departure north."

Salim Ali, in 'The Birds of Travancore and Cochin', Page 388, says :—

"Singly, in twos and threes or flocks, at marshes and tidal creeks near the coast." And,

"Status and Habitat : Winter visitor. Fergusson (*Jour. Bom. Nat. Hist., Soc.*, xvi, p. 9) mentions flocks on the seashore at Manakolam Bar and at North Parur."

"General Habits : In common with the Green-shank it has the characteristic habit of pivoting, or seeping around in half circles from side to side as it probes the bottom mud for food, often with its head and neck completely submerged in the shallow water."

I have never seen it in such large numbers in the past, but I might have missed such occasions of watching the birds so closely at the time of migration. Packing together while feeding or otherwise on the sea-coast appears to be a characteristic of this bird at the time of migration. It is a fact that many birds are seen singly or in small numbers in fresh-water *jheels* and water-courses. In 'The Birds of Kutch' Page 131, (Salim Ali), under habits, it is written as follows :

"Seen singly or in scattered twos or threes on the swampy edge of ponds and *jheels* often wading into the shallows. Rarely on salt-water puddles, and practically never on the sea-shore."

The last line does not appear to be very precise but may apply to Kutch only, I do not know, but I have seen them on the sea-side in Saurashtra in fairly large numbers. I hope 'Bird-Watchers' will look out for more data in the large gatherings of Marsh Sandpipers on the sea-coast.

A CONTRIBUTION TO THE ORNITHOLOGY
OF THE SUNDERBANS

By

S. C. LAW

(Continued from page 65, Vol. XXVII, No. 2.)

Dicrurus macrocerus Vieill. Black Drongo.

Common and widespread throughout the forest; quite a familiar sight—frequent in attendance on grazing cattle in the open cultivation around forest villages. Its ecological preference for the proximity of human habitations is apparent.

Dicrurus leucophaeus longicaudatus (Jerd.). Indian Grey Drongo.

Apparently much less common, though in winter months more numerous.

Known as *Neel Phinga* in Lower Bengal.

Dicrurus caerulescens (Linn.). White-bellied Drongo.

Not seen in the forest belt, nor in any open tract outside.

Blyth (1846) states—not common in Lower Bengal. "Very rare" according to Tytler (1854) who obtained a specimen from tree-grove in Barrackpore. Stray specimens recorded by Cunningham (1903) about Calcutta in winter.

Dicrurus aeneus Vieill. Bronzed Drongo.

Not uncommon; usual on high trees.

Dicrurus hottentottus (Linn.). Hair-crested Drongo.

Rather common in the Sunderban forest.

Dicrurus remifer (Temm.). Lesser Racket-tailed Drongo.

Rare. Sometimes a straggler to the well-wooded areas of the neighbouring districts of Jessore and 24-Perganas. Stray specimens obtained by me even from rural environs nearer Calcutta.

Discurus paradiseus grandis (Gould). Large Racket-tailed
Drongo.

Noticed in evergreen forest on high *Keora* (*Sonneratia
apetala* Ham.) trees.

Recorded from 'the Bengal Soonderbuns' (Blyth, 1846).

Acrocephalus stentoreus (Hempr. & Ehrenb.).
Indian Great Reed-Warbler.

Frequent on winter migration; in singles, sometimes in
small parties. A great skulker in shrubs and bushes on river-
banks.

Acrocephalus dumetorum Blyth. Blyth's Reed-Warbler.

Not rare in winter; an infrequent passage migrant to
deltaic alluvium; single birds skulking among scrub jungle
and low bush.

Acrocephalus agricola (Jerd.). Paddy-field Warbler.

A cold weather visitor.

Blyth (1845) found it very abundant in reedy ground
near Calcutta.

Locustella certhiola (Pallas). Pallas's Grasshopper-Warbler.

Rare winter migrant, partial to reeds and long grass.

Recorded from Calcutta (Blyth, 1845); extends probably
into other parts of Lower Bengal (Jerdon, 1863).

Orthotomus sutorius (Penn.). Indian Tailor-Bird.

Common and widespread resident species.

Noticed in the forest limit as well as outside.

Cisticola juncidis cursitans (Frankl.). ♂ Streaked Fantail-Warbler.

Resident and local migrant. Very often many pairs
during the rains breed amongst low grass close to one another.

Commonly observed in the surroundings of paddy cultiva-
tion and in stretches of grass land bordering marshes.

Chaetornis striatus (Jerd.). Bristled Grass-Warbler.

Abundant all over Lower Bengal in high grass (Jerdon, 1863).

Phragmaticola aedon (Pallas). Thick-billed Warbler.

Only on passage and rare on winter migration.

Records from the vicinity of Calcutta (Blyth, 1845; Tytler, 1854); "inhabiting marshy jungle or woods and bushes on the edges of the jheels or in the paddy-fields" (Munn, 1894).

Hippolais caligata rama (Sykes). Sykes's Tree-Warbler.

Recorded from Lower Bengal, where it occurs abundantly (Blyth, 1847). Mainly a cold weather visitor, affecting branches of high trees.

Sylvia hortensis (Gmel.). The Orphean Warbler.

Sometimes noticed on winter migration in Lower Bengal. Recorded from Barrackpore near Calcutta. (Baker, 1924).

Phylloscopus affinis (Tickell). Tickell's Willow-Warbler.

In winter practically throughout the plains.
Common about Calcutta (Blyth, 1847).

Phylloscopus collybita tristis Blyth. Brown Willow-Warbler.

Winter visitor to the Bengal plains. Most common and very abundant in swampy places with bushes and jungle; occasionally in groves of trees.

Phylloscopus griseolus Blyth. Olivaceous Tree-Warbler.

Not uncommon in winter.

Phylloscopus fuscatus (Blyth). Dusky Willow-Warbler.

Not rare in the cold season.

Phylloscopus inornatus humii (Brooks). Hume's Willow-Warbler.

Winter vagrant.

Recorded from Calcutta (Baker, 1924).

Phylloscopus t. trochiloides (Sundevall). Dull Green
Willow-Warbler.

Abundant winter visitor.

Common in the vicinity of Calcutta (Blyth, 1843).

Specimens on spring passage evidently do not leave the plains of Bengal till the middle of May (Ticehurst, 1938).

Phylloscopus trochiloides viridanus Blyth. Greenish
Willow-Warbler.

Winter visitor and passage migrant.

Very common and abundant in Lower Bengal (Blyth, 1843), and environs of Calcutta (Tytler, 1854).

Phylloscopus (trochiloides?) nitidus Blyth. Green
Willow-Warbler.

Recorded from Calcutta in winter (Blyth, 1843).

Phylloscopus reguloides (Blyth). Blyth's Crowned
Willow-Warbler.

Obtained in the vicinity of Calcutta late in March; not uncommon in the cool season (Blyth, 1843).

Seicercus burkii (Burton). Black-browed Flycatcher-Warbler.

Recorded from the neighbourhood of Calcutta in the cold season (Blyth, 1843).

Prinia flaviventris (Deless.). Yellow-bellied Wren-Warbler.

A specimen obtained in *Buri-goalini* forest-station on August 3, 1944; affects stretches of *Hargoza* (*Acanthus ilicifolius* Linn.) shrubs in swampy environment. Rather common, resident.

Prinia inornata Sykes. Indian Wren-Warbler.

A resident bird occurring in congenial surroundings of grass, bush and low cover near cultivation; observed outside the forest limit.

(To be continued).

BIRDS OF THE DUARS

By

(LATE) C. M. INGLIS, M.B.O.U., F.Z.S.

(Continued from page 115, Vol. XXVIII, No. 3, August, 1956)

FAMILY ARTAMIDAE

164. The Ashy Swallow Shrike

Artamus fuscus Vieillot

Fauna Brit. Ind., 2nd. Ed., No. 763

Description.— Length 7 inches. Sexes alike. A blackish patch in front of the eye; head and neck dark slaty grey; upper plumage vinaceous brown; longer feathers above the tail, white or smoky grey; wings and tail bluish grey; the latter tipped with white or smoky grey; lower plumage very pale vinaceous brown, the patch below the tail white or vinaceous white.

Bill mauve blue, or pale blue, with a black tip; iris dark brown or blood red; legs slaty.

The principal features of this bird are the long wings, short square tail and curved, conical pointed bill.

Distribution and habits.— A very common, resident bird, with the appearance of a large grey swallow as it circles round and round and then comes to rest on some high branch. It is very gregarious and the birds perch close up to each other, sometimes as many as 30 or 40 may be seen on a branch huddled close together and that is how they roost at night. While in flight it continually utters its rather harsh cry which has been syllabalized as *ma-a-a*, *mr-a-a*, *ma-a-a*. It has a slow sailing flight with, every now and then a fast beating of the wings. It obtains all its insect food on the air and is said never to descend to the ground but it certainly, nearly does so as O'Donel took a photo of one sitting on his bird bath. It is said to eat various numerous butterflies of the Genera *Danais* and *Euploea*, it would be interesting to record any observations on this subject.

The breeding season is from April to June. The nest is a shallow, flimsy cup, composed of roots, fibre and grass, usually without any lining and placed on the projecting stump of a broken branch, in a hole in a tree stump, at the bases of leaves of a palm or on the rough projections from which leaves have fallen. The eggs number 2 or 3 seldom 4, and the ground colour varies from white to buffy cream, marked with blotches of reddish, or purplish brown and underlying markings of lavender and purplish grey, more numerous at the thick end, sometimes forming a cap. They measure about 0.95 by 0.65 inches.

FAMILY DICRURIDAE

165. The Crow billed Drongo

Dicrurus annectens (Hodgson).

Fauna Brit. Ind., 2nd. Ed., No. 765

Description.— Length about $10\frac{1}{2}$ inches. Sexes alike. Whole plumage black, glossed with steel blue, except on the sides of the head.

Young birds have the plumage barred with white.

Bill and legs black, iris brown.

This Drongo differs from the King Crow in not having such a deep fork to the tail, by the outermost feathers being distinctly curved upwards. Deignan gives its scientific name as *Dicrurus bucophaeus bucogenis* (Walden).

Distribution and habits.— O'Donel said it was common in the summer and bred in May and June but gave no details of any nests. It is often seen singly or several may be seen not far from each other. Its flight is rather heavier than that of the Black Drongo and like that bird, its notes are various, some being very harsh. Like Drongos in general it is very pugnacious and is insectivorous in diet.

With regard to their nesting in the Himalayan foothills Stuard Baker states that they build the usual Drongo type of nest placed in the horizontal fork of one of the outer branches of a tree sometimes low down, at othertimes high up, but always on a slender branch. The site is in thin scattered

forest, or in mixed bamboo and tree forest. The eggs number 3 or 4 and are very handsome. Their ground colour varies from creamy white to warm salmon and the markings are streaks and blotches of reddish or chestnut brown, with underlying markings of neutral tint or grey, measure about 1.04 by 0.78 inches.

166. The Himalayan Black Drongo or King Crow

Dicrurus macrocerus albirictus (Hodgson)

Fauna Brit. Ind. 2nd. Ed., No. 767.

Description.— Length 13 inches. Sexes alike. Whole plumage black, glossed with steel blue, a small white spot generally present at the angle of the gape.

Bill and legs black, iris red or crimson.

This Drongo has a long and deeply forked tail only curling up slightly at the ends.

Distribution and habits.— A very common, familiar bird, resident every where. It is found in any kind of country but prefers it open and is always seen in garden. It is one of the birds which use telegraph wires and other spots of vantage, such as bare branches of trees and the backs of grazing cattle, from which to dart off after any luckless insect and capture it either in the air or on the ground, it is also an arch pirate and may be seen chasing another bird and appropriating its food. Drongos are bold and pugnacious, attacking even Eagles and Falcons. I once, in Bihar saw one chase a Laggar Falcon, but the latter bird slowed down, suddenly, in its flight and as the King Crow shot past, captured it. The name King Crow is derived from this habit of attacking and driving off Crows and more dangerous enemies like birds of prey. It does not molest such harmless birds as Orioles, Green Pigeons, Turtle Doves etc. and these birds, being probably aware of its pugnacity, often build their nests on the same tree as that of their, presumed, protector. The King Crow is a beneficial bird to the agriculturist as it captures very few beneficial insects and takes toll of locusts, grasshoppers, termites, beetles, cutworms etc. As already mentioned many of the

insects are captured on the ground but its long tail does not permit it to move freely about there. During the big grass fires this is one of the birds which may be seen catching escaping insects almost through the flames.

It has a long breeding season from April to August, but May seems to be the chief breeding month of this bird in the Duars. It is curious that such a wide awake bird should be so easily cuckolded by the Indian Short Winged Cuckoo (*Cuculus m. micripterus*). H. Storrs saw this bird feeding young Cuckoos on several occasions and had a King Crow's nest on a white Siris tree (*Albizzia procera*) in his compound and noticed the nestling Cuckoo on the 25th May. The nest is a broad, shallow cup, composed of small twigs, grass-bents and roots bound together on the outside, with a certain amount of cobweb. It is placed in the fork of a tree not quite at the extremity of the branch and often, at a considerable height from the ground. The eggs number 3 or 4 but 5 are sometimes laid, they vary from pure white or white, sparingly, spotted with deep blackish brown, to creamy pink, or deep salmon pink, blotched with reddish brown or claret. They measure about 1.05 by 0.75 inches.

167. The Indian Grey Drongo

Dicrurus leucophaeus longicaudatus Jerdon

Fauna Brit. Ind., 2nd. Ed., No. 774

Description.— Length 12 inches. Sexes alike. Upper plumage glossy indigo, in front of eye blackish, lower plumage dark grey.

Bill and legs black; iris red to deep crimson. The tail is long and slender, widely forked and with the ends curling upwards.

Distribution and habits.— This is also a very common Drongo in the district. Unlike the King Crow it frequents more open forest and clearing inside it, it is however, like that bird, commonly seen away from forests, in tea-gardens and Bungalow compounds. Its habits are very similar to those of the last bird. It occurs singly and in pairs. O'Donel saw

one sit alongside a small Bee hive and deliberately pick off Bees and swallow them. I once saw one, in the Haldibari garden, pounce on and carry off a spotted Munia.

168. The Northern Bronzed Drongo

Chaptia aenea aenea (Vicillot)

Fauna Brit. Ind., 2nd. Ed., No. 780

Description.— Length $9\frac{1}{2}$ inches. Sexes alike. Whole plumage black glossed with steel blue, which in certain light show bronze, green and lilac reflections except on the abdomen and below the tail, which are tinged with grey.

Bill and legs, black; iris brownish red to red.

The feathers of the crown, and neck, are pointed, the bill is flatter than in other Drongos and the tail is much forked.

Distribution and habits.— This handsome little Drongo the smallest we have, is a very common forest bird all over the district. It much frequents trees alongside roads through forest where it perches on some branch and sweeps at any passing insect returning afterwards, to its perch. It has many melodious notes and also many harsh ones and is an excellent mimic. It has the same pluck as the larger Drongos and its habits do not differ from those of the rest of the family. It is insectivorous and secures its prey in the air.

The usual breeding months are from April to early June. Its nest is a small edition of that of other Drongos, placed in the slender fork of a tree, often near a forest road and sometimes in bamboos it has a preference for a tree which hangs over water and also, sometimes, selects one which is growing in low scrub jungle. The eggs number 2 to 4 and the ground colour varies from pinkish, fawn to pale salmon, pink, with a zone of reddish pink spot, some eggs are boldly marked with reddish brown. They measure about 0.82 by 0.61 inches.

169. The Indian Hair Crested Drongo

Dicrurus hottentottus hottentottus (Linnacus)

Fauna Brit. Ind., 2nd. Ed., No. 782

Description.— Length $12\frac{1}{2}$ inches. Sexes alike. Whole plumage black, highly glossed with metallic steel blue reflections on the crown and hackle feathers, wings and tail glossed with bronze and steel green.

Bill and legs black; iris dark brown or brownish-red. This large Drongo has a long, much curved, bill and some fine, long hairs springing from the anterior crown and extending as far as the upper back. The tail is nearly square and the ends of the outermost feathers are much curved upwards. The feathers on the sides of the neck are hackled.

Distribution and habits.— This fine Drongo is very common both in forest and in more open country especially when a Simul tree (*Bombax malabaricum*) is in bloom. It then can be seen probing into the flowers for insects and as Deignan remarks "getting its face well dusted with the yellow pollen" insects are often captured on the wing and "from the branches and trunks of trees, momentarily supporting itself with beating wings like a huge, black butterfly" according to the last named naturalist. Stanford observed that "in flight the shape of this bird, especially of the upturned tail feathers, is remarkably like that of an aeroplane, and this resemblance is more pronounced by the "vertical nose-dives", with which it is constantly displaying". It is seen in parties of considerable numbers assemble when a large Simul tree is in flower.

It probably breeds at elevations between 700 and 2500 feet. The breeding season is from the end of March to the end of April but some birds breed later. The nest is built in the horizontal fork of a branch of a tree situated in forest, or mixed bamboo and forest about 15 to 25 feet from the ground. It is quite a typical King Crows nest but rather larger and more untidy. The eggs number 3 or 4 rarely 2 and 5 and the ground colour is pale cream but varies from pure white to deep salmon. The markings consist of rather longitudinal pale reddish blotches fairly profuse everywhere or sparsely freckled

with deep purple. The eggs measure about 1.12 by 0.81 inches.

170. The Indian Lesser Racquet tailed Drongo

Dicrurus remifer tectirostris Hodgson

Fauna Brit. Ind., 2nd. Ed., No. 786

Description.— Length to tips of central tail feathers 11 inches, the outermost feathers extend another $14\frac{1}{2}$ inches of which $10\frac{1}{4}$ is bare shaft. Sexes alike. Whole plumage black, except on lower flanks where the feathers are silvery grey; upper plumage, throat, neck, breast and tail highly glossed with steel blue and in some lights, the gloss on the head and breast is violet.

Bill and legs, black, iris crimson.

This beautiful Drongo is easily recognised from the next in having the terminal portion of the outermost feathers webbed on both sides and not twisted as in the larger bird. It has no crest but a dense pad of long feathers, on the forehead, lying over the bill.

Distribution and habits.— Common in the forests and may often be seen on trees near roads going through them or in open glades, it seems to be especially fond of trees in the neighbourhood of a forest stream and also frequents bamboo jungle. It is a pretty sight to watch one with its long tail, feathers waving in the air. I have many times seen it in hunting parties of small birds. It captures its insect food on the wing and its flight is slow and dipping. It is generally seen singly and is wholly arboreal. Its notes are varied and melodious.

It probably breeds between 1500 and 2500 feet in the foothills, during April and May and June. The nest is built in a tree either in an open glade in the forest near a stream, or in bamboo or scrub jungle and is very similar to the nest of other Drongos. They are generally placed below 20 feet from the ground, sometimes, even within hands reach. The eggs number 3 or 4 and are the deepest coloured of all the Drongo's eggs. The ground colour varies from pale pink to rich salmon

pink, or terra cotta and are blotched and freckled with dark reddish brown blotches and underlying grey marks, sometimes the blotches are more numerous over the whole surface. They measure about 1.05 by 0.75 inches.

171. The Assam Large Racquet tailed Drongo

Dicrurus paradiseus grandis (Gould)

Fauna Brit. Ind., 2nd. Ed., No. 789

Description.— Length to end of central tail, feathers 14 inches, the outermost ones extend another 13 inches. Sexes alike. Whole plumage black, glossed with steel blue, except on the throat, abdomen, vent and inner webs of wing. Bill and legs black; iris brownish red to crimson lake. This large Drongo differs from the last in having a large hackled crest curling back over the crown and the racquet feathers of the tail are broadly webbed on one side of the shaft, gradually spiralled and twisted upwards. It is also much larger.

Distribution and habits.— A common forest bird, known as the *Bhimraj*, especially in forest which is humid and dense, but also frequenting that which is deciduous or of bamboo. It is generally seen singly or in pairs sometimes in parties and is a bold bird. It is also one of those which joins hunting parties of small birds, woodpeckers etc. flying from tree to tree. It has a large variety of notes, some harsh but many melodious and it is a wonderful mimic, imitating many birds and other sounds. Stuart Baker tells of one which used to sound the reveille every morning with absolute correctness and punctually. It makes a charming pet but should be confined in a cage of its own. It is entirely arboreal and captures insects on the wing or from the branches. It is insectivorous and feeds on bees, wasps, beetles, locusts, butterflies, termites etc. It readily, eats plantains and according to Jerdon, raw meat in captivity.

The breeding months are April and May and it makes a shallow cup shaped nest of tendrils, roots, stems of grass, snaps of leaves etc., and generally, more or less like a transparent net. It hangs in the fork of a slender, outside, branch

of a tree in the forest, usually about 25 feet from the ground but sometimes, as low as 5 or as high as 50. The eggs number 3 or 4 with a ground colour varying from white to deep terra cotta pink and marked with blotches spots or specks of reddish brown or purple with underlying marking of pale neutral or lavender.

(To be continued).

THE TALE OF A HARE

By

M. E. WOLFE MURRAY.

It was on the evening of 26th July (1955), that a boy brought me a very young leveret, for which he wanted 8 as. At first I refused as I very much doubted if I could rear the poor little thing, but at last I took it.

I was assured that it would eat grass, but of course it was much too frightened, to do much with, I did try to get down a few drops of warm milk, and remove the bamboo "string" from off its hind leg. I fortunately had a small basket handy in which I could put straw and a warm cloth, also a hot water bottle wrapped up. A large sized Detol Bottle is just the thing, a small animal can then sit on the flat surface and be very comfortable. Plenty of outside wrappings round the basket were also necessary for warmth, I had had bitter experience of the difficulty of rearing these tiny animals without any proper artificial heat, they die of cold very soon if not carefully protected and kept very warm.

It was in some trepidation that I opened the basket the next morning, but the wee thing was certainly alive, though still dreadfully disinclined to co-operate over feeds, and all that day was quite an anxious time as I could only get a few drops into its mouth at each feed. I was feeding it all this

time with warm cows milk and glucose. My relief was great when at night time it really took several small spoonfuls, and I could feel its tiny teeth granting on the spoon. Then it was tucked up for the night with its hot bottle and much hope, I can not do anything about feeding young things between the hours of 10 p.m. and 7 a.m. this adds greatly to the difficulties of rearing "orphans" of this sort.

It was a great relief to find in the morning that my tiny charge had taken a real turn for the better, he was quite friendly and active and very hungry, in fact it was altogether a different matter now, he "lipped" my fingers, and sucked the spoon, and though the feeds were only small amounts, about a good dessertful spoon each time, he was very ready for them, and I was able to give him two hourly feeds all through the day. What always seemed to be a natural end to each feed was a regular cuddle, snuggling into the crook of my arm or up my sleeve, before being put back into its basket with the hot bottle re-filled, it was so sweet to see it sitting on the top of the bottle, while it was still small and then later propping itself up, the front paws on the top of the bottle and its "tummy" against the warm side!

Friday, 29th. This morning on opening up the basket, it took a flying leap, fortunately I caught the wee thing in my hands, but had to hurry to feed him, he was really ravenous and took a much bigger feed; when my own breakfast came I mixed a little of the porridge into the milk. We use a Rolled Oats of sorts, and cook it without much salt, this the Babe, as I was still calling him, liked a lot, and I put some aside for the rest of the day's feeds, and put what was needed each time into a small aluminium container which was then warmed thoroughly by standing it in hot water. He was weighed this morning after one of the feeds and was about $5\frac{1}{2}$ oz. Another delight was to see him sit up and clean himself, washing his face and using both tiny paws. He also I noticed "chewed the cud." these things happened after a good snuggle under the bed-cloths. He never messed immediately after a feed so was always quite safe to cuddle and pet, and he was fast becoming a most attractive baby hare.

Sunday, 31st. Was the first time he would look at any grass, he did that night eat two small blades of a special fine kind of grass. But it gave him a very loose motion, and the following morning his basket was rather messed up. He normally passed quite clean dry pellets, that were easily shaken out of the cloths and straw. So I came to the conclusion that it was still a little soon to give him grass as a regular diet. About this time I let him have a good-night romp on my bed. It was the loveliest thing to see him play, and make that wonderful twisting leap into the air, coming down in almost the same place, but facing the opposite direction. He was fast becoming quite a person, and we decided he must have a proper name so called him "Timothy" supposing all the time that he was of the male variety! He now weighed a full 6 oz. and was growing fast, and as he was eating well his feeds were gradually lengthened out to five feeds between 7 a.m. and 9 p.m. this was naturally a relief, the clock had not to be watched so carefully. He used to be very ready for his "congee", nearly knocking the food out of the spoon in his haste, but he still liked best to be fed, and not to be given it in a saucer. He was quite tame with me, but I could never get him to show off his pretty ways in front of other people, he knew at once if someone strange was coming and would freeze wherever he happened to be at the moment.

He was given grass again on Tuesday, and this time thoroughly enjoyed it all; we also tried carrot, very finely chopped and put in with the "congee", and this turned out to be much liked and became a "firm favourite" which never lost its attraction for him, I tried turnip but that was never much liked. He now spent the best part of the day in a large packing case with a wire lid, and was only in his basket at night, with his hot bottle, and plenty of coverings over the basket. It was only when he began showing signs of eating his way through the basket and he spent the nights as well in his big box, that I gave up giving him a hot bottle at night. It is essential to keep leverets very warm especially through those hours in which they are not so often fed. But I soon began to put a little grass in for him so that he should not suffer from "night starvation"! He put on weight fast during the next week or so, at a fortnight old, he weighed 8 oz.

and at three weeks he turned the scales at 1 lb., so there was no need now to worry over his health, but alas he was still so timid of strangers.

By now I had cut out the mid-day congee feed, and gave only grass then, he was always very particular about the kinds he liked, some he would only have to "make a change", others he liked in quantities and often, vetchling was one of the former, while Black Meddet, he never seemed to tire of; but I will give a list of some of the things I had to gather for him every day. It was sad to have to keep him, so penned up, and probably helped a lot to keep him so timid, though I think it very doubtful that the Nilgiris Hare would ever become as tame as "Horace" did in Dublin.

My idea would have been to give him his liberty on the Downs, when he was about two months old, but friends all thought this would be cruel, and I could not let him escape here, as our garden was far too precious, but as he grew up he became wilder even with me, and I had to be careful in handling him not to get a kick from his strong hind legs, nor let him give himself one. Somehow on one occasion he did skin quite a bit off himself, hares skin and fur are very delicate, but the place healed and fur grew again in a short time.

It was quite early in October that I began to notice the change of colouring, his cheeks were getting an "overlay" of black, also the saddle on his back was becoming darker and more noticeable, he had now lost all his baby ways and was fast becoming a full grown Hare. And would soon need some other home. My friends Dr. and Mrs. Sundara-Raj agreed to take him as soon as they had made a large cage for him, this we thought would be a happy arrangement for him, and the move was made about the middle of November. Alas it was anything but successful, and he became very ill, simply I believe from working himself up into a wild excited state, and he died within a week in spite of all the care my friends gave him.

Poor Timothy, it was rather a sad end for him, I would so much have preferred to give him his wild liberty if only I had had the opportunity to take him right out to the Downs.

I have been told since, that I did rather a unique thing in rearing so small a leveret, for I now realize he cannot have been more than 24 hours old, at the time I found it very difficult to get enough information about very young leverets to be able to gauge his age. I failed to get in touch with the Superintendent of the Madras Zoo, and the Bombay Natural History Museum could give me no definite information as to when they first got their teeth, so I never was able to really guess at his age till I read Cecil S. Webb's book, "A Hare About The House." Mr. James Fisher of The British Ornithological Trust kindly sent me details of Hares dentition, taken from Barrett Hamilton's "History of British Mammals", this shows that hares have teeth from birth so that the fact that I could feel "Timothy's teeth grating on the spoon so soon after acquiring him was no help towards finding out how old he would have been when he first came to me.

LIST OF GRASSES.

Juncus bufonius, *Aponogeton natans*, *Kyllinga melanosperma*, *Isachne kunthiana*, *Panicum villosum*, *Andropogon foulkesii*, *Chrysopogon zeylanicus*, (when not too ripe), *Cymbopogon lividus*, *Anthistiria ciliata*, *Tripogon bromoides*, *Festica bromoides* (very much), Chickweed (both sorts), Black meddet, Vetchling (*Vicia setiva*), Broom (*Cytisus scoparius*) this in small quantities and young tips only. A tender grass I call "English Lawn grass" that grows in the rains.

Dislikes. Both kinds of Quaker Grass (*Briza minor*, *B. major*.) Couch Grass, and the Polygonums, Cabbage, more or less, and Lettuce.

"Timothy" had a saucer of finely cut carrot every night as well as a good handful of grasses, this was his "night feed" right through his "grown up" life.

MISCELLANEOUS NOTES

THE HODGSON'S OR ORANGE-BELLIED FLYING-SQUIRREL

(*Petaurista magnificus*).

The Hodgson's Flying Squirrel, aptly named "*Petaurista magnificus*," is truly a magnificent animal both in temperament and general characteristics. It is referred to as "*Rajpunkhi*", which is however a general name ascribed to all species of Flying Squirrel, by the local tribes in Darjeeling.

The average combined size of the head and body is 16 in. while the tail is usually 2 ft. or more in length. The dorsal part of the head, body and limbs is deep maroon in colour, verging on brown. The underparts are rich yellow or rufous. The tail has a black tip. In the summer coat there is a bright yellow stripe running centrally along the back and extending right up to the nose. This yellow line broadens and becomes increasingly pronounced with maturity. The cheeks and sides of the body, too, take on a brilliant yellow colouration. The colour of the body is always darker than the parachutes.

Flying Squirrels do not fly in the same sense as the continuous aerial progress accompanied by rapid changes of direction of which birds, bats and winged insects are capable. They do, however, possess parachute-like folds of skin connected to the limbs on either side of the body which permit them to glide in a fixed direction and add up to 50 or 60 yards their leap from one tree to another. These folds of skin adhere closely to the sides of the body owing to their elasticity and are not readily noticed when the animal is resting. But they become very evident when the limbs are stretched.

The method of flight is very interesting. Climbing to the top of one tree they leap towards another. With limbs outstretched they glide through the air in a fixed direction losing a little elevation. On reaching the objective they turn sharply up, thus temporarily checking the rapidity of travel, before alighting with ease and grace.



Hodgson's Flying-Squirrel (*Petaurista magnificus*)

Photos—Author.

Apart from this ability to fly and also the fact that they are nocturnal, they resemble their earthbound cousins in general points of structure and habit.

The Hodgson's Flying Squirrel ranges in the Eastern Himalayas from Nepal to Assam and is encountered at elevations between 6000 and 9000 ft. They are never located far from wooded districts and seldom seen on the ground. It would appear that they lead a completely arboreal existence. They make their homes in hollow trees high above the ground. When suitable hollows are not available they shelter in clumps of moss or among the branches of conifers. When required they probably hollow out their own shelters as I have noticed that every single captive specimen has invariably chiselled out a hollow in the floor of the sleeping platform. Their call is usually a low monotonous note rapidly repeated at intervals. When excited they emit a sharp, rolling, metallic sound. They are readily heard but seldom seen.

In the wild state their chief food consists of nuts, cones, seeds, fruits and insects. But they are omnivorous and general feeders. They also gnaw the bark and eat the gum and resin of conifers. The evidence of a large quantity of green cones strewn on the forest floor will usually signify the presence of these animals.

In captivity they become very tame and can be treated much like the more common round squirrel. They must, however, be permitted to rest undisturbed throughout the day and provided for ample space for exercise during the hours of darkness. They sleep upright on their haunches with the head tucked into the belly and the tail brought over to cover the head and body. They are delicate animals but if properly looked after will survive up to five years.

Little is known about their breeding habits. Hodgson states that a single young one is produced in the rains and becomes independent of the mother in September. The parachutes in the young are much less developed than in adults.

As a rule they prefer to lead a solitary life and will become antagonistic if confined together. I have found that they

prefer milk to water, and also enjoy a little meat if insects are not available. They seem to have little taste for vegetables but enjoy a few blades of fresh green grass, and they are most certainly "sweet-toothed" rodents.

Emerald Cottage, SAMIR SEN, D.L.C. Hons. (Eng.) F.Z.S.
DARJEELING
October 24, 1956

TIGER TRACKS AT HIGH ALTITUDE IN NORTHERN SIKKIM.

It might interest your Members to read about some large Tiger Pug marks I saw fairly high up earlier this year.

On the morning of 5th April, 1956, two porters and I were coming down from Dzungri to Yoksam in N. W. Sikkim. It had been snowing all morning but had stopped a few minutes before we entered the forest line. Just as we entered the forest, on the steep path I saw large pug marks distinct in the snow. The Marks were 8" in length, 6" broad and the depth of the pad mark was $1\frac{1}{2}$ ". We had obviously disturbed the animal on its way up and it had disappeared into the forest. This was at about 13,500 feet and we saw these pug marks on the path all the way down to Bakhim at 8,500 feet. Unfortunately my Camera was only loaded with Kodachrome and the light being very poor the photograph of the Pug marks has not come out very well.

On questioning the villagers at Yoksam, I gathered that local lore has it, that this Tiger makes an yearly trip on this track and is considered a local *Devta* (Deity).

PRINCIPAL,
Mountaineering School,
Darjeeling.
25th September, 1956.

N. D. JAYAL,
Major.

[There is a record of a Tiger killed at an altitude of 8,800 ft. at Lachung in N. Sikkim, in the Journal of the Bombay Natural History Society, Vol. 40, Page 553, 1939—*Editor*.]

ADDITIONS TO THE LIST OF MAMMALS OF THE
RAJASTHAN DESERT.

Since writing the paper on the Mammals of the Rajasthan Desert (Prakash, 1955-56, *Jour. Bengal Nat. His. Soc. Vol. 28* : p. 1-7); some more species have been collected during our surveys of the region.

Thanks are due to the Director, Zoological Survey of India, for checking the identifications and for determining the subspecies of *Rhinolophus*.

Order Chiroptera

1. Horseshoe Bat, *Rhinolophus lepidus lepidus* Blyth.

(Hindi—*Chumgadar*; Marwari—*Chumcher*.)

This vesperilionid bat was observed at Bikaner and Pilani. At Pilani in an old dried up well and at Bikaner in some abandoned lime mines. Usually found roosting in small niches on the roof into which they fit so well that it is difficult to detect them. In November they were found to be quite active.

- Indian Pigmy Pipistrelle, *Pipistrellus mimus glaucillus*.

This small bat does not live in colonies, a pair or two are usually found in the crevices of Houses. Their flight is confined to a small territory. These bats are the first to be seen at dusk hawking for insects.

2. Greater Yellow Bat, *Scotophilus heathi heathi* Horsfield.

One bat was caught near a lamp post in Jodhpur, not observed elsewhere.

Order Carnivora

3. Small Indian Mongoose, *Herpestes auropunctatus pallipes* Blyth.

Collected at Bikaner and Jhunjhunu district of Rajasthan. It is slightly smaller than *Herpestes edwardsi ferrugineus* and the rusty colour on the face and limbs is, if present very faint.

Usually lives in burrows and feeds on small birds, eggs and rodents.

Order Lagomorpha

4. Indian Hare, *Lepus nigricollis ruficaudatus* Geoffroy.

(Hindi—*Khargosh* ; Marwari—*Sussa*)

This hare is found in sufficiently large numbers in the semi arid regions of North Eastern Rajasthan.

Order Rodentia

Mouse, *Mus* sp. (Hindi—*Chuia* ; Marwari—*Undri*)

Mice are not as common as rats but are usually found in houses.

Maharaja's College,
JAIPUR.

ISWAR PRAKASH

BRUTALITY OR HUMANITY

It is the weakness of most nations to indulge in periodical outbursts of self-praise. It was so in the heyday of imperialism. It has been so even since the birth of modern democracy after the throes of the French and American Revolutions. In a world of megaphones and over-loud self advertisement the still small voice of self-criticism is apt to be discredited and stifled. It is refreshing, therefore, to come across instances of humble self-analysis, one of which (extracted from "The Field" of May, 17, 1956) I quote below :--

'We are wont to describe any instance of cruelty which really shocks us as "inhuman" or "brutal". Yet over 80 years ago H. C. Barkley pointed out, at the time when the use of the gin-trap was spreading all over

the country, that the worst cruelties in the countryside were not the work of the brute creation, but those inventions thought up by man. To him the word "inhuman" was an obvious misnomer. I am glad to see that there have been many protests, so far not answered or explained away, about the recent destruction by fire in Sussex, done deliberately and in the middle of the nesting season, of 100 acres of heathland "with all its flora and fauna, uncommon plants, sitting birds" and so on because the area harboured a certain number of rabbits.

'This fire-raising was not, it seems, an isolated case. If such burning was really necessary, and not just a thoughtless way of avoiding work, any country-dweller might have thought that it could have been done in March, in such an unusually dry spring, before vegetation had grown or birds had begun to nest. Anybody who has seen, as I have, half-frizzled rabbits trying to escape from the smoke and flames of an accidental heath fire, or a forest fire sweeping on in the dry season in the East, will appreciate the horror of the victims of such man-made destruction at the wrong time of year. It is clearly "human" cruelty, and a far worse condemnation of man than calling it "brutal". Heaven defend us if similar methods are going to be widely adopted this summer in rabbit-clearance areas. We shall find that we have abolished the cruelty of the gin by legislation and replaced it by another and even worse form of "humanity."

'How pleasant it is, by contrast, to put on record the concern shown for a wild bird by a farmer, even if it is one of our commonest and apt to be a nuisance in the fruit season. Only the incurably deaf would regard the nesting blackbird as anything but one of our greatest "invisible assets" among the voices of the countryside in spring. A friend has just recounted to me the tale of a blackbird and a farming neighbour. He had called in the builders for certain work, but they found their task obstructed by a blackbird's nest, built with sublime

inconsequence on a shed wall between the blade of a hoe and the teeth of a rake.

“They had the choice”, he writes, “of deferring the job for a month, or disturbing the nest of the bird (which in this country, to some so bloodthirsty and uncivilised, could not be contemplated), or of finding some other solution”. They found that “the nest, though attached to the hoe and the rake, was not attached to the wall, and with enormous dexterity two horny-handed sons of toil removed the hoe and the rake and the nest, together with its eggs, and preserving the angle of the instruments undisturbed, carried them to another cart shelter.....and re-hung them in the identical position.” The new site was 25 yards away and faced in another direction, but the blackbird was back on the eggs within 20 minutes, and continued to brood them.

‘Now we are a pretty barbarous people in some ways, but that incident is in the genuine tradition of the country. The immolation by fire of eggs and young birds and animals is most certainly not, and it will be an evil day for us if such methods get official backing, even on what is known as a “low level”.’

We on the contrary are supposed to be a very spiritually minded race, worshipping cows and trees, paying much lip service and homage to the great Buddha whom we own as an *avatar*, and regarding as our emblem the wheel of Asoka who was the first ruler to have established hospitals for animals. Just look at our cows—it is difficult to conceive worse scare-crows. And look at our much-mangled trees, even in beauty spots like Darjeeling ! The birds have no god-parents ; they are shot within and outside the forest reserves, snared, trapped and sold for the table or for export, and are catapulted out of existence from village groves, roadside trees and ornamental gardens in towns. The pity of it is that most people are serenely unconcerned while the destruction and maiming of tree, bird and animal goes on merrily.

And what of forest fires ! Against a hundred acres of heathland burned to clear it of the rabbit pest in England

there are thousands of acres of good forest burnt annually in our country, and deliberately—for what? Partly, for the indulgence in the manly sport of shooting animals that run away in fright from an all-consuming forest fire. Mostly, for sheer-cursedness! And the great voices of the country are silent on the subject. They are probably pre-occupied with matters of a less trivial nature than a few tens of thousands of acres of forests with all their animal and bird population, their fertile humus and their soil—and water-protective values gone up in smoke. Well, this is the height of—philosophy!

How far down are we on the ladder of civilisation below the nation to which the writer of the above-quoted article belongs! Until our self-complacency is broken and our conscience is awakened we cannot make a start on the road of real progress. Of if we must have pride, why, let us rather have it in our devoted efforts to build something worth the admiration of the world, and in our humble preparedness to study, observe, imbibe and adopt all that is best in other nations.

Conservator General of Forests,
West Bengal.

V. S. RAO, I.F.S.

LOCATION OF SILIGURI TOWN.

Dr. Hooker, the great Scientist and traveller in his diary for April 13th, 1848 describes Siliguri as below :

“A sudden descent leads to the Mahanuddee river. It is a rapid river even at this season. Beyond it the road winds through a thick brushwood, choked with long grasses. After proceeding some six miles along the

gradually ascending path I came to a considerable stream. The road here suddenly ascends a steep gravelly hill and opens out on a short flat or spur from which the Himalaya rise abruptly. The little Bungalow of Punka-baree,.....nestled in the woods, crowning a lateral knoll."

Where exactly this site of Siliguri of a hundred years ago be ? Could any of your readers enlighten ?

Conservator of Forests and A. C. GUPTA, I.F.S.
Superintending Engineer, I. & W.,
Teesta Catchment Circle,
'The Glen', Darjeeling.
26th October, 1956.

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