

A TENTATIVE LIST OF THE VERTEBRATES OF THE  
JALPAIGURI DISTRICT, BENGAL.

BY

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(*With Plates.*)

Although several present and past residents of the district have taken an interest in natural history, we know of no list of the fauna, and have accordingly attempted to draw one up to the best of our ability as far as the vertebrates are concerned. On Inglis' first visit to the district, Shebbeare proposed the drawing up of the list; the latter had already done some collecting and the former had collected in the adjacent districts of Darjeeling and Goalpara. Inglis drew up a tentative list of the birds which during his later visits he was able to add to and confirm many of the species given in it. Later, Inglis and Shebbeare made out the list of mammals and sent both lists to O'Donel, who added several birds and confirmed a number more and sent notes on a number of species; he also added considerably to the list of mammals, more especially bats as, besides collecting himself, he had the Society's collector Baptista working with him for some months. Shebbeare also sent a copy to Travers to add any ducks which had been omitted and for some notes on them which he gave. Travers also drew up the list of snakes, having collected them for some years. He also collected the tortoises for Dr. Annandale who kindly identified them and gave us the names of others probably found in the district; these we have included with a note. None of us have worked out the lizards and frogs, but we have included such as we know for the sake of completeness. The list of fishes for which Shebbeare is responsible is compiled from a previous list made by him. His collection and observations were chiefly made near the hills in the quick-flowing streams, and having had no opportunity of visiting the south of the district where most of the tanks occur, he has been unable to add the numerous Bengal tank and sluggish river fish which are sure to be found. His list is therefore very incomplete. The names of a few mammals and birds were also got from a Settlement Report of the Western Duars by Mr. Sunder written in 1895.

As to the nomenclature, we have followed the *Fauna of British India* except in the mammals where we have tried to give the names from the mammal survey, and in the game-birds, pigeons and doves, where we have followed Mr. Stuart Baker. We have also followed the late Lt.-Col. H. H. Harington in the *Timeliidæ* as far as he had gone before his regrettable death.

The English names of the snakes are mostly taken from Lieut.-Col. Wall's articles in the *Journal*. The numbers throughout refer to the *Fauna of British India*. All the species in the list have been got or observed in this district by one or other of us unless otherwise stated.

We have taken as our area the whole of the Jalpaiguri civil district which is situated in the extreme N. E. of Bengal adjoining Bhutan, Assam, and Cooch Behar State.

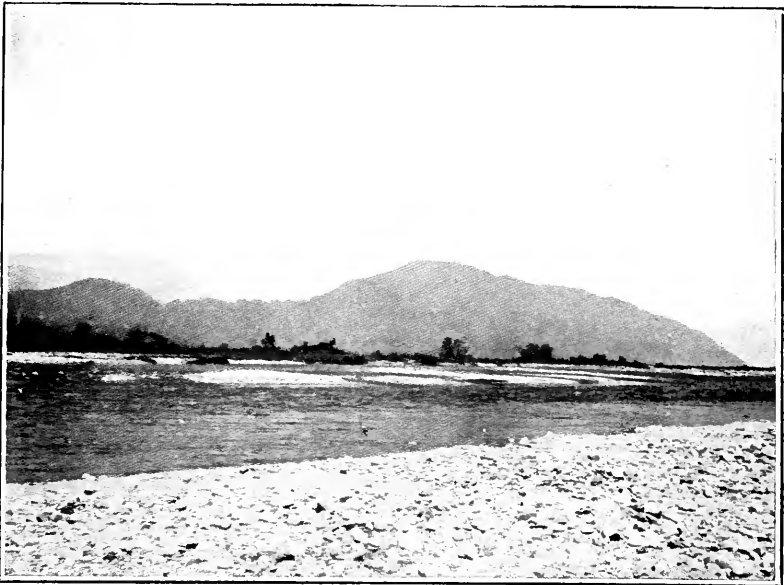
The northern part of the area in which most of our collecting has been done lies in the foothill tract known as the Duars (or Dooars), an area taken over by the British Government after the Bhutan War of 1865 and prior to that time divided by the Bhutan Government for the purpose of rent collecting into a number of small districts known as Bala-Duar, Luckee-Duar, etc., whence the name. The term "Duars" and specially such combinations as Sikkim and Bhutan Duars, Buxa Duars, Eastern and Western Duars, etc., used by writers in describing the habitat of species, lead to a good deal of confusion. Originally, at any rate, the whole of the foothill tract east of the Tista and stretching into Assam was called the Duars (just as the corresponding tract west of the Tista is called the Darjeeling Tarai), but latterly the meaning of the word has been narrowed down by common usage to refer to the "Duars" tea district which only extends eastwards to the Sankos and is therefore co-terminous with the Jalpaiguri District. We presume that Sikkim Duars refers to that part west of the Jaldhaka and Bhutan Duars to that east of this river. Buxa Duar was one of the original divisions made by the Bhutan Government, a comparatively small area, but we believe that the expression "the Buxa Duars" is meant to refer to the whole of the tract between the Torsa and the Sankos. Similarly Eastern and Western Duars though originally used relatively to the Sankos, is some times, we believe wrongly, used relatively to the Torsa. British Bhutan is another rather confusing term which we believe is intended to be synonymous with the Duars.

The north boundary of the district is in some places the foot of the hills and in others the top of the first ridge which at one point (above Buxa) reaches an elevation of nearly 6,000 feet. From the foot of the hills, which is usually well-defined, a stony plateau intersected by the steep-sided beds of streams and rivers slopes gently southwards for a distance of two to six miles to join the true plains, at some places passing into them imperceptibly and at others descending to their level by one or more steep or even precipitous declines. The plains like the plateau slope towards the south, but with a very gentle gradient.

As might be supposed all water courses flow from north to south; those which rise in the Himalayas are torrents in the rains



Tea with shade trees haunts of *Franklinia gracilis* and other Warblers.



Torsa river, the haunt of *Ardea insignis*, *Merganser castor*, etc.; the stones in the foreground affording shelter to the Wall Bat (*Mrotis muricela*).

and have rocky, gravelly, or sandy beds according to their distance from the hills. For the first few miles after leaving their gorges, these hill streams are confined to some extent by the necessity of cutting their way through the plateau, but once in the plains they spread out to an enormous width. Except a few of the larger ones, these hill rivers disappear underground for some part of their length in the dry season causing a waterless tract some miles wide from north to south. The streams which rise in the plains are in almost every respect the opposite of those which rise in the hills; they have narrow beds and high banks with overhanging evergreen vegetation, and vary very little at the different seasons.

The northern part of the district is nearly all either tea-grant or Government forest and the southern part nearly all cultivation; the distribution of these three is shown on the accompanying map. The tea-grants are not all entirely under tea. Parts of them are grazing land, savannah, and, in a few cases, tree-forest. The Government forests are mostly tree-forest though there are still a few fair-sized savannahs and some forest villages.

The forests of the plains consist of a great variety of trees of which the commonest is *Sal* and there is generally a heavy undergrowth of shrubs and creepers mostly evergreen. In the river beds *Khair* and *Sissoo* forest is found. This is not evergreen and usually has a lighter undergrowth or simply grass. The forest of the hills consists of trees with moderate undergrowth and some bamboos in the valleys. Where shifting cultivation has been practised there is an almost impenetrable mass of shrubs and creepers.

The savannahs consist mostly of tall grass usually from 8 to 15 feet high with scattered trees; there are some areas with shorter grass. The area of savannah throughout the district is much smaller than formerly and constantly on the decrease owing to the extension of cultivation, tea and grazing outside the Government forests, and fire protection, which tends to encourage trees, within them.

The cultivation in the plains is almost entirely irrigated paddy land and a good deal of jute is grown. There are practically no large villages as in some other parts of India and the homesteads of the cultivators, surrounded by clumps of bamboos and betel-palms, are scattered among the paddy fields at frequent intervals.

We have included a few photographs of the various types of locality to make the above descriptions clearer to those who do not know the district.

The average temperature in the plains is between 60° and 70° during the cold weather (November to February) and between 75° and 80° during the rest of the year. Frost is rare. The average rainfall at Jalpaiguri is 127 inches. The rainfall increases

as the hills are approached and the average in the northern part of the district is about 160 inches while in the hills themselves (at Buxa—2,000 feet) it is 194 inches.

## PART I—MAMMALS.

- Bengal Monkey (3), *Macaca rhesus*.—Very common.  
 Himalayan Monkey (4), *Macaca assamensis*.—One in captivity is said to have been caught locally. This may prove to be *Macaca pelops*.  
 [*Pithecus* sp?—A pale yellow coloured langur is common in the adjoining district of Goalpara (Assam). Jerdon reported one from the Terai, the adjacent district on the (west) side, which Blanford suggested might be *P. entellus*. Recently we have heard of another observed in the Terai.]  
 Tiger (29), *Felis tigris*.—Common.  
 Panther (30), *Felis pardus*.—Very common.  
 Clouded Leopard (32), *Felis nebulosa*.—One was killed by some coolies at Hanatapara. A clouded leopard and one of the common variety (*Felis pardus*) fought together at Samsing, killing each other. Mr. Phillips got a young cub at Buxa in May, the mother being killed by Bhotias. It is very tame.  
 Marbled Cat (33), *Felis marmorata*.—Travers got one at Baintguri. Skins are occasionally brought down by Bhotias for sale. O'Donel saw a black cat in the forest near Hasimara which he took to be a melanistic specimen.  
 [Golden Cat (34), *Felis temmincki*.—May occur here, but we have not found it.]  
 Fishing cat (35), *Felis viverrina*.—Common.  
 Leopard Cat (36), *Felis bengalensis*.—Mr. W. P. Field has shot three leopard cats in the Duars, two on his tea garden, one in Tondou forest; he has also had kittens brought to him twice. Mr. F. Murdoch has also shot a leopard cat, which had double upper canine teeth in the upper jaw. Shebbeare sent a skin and skull of a young animal to the Society which he obtained in the district. This cat appears to be not uncommon in the west at any rate. Mr. Field has tried to tame kittens but found them most savage even when quite small.  
 Jungle Cat (41), *Felis affinis*.—Common. The young when first born show the black on the back continuous, this is replaced in a few days later by broken blackish markings; from these the change to sandy grey and greyish brown is gradual. The young have been taken in in December, February and May. The call of this cat is hard and raucous carrying a long distance and is often heard round bungalows at night.  
 Large Indian Civet (45), *Viverra zibetha*.—Very common. It appears to be impartial as to its diet, fruit and meat being equally welcome.  
 Small Indian Civet (48), *Viverricula malaccensis*.—Very common in grass land and also got in the forest where river beds occur. It is doubtful whether this animal is arboreal as stated to be. None of us have seen one climb a tree, and O'Donel has seen one chased by dogs pass a tree without making any attempt to climb.  
 [Spotted Tiger Civet (49), *Prionodon pardicolor*.—No specimens have been secured by us but O'Donel has had skins from the Bhotias, who got them apparently at low elevations, so it probably occurs round Buxa.]  
 Indian Palm Civet (51c.), *Paradoxurus crossi* (?).—Some skins seem to be intermediate between this and the next species.  
 Malayan Palm Civet (52), *Paradoxurus strictus*.—Travers got this species in his bamboos at Baradighi.  
 Small Indian Mongoose (58), *Mungos auropunctatus auropunctatus*.—Uncommon.

- Common Mongoose (60), *Mungos mungo mungo*.—Common. "My dog chased a specimen and to my surprise the Mongoose darted up a small tree, *Albizzia stipulata*, and took refuge in the highest branches." (H. V. O'D.)
- Crab-eating Mongoose (65), *Mungos urra*.—Decidedly uncommon. It is generally to be found near stream beds whether flowing or dry and usually in pairs, the latter probably being family groups. Their foot-prints are often seen in the Murti.
- Jackal (69), *Canis indica*.
- Indian Wild Dog (70), *Cuon dukhunensis*.
- Indian Fox (72), *Vulpes bengalensis*.
- Indian Marten (77), *Martes flavigula*.—Uncommon. "On one occasion, I found this animal tearing up the partly deserted hive of the jungle bee." (H. V. O'D.)
- Brown Ferret-badger (87), *Helictis orientalis*.—Only noted by O'Donel west of the Torsa River.
- Burmese Ferret-badger (88), *Helictis personata*.—Recorded by O'Donel in this Journal, Vol. XXV, page 819.
- Hog-badger (90), *Arctomys collaris*.—This is mentioned in Sunder's Settlement Report.
- Common Otter (92), *Lutra lutra*.—This is given in Sunder's Settlement Report.
- Smooth Indian Otter (93), *Lutra macrodus*.—Either or both this and the former are common. Mr. W. P. Field has seen an albino of one of these species.
- Clawless Otter (95), *Aonyx leuonyx*.
- Himalayan Black Bear (98), *Ursus tibetanus*.—In and near the hills.
- Sloth Bear (100), *Melursus ursinus*.—Common.
- Sikkim Tree Shrew (102), *Tupaia belangeri chinensis*.—Has been obtained at Hasimara and Bharnabari.
- Short-tailed Mole (112), *Talpa micrura*.—There is a specimen from Jalpaiguri in the Society's Museum, collected by Shebbeare.
- Hodgson's Brown-toothed Shrew (115), *Soriculus caudatus*.—Recorded from Hasimara and Bharnabari.
- Himalayan Pigmy Shrew (124), *Pachyura hodgsoni*.—Common at Hasimara.
- Musk-rat, *Pachyura* sp.
- Common Flying Fox (134), *Pteropus giganteus giganteus*.
- Fulvcs Fruit-Bat, (137), *Rousettus leschenaulti*.—The Society's collector shot a single example at Hasimara.
- Southern Short-nosed Fruit-Bat (138), *Cynopterus sphinx sphinx*.—Several specimens obtained at Hasimara and one at Bharnabari.
- Allied Horse-shoe Bat (150), *Rhinolophus affinis himalayanus*.—A single example was taken at Hasimara.
- Great Himalayan Leaf-nosed Bat (159), *Hipposideros armiger*.—Only obtained in November.
- Bicoloured Leaf-nosed Bat (166), *Hipposideros fulvus*.—One obtained at Hasimara.
- Indian Vampire Bat (169), *Lyroderma lyra lyra*.—Recorded from Siliguri, Jalpaiguri and Hasimara and said to be very plentiful at the first two localities.
- Eastern Barbastel (172), *Barbastella darjelingensis*.—Hasimara.
- Club-footed Bat (180), *Tylonictoris fulvida*.—Mr. Crump got this at Sivoke, just outside the district.
- Babu Pipistrel (189c), *Pipistrellus babu*.—A single specimen has been taken at Hasimara.
- Coromandel Pipistrel (187), *Pipistrellus coromandra*.—Very common.

- Southern Dwarf Pipistrel (187A), *Pipistrellus minus minus*.—Very common at Hasimara and has also been recorded from Jalpaiguri and Bharnabari.
- Tickell's Bat (191), *Hesperoptenus tickelli*. Hasimara and Bharnabari.
- Dormer's Bat (193), *Scotozous dormeri dormeri*.—Bharnabari.
- Common Yellow Bat (194), *Scotophilus kuhli*.—Common at Jalpaiguri, Hasimara and Bharnabari.
- Wroughton's Bat (193A), *Scotophilus wroughtoni*.—Common at Hasimara ; also recorded from Jalpaiguri.
- Harlequin Bat (197), *Scotomanes ornatus*.—Got by Mr. Crump at Sivoke, and O'Donel has obtained it at Buxa.
- Hairy-winged Bat (200), *Harpicriphalus lasyurus*.—A single specimen was obtained at Hasimara.
- Wall Bat (212), *Myotis muricola*.—O'Donel got this under stones in the bed of the Torsa river, where it is common.
- Painted Bat (213), *Kerivoula picta*.
- [Cutch Sheath-tailed Bat (221), *Taphozous kachensis kachensis*.—Obtained by Mr. Crump at Sivoke.]
- Particoloured Flying Squirrel (234), *Pteromys alboniger*.—Got by O'Donel from trees felled in his fuel-coupe at Hasimara.
- Assam Giant Squirrel (240), *Ratufa gigantea gigantea*.—Very common.
- [Long Snouted Bhootan Squirrel (243A), *Dremomys lokriah botia*.—A squirrel (*Sciurus lokriah*) is given by Sunder in his Settlement Report, but as he has not given the following species, *Tomeutes lokroides*, he may have been mistaken but still he calls it an "orange bellied squirrel"; he may have been correct and if so it is probably this species and not *D. l. lokriah*.]
- Hoary-bellied Himalayan Squirrel (251), *Tomeutes lokroides*.—Exceedingly common.
- Common Five-striped Squirrel (253E), *Funambulus pennanti pennanti*.—Mr. Crump obtained this species at Haldibari. Sunder says of this squirrel that it is common and as he has spent a good deal of his time in the south of the district he is probably correct.
- Hodgson's Tree-mouse (270), *Vandeleuria dumeticola*.—Very common in the tea bushes.
- Bhutan Dnars Rat, *Rattus rattus bhotia*.—Mr. Hinton has described a new race of the common rat from specimens obtained at Hasimara where it is very common.
- Rattus* sp.
- Nepal House Mouse (282), *Mus dubius*.—Very common.
- Himalayan House-mouse (282A), *Mushomourus*.—Apparently not so common.
- Southern Field-mouse (287), *Mus booduga*.—Very common.
- Bengal Mole-rat (295), *Gonomys bengalensis*.—Very common.
- Bengal Bandicoot (297), *Bandicota elliotana*.—Common and often damages tea by cutting through the stem of a bush three or four inches under the soil.
- Indian Bush-rat (299), *Golunda ellioti*.—Common at Hasimara.
- Bay Bamboo-rat (312), *Rhizomys castaneus*. Very common in tea gardens. "I have heard of this rat being destructive to tea, but have never found it so myself though it is common in the forests round Hasimara." (H. V. O'D.)
- Crestless Himalayan Porcupine (316), *Acanthion hodysoni*.—Common. Their burrows are situated in the banks of ravines, but are very difficult to find owing to the thickness of the jungle.
- Hystrix bengalensis* (?)—A porcupine other than the crestless one is often turned out of heavy jungle during tiger beats and consequently not shot at.
- Common Indian Hare (320), *Lepus ruficaudatus*.—Common among tea and in river beds.

- Hispid Hare (325), *Lepus hispidus*.—Not so common as formerly owing to the decrease in grass jungle in the district.
- Indian Elephant (332), *Elephas maximus*.—Common. Rogues are prevalent and do a lot of damage. Khedda operations have been carried on during the last few years. Young are born all the year round.
- Great one-horned Rhinoceros (334), *Rhinoceros unicornis*.—Probably slightly on the increase, in the few suitable localities, owing to strict preservation. Not nearly so common as formerly.
- Smaller One-horned Rhinoceros (335), *Rhinoceros sondaicus*.—Has been shot during the last twenty years. As all rhinoceros are preserved and the tracks and habitat of this and the last are identical and their appearance not very different, unless a close view is obtained, it is difficult to say whether this species still exists here.
- Asiatic Two-horned Rhinoceros (336), *Rhinoceros sumatrensis*.—Almost certainly not found in this district, now, though one was shot on the Sankos River (boundary of this district) in 1864. In his Settlement Report Sunder says a rhinoceros was shot in Dalgaon forest but is very rare.
- The Gaur (338), *Bibos gaurus*.—A few herds exist, some of which are apparently on the increase owing to preservation. In places they are fairly plentiful. As far as we know they rut all the year round.
- The Buffalo (342), *Bubalis bubalis*.—Not common. A few are found in suitable localities.
- Capricornis sumatrensis (janvachi?)*, (352).—A serow is found in the hills, but we are uncertain to which species it belongs.
- Nemorhædus (hodgsoni?)* (354).—A goral, most probably Hodgson's is found in the hills.
- The Indian Antelope (357), *Antelope cervicapra*.—Sunder writes in his Settlement Report that this species is found in the waste lands of Falakata, Alipur and Bhalka tahsils; these lie on the south part of the east side of the district. As far as we know this species is no longer found in the district.
- The Bengal Barking-deer (362), *Muntiacus vaginalis*.—Common in forest throughout the district. They rut all the year round.
- The Swamp-deer (365), *Rucervus duvauceli*.—Found in heavy savannah, though much less common than formerly. They rut during the latter part of the rains.
- The Sambhur (367), *Rusa unicolor*.—Next to the barking-deer this is the most plentiful deer. They rut during the cold weather.
- Spotted Deer (368), *Axis axis*.—A few small herds, very local. We believe they rut during the cold weather.
- Hog-deer (369), *Axis porcinus*.—Plentiful in suitable localities. We believe they rut during the rains.
- A deer intermediate in size between the Sambhur and Hog-deer and resembling the latter has been shot in the same locality on several occasions. We have seen heads and believe a specimen was forwarded to the Society by Mr. W. P. Field who was the first to draw attention to the matter.
- Indian Wild Boar (374), *Sus cristatus*.—Extremely common.
- Pigmy Hog (376), *Sus salcanius*.—Rare now, though probably commoner before the reduction of savannah land. Travers has seen them and Shebbeare, who knew the animal in Goalpara where they are common, believes he has seen them. In both cases they were seen in Sal forest.
- Gangetic Dolphin (379), *Platanista gangetica*.—Found in rivers in the south of the district.
- Indian Pangolin (399), *Manis crassicaudata*. } A pangolin has been reported  
 Chinese Pangolin (400), *Manis aurita*. } but we have never seen it.