

TABLE (continued).

	INDIAN REGION.							AUSTRALIAN REGION.															
	Asia.		Indo-Malay Islands.				Celebes.	Timor group.	Moluccan Group.					Papuan Islands.									
	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sulla Island.	Lombok.	Flores.	Timor.	Batchian.	Kaioa Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigou.
GOURIDÆ.																							
PHLEGGENAS																							
criniger	I																
tristigmata	I																
rufigula																	
CHALCOPHAPS																							
indica	I	I																					
javanica	I	I	I	I	I	..	..	I	I												
moluccensis							I				I	..	I	..	I	I					
borneensis ?				I																	
timoriensis										I											
stephani						I															
hombroni																				I	I
GEOPELIA																							
maugei									I	I											
striata	I	..	..	I	..	..	..	I														
CALÆNAS																							
nicobarica	I	..	..	..	..	I	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..
GOURA																							
coronata
victoriæ (Jobie I.)

XXXIII.—Notes on various Indian Birds. By R. C. BEAVAN, Capt. Bengal Survey, M.A.S., C.M.Z.S., &c.

IN 'The Ibis' for 1862 (page 284), in an article on the ornithology of the International Exhibition, I see the remark made that "India sends only bundles and fans of Peacocks' feathers, and so does not do much to elucidate her still imperfectly known Ornithology." Now, although this remark will not bear the same force now that Dr. Jerdon's 'Birds of India' has made its appearance as it did then, yet, since the publication of that famous work has rendered the study of Indian forms a task comparatively

easy to what it was before a manual of reference existed, as one who has benefited much thereby, I venture, although with some diffidence, to take up an amateur's pen with the view of contributing my small quota, and that, I am afraid, not a very valuable one, to the knowledge of our Indian birds; and the notes here hastily set down may at least, if of no other value, do something towards the elucidation of their local distribution.

My first attempt at collecting was made at Darjeeling, in the months of March, April, and May 1862, during which period I undertook an expedition to the top of Tonglu—a mountain some 10,000 feet high, which was visited by Dr. Hooker, and along the summit of which runs a portion of the boundary between Sikkim and Nepâl. The few days spent there were not at all satisfactory for bird-collecting; the weather was decidedly “damp”; in fact I was enveloped in a thick fog during all but a few hours of my stay; and the cold, to one lately arrived from the plains, combined with wet and existence in a little bit of a blanket-tent just large enough to cover a bed, made the *tout ensemble* anything but agreeable. I hope, however, to have another opportunity at some future time not only of revisiting Mount Tonglu under more auspicious circumstances, but also the interior of Sikkim and Bhootan, in both of which countries, I have no doubt, several new forms of birds are still to be found near the regions of eternal snow.

The examination of my Darjeeling collection of 1862 was kindly undertaken by Mr. Blyth, who named and labelled the specimens; but no list was drawn up until my arrival in England, when I carefully took down the names appended by him. Some of the specimens were, however, with my permission, reserved by him for further examination, and some duplicates of Calcutta and Burmese birds added; so that if, in drawing up the following notes, I should inadvertently have included any species decidedly not Himalayan as belonging to my collection of 1862, I shall feel still more obliged to that gentleman if he will correct any glaring error.

I have made other collections, in the Maunbhoom District, in 1864-65, chiefly during the cold-weather months, and in 1864, at Barrackpore, during the hot weather and rains. Some of the

specimens have already reached England; others are on their way, and the rest I have still by me.

By way of preface to the notes, it may not be out of place to give a slight sketch of Maunbhoom, the district in which the majority of the specimens were collected, and in which I am professionally engaged with the Second Bengal Division of the Revenue Survey. It is a tract of country of some 5000 to 6000 square miles in extent, forming a portion of the province of Chota Nagpore, which, besides it, includes Singbhoom, Hazareebaugh, and the other districts of what formerly was the Agency of the South-west Frontier. Maunbhoom appears to be a name only given of late years to this district, from one of its *pergunnahs*. It is bounded on the north by Hazareebaugh, on the east by Beerbhoom and Bancoorah, on the south by Midnapore, and on the west by Singhbhoom and the large tract of wild and jungly country which extends for miles in that direction.

The general aspect of Maunbhoom is quite distinct from that of Lower Bengal. The low alluvial plains of the Ganges and Hoogly are here replaced by an elevated plateau gradually rising from Midnapore and Bancoorah, until it reaches its greatest culminations in the offshoots of the great Vindhyan range near Hazareebaugh, and the high tableland of Chota Nagpore (Dorundah) 1200 to 2000 feet above the sea. The highest peaks are those of Parisnâth (just outside the Maunbhoom District) and Dulma, which attain an elevation, the former of 4348 feet, and the latter of 3049 feet. The general elevation of the district must, I fancy, be from 500 to 800 feet above the sea-level. It is essentially a country of rocks: hills crop out in various directions, sometimes singly, sometimes in masses, composed almost entirely of the primary igneous rocks in a high state of contortion,—granite, gneiss, quartz, and other metamorphic rocks forming the principal groups.

The rivers are clear hill-streams with rocky beds, here and there flowing over a sandy bottom which frequently contains gold. Filled in a few hours by heavy rain, they become impassable, but as quickly subside; and in the hot months the water in places entirely disappears below the sand. Minerals, as may be expected, are abundant: iron is found everywhere;

coal crops out at Raneegunje, a well-known spot, whose collieries supply most of what is consumed of this precious fuel on this side of India. Gold is found in the beds of the rivers, washed clear of its matrix, quartz; and copper, as well as bismuth, also exists. I am of opinion that this district will eventually, when its mineral resources become better known, prove to be, on account of its proximity to Calcutta, and the facilities afforded for transport by the extension of railways, a great field for European mineral enterprise*.

A large portion of it, however, is at present covered with heavy jungles. Roads cannot be said to exist, except for small native carts, even the main road from the Sudder Station of Perulia to the railway-station at Raneegunje being little more than a mere track; and in many parts not only is the population small, but the want of water severely felt in the hot months.

The climate in the cold weather is all that could be wished for; but about the end of March it begins to get too warm to live in tents, and the hot winds from the north-west impart an appearance of arid sterility to the scene. This, the winter time for the vegetation, is marked by all the trees and shrubs losing their leaves; the jungles, dense and almost impervious before, are now laid under contribution to supply the famous "Tusseh" silk, the cocoons of which, in the absence of foliage, are easily seen hanging to the boughs of the trees. The wild animals, deprived of their usual cover, retreat to the hills and caves amongst the rocks. Birds are at this period very scarce; and for a space of about three weeks the whole aspect of nature seems changed. Winter in look, but more than summer in heat, with but scanty shade for one's tent, it would be unbearable if prolonged for any length of time. A change, however, soon comes, the all-devouring element of fire sweeps through the jungles, and leaves them black and scorched; a heavy thunder-storm generally succeeds, and the first intimation of spring is the bright scarlet blossom of the pullas (*Butea frondosa*) and other trees, whose gorgeous hues, unrelieved by foliage (which does not

* *Vide* 'Memorandum on the Geological Structure and Mineral Resources of the Singbhoom Divu,' by Capt. Haughton, J. A. S., No. 2 of 1854.

appear until this tree has ceased flowering), contrast strongly with the general want of vegetation. Soon others begin to flower, while on some the leaves appear as if by magic; and in less than a fortnight the jungles are of a bright green again, and so powerfully scented with the flowers of the sâl and other trees that the sensation is rather sickening. With the opening leaves and flowers appear numberless birds: many have come from far to breed, others doubtless for the sake of the plentiful insect repast afforded by the fresh vegetation. The species of Honey-suckers and Flower-peckers are especially numerous, and flit about from tree to tree in thorough enjoyment.

Fruits and berries are of course very scarce; and the bears and other denizens of the jungles would fare badly at this season, were it not for the beneficent mhowa-tree, whose wax-like flowers, produced long before the leaves, fall to the ground, and are not only assiduously gathered up by the lower classes of natives for the purpose of distilling spirit therefrom, but are eagerly sought for by bears, deer, Peafowl, Jungle-fowl, and several other birds.

But to turn more to our immediate subject, the Ornis of the district, I should be inclined to consider birds to be its distinctive feature in animal life. They abound more especially in the hot and rainy (?) months, at which seasons the dense jungles afford resting-places to many species the *locus* of whose nidification has long remained a mystery. The species are in most cases known. I am not aware of my having come across a single new one; but that is not so much to be wondered at when I mention that Mr. Blyth has before now collected on the southern border near Midnapore; and Col. S. R. Tickell, formerly in government employ at Chaibassa, in Singbhoom, and well known to science as an ardent ornithologist, has detailed the result of some years' collections made in this district, in his list of the Birds of Dhulbhun or Dhulbhoom, and Borabhun or Burra-bhoom, which are the names of two of the *pergunnahs* (counties, so to speak) of the district; and as they comprise the greater part of the more jungly portion, it is not likely that many of the birds have escaped the notice of these two well-known ornithologists.

Awaiting a further examination of some specimens of *Raptors* in my collection, I have omitted them for the present, and begin with the *Insessores*. The arrangement followed is that adopted by Dr. Jerdon in his 'Birds of India'; and the numbers used are the same as in that work.

82. *HIRUNDO RUSTICA*. Common Swallow.

Darjeeling collection, 1862; Maunbhoom, 1864-65, where both young and old are very common at Ambekanuggur in January and February, hawking over rice-kates and near tanks. About sunset they all fly away to the north-west; but I never could find any of their roosting-places. They totally vanish by the end of February, and even earlier appear somewhat locally distributed.

85. *HIRUNDO DAURICA*. Red-rumped Swallow.

Maunbhoom; Rognathpore, 1864; Ambekanuggur, 1865. I found it tolerably common at the latter place, in small parties, hawking over the rice-kates. It flies higher and more steadily than *H. rustica*, with which it is frequently seen associated. The stripes on the breast present a more distinctive feature in this bird than perhaps the red rump from which Dr. Jerdon has given it an English name.

100. *CYPSELUS AFFINIS*. Common Indian Swift.

Common at Barrackpore, where it builds in outhouses at the station; and a large colony have taken up their abode in the stand on the race-course, where they breed yearly in July and August. Rare in Maunbhoom, although seen in Perulia itself. This bird is especially abundant at Fort William, Calcutta, in May.

102. *CYPSELUS BATTASSIENSIS*. Palm-Swift.

Common both at Barrackpore and in Maunbhoom. Wherever the Palmyra Palm (*Borassus flabelliformis*) is found planted, there, as a rule, will also be several of this species associated with it.

104. *DENDROCHELIDON CORONATA*. Indian Crested Swift.

Occurs in Maunbhoom, but is locally distributed. At Beer-

achalee, in April, I found a colony in a mango-tope, close to a village, in a tolerably open and cultivated country, in which were several large tanks. Whether they intended to breed there I am unable to say, as I never saw them perch. They are very graceful in their movements on the wing; and the call, as mentioned by Dr. Jerdon, is very like that of a Parrakeet.

I expect that two or three species of the Swallows and Swifts, which have been procured before by Col. Tickell in Chota Nagpore, have hitherto escaped my notice; but I hope that further research will supply the deficiency.

109. *CAPRIMULGUS ALBONOTATUS*. Large Bengal Night-jar.

Called "Khallpêcha" in Maunbhoom, where it is more frequently heard at night than seen. The note, as mentioned by Dr. Jerdon, is somewhat like striking a plank with a hammer, only that the sound has generally somewhat of a metallic ring. I have procured the eggs at the end of March or beginning of April; they are as described by Capt. Hutton. This species appears to be very locally distributed. I have nowhere found it, as mentioned by Col. Tickell, "extremely common in the jungles." Dr. Jerdon's description of it is somewhat meagre. This bird sits lengthways on the bough of a tree.

112. *CAPRIMULGUS ASIATICUS*. Common Indian Night-jar.

Abundant in Maunbhoom, where it is called "Kupcha pêcha." I have procured the eggs early in April. The bird is not seen in trees; and I do not think it ever perches.

114. *CAPRIMULGUS MONTICOLUS*. Franklin's Night-jar.

Called "Phurruck pêcha" in Maunbhoom, where it is extremely plentiful in certain localities, apparently replacing *C. asiaticus*, which, again, is common where *C. monticolus* is rare. This bird may be seen of an evening flying slowly over the jungle, at some height from the ground, uttering its peculiar call of "tzit," "tzit," sounding as if at one moment close by, at another some distance off. Its appearance whilst thus engaged is much like that of a hawk beating over the ground. It also utters this call from the bough of a tree. I found it very plentiful of an evening at Kashingur, feeding in the rice-kates, chiefly on *Coleoptera*.

It then frequently settles on the ground; but I have never flushed it from the ground when beating for game in the daytime, as is often done with *C. asiaticus*. It breeds in the beginning of April or end of March. Its eggs, intermediate in size between those of the last two species, are of much the same colour. I presented specimens of eggs of these three species of *Caprimulgi* to the Zoological Society in 1864 (P. Z. S. 1864, p. 375).

116. *HARPACTES HODGSONI*. Red-headed Trogon.

Darjeeling collection, 1862. Found in heavy timber-trees in the valley of Little Rungeet River. *H. fasciatus* was procured by Col. Tickell in Dhulbhoom, in Maunbhoom; but I have not yet seen a specimen.

117. *MEROPS VIRIDIS*. Common Indian Bee-eater.

Common at Barrackpore in the cold weather, arriving about the end of October. Breeds in Maunbhoom, where it is tolerably common, at the beginning of April. The eggs, two in number, are very round and of a pure clear white. The nest-hole is excavated in the ground.

118. *MEROPS PHILIPPENSIS*. Blue-tailed Bee-eater.

Found at Barrackpore only during the rains, from July to the end of October, and is then in moulting-plumage. When the cold weather sets in about the beginning of November, it disappears, and is replaced by *M. viridis*.

123. *CORACIAS INDICA*. Indian Roller.

Common in Maunbhoom; more so towards the beginning of the hot weather. Is said by the natives to breed there in holes of trees; but I have not hitherto procured the eggs. It breeds in the station of Bancoorah in April. The kind of trap called a *chou-guddi*, described by Dr. Jerdon under the notice of this bird, is frequently used by the natives of Maunbhoom, but chiefly for the capture of *Ruticilla rufiventris* and *Thamnobia cambayensis*.

127. *HALCYON LEUCOCEPHALUS*. Brown-headed Kingfisher.

I have only observed this fine bird in the neighbourhood of

Barrackpore at the beginning of and during the cold weather. Its legs are more of a coral-red than "dull scarlet," as described.

129. HALCYON FUSCUS. White-breasted Kingfisher.

Is tolerably common near Barrackpore, and is the only species of Kingfisher, besides *Alcedo bengalensis*, that I have hitherto met with in Maunbhoom.

134. ALCEDO BENGALENSIS. Common Indian Kingfisher.

Is the most abundant species both at Barrackpore and in Maunbhoom.

136. CERYLE RUDIS. Pied Kingfisher.

Appears to be the common species of Lower Bengal.

137. CERYLE GUTTATA. Large Pied Kingfisher.

Darjeeling collection, 1862, when it was procured on the Great Rungeet River.

140. HOMRAIUS BICORNIS. Great Hornbill.

Darjeeling, 1862. Frequently seen in pairs in the Great Rungeet valley, at low elevations in the heavy forest-jungle near the river.

141 ? HYDROCISSA CORONATA. Pied Hornbill.

Either this species or *H. albirostris* is common in Maunbhoom, especially on the banks of rivers. Invariably seen in flocks of seven or eight in high trees, on hills if they are near water, or on the large forest fruit-trees, such as the koochila (*Strychnus nux-vomica*), which grows luxuriantly on the banks of the Cossye river. They are so extremely wary, that in two seasons I have only been able to procure two specimens. They apparently breed in the district.

144. MENICEROS BICORNIS. Common Grey Hornbill.

Not common in Maunbhoom, but occasionally seen solitary on high trees in tolerably open country.

146. ACEROS NIPALENSIS. Rufous-necked Hornbill.

Darjeeling collection, 1862. Plentiful in the interior of Sik-

kim, at an elevation of from 5000 to 6000 feet, in flocks of a dozen or more. I procured several at Rinchingpoong.

147. *PALÆORNIS ALEXANDRI*. Alexandrine Parrakeet.

Common in the hilly parts of Maunbhoom. It flies high and solitary, departing early in the morning and returning at night to roost on trees on the hills, having probably, as mentioned by Mr. Blyth, gone a considerable distance for its food during the interval. Its call, uttered on the wing, is particularly harsh and loud. Known as "Chundanon" in Maunbhoom.

148. *PALÆORNIS TORQUATUS*. Rose-ringed Parrakeet.

Common at Barrackpore in July, where large flocks were seen in 1864 coming regularly every evening to roost in the *Palmyra* palms beyond the railway-station. These flocks consisted chiefly of young birds. It is found also in Maunbhoom, though sparingly distributed. I obtained a nest with three eggs, at Baramussia, on 1st March, 1865: these are nearly 1·2 inch in length, and barely 1 inch in breadth. Called "Teea tota" in Maunbhoom.

149. *PALÆORNIS ROSA*. Rose-headed Parrakeet.

Common in Maunbhoom, where it is known as "Teea-tota," and is invariably seen in flocks. In the cold weather, December and January, it is most abundant in the hilly portions; but as the breeding-season advances, it becomes more plentiful and is found everywhere. I procured a nest with four eggs, from a hole in a tree, in March, and several young birds later. The eggs are white, round and blunt at the ends, in length ·9 inch, by ·8 inch broad. Numbers of young birds are taken by the natives, and reared by hand; and a large proportion of those imported into Calcutta, nominally from the Rajmahal Hills, probably come from this district. It is the only Indian Parrakeet I know of which, in addition to the usual call, possesses a pleasing warbling song. This I have often heard, in the breeding-season, from a flock passing overhead, or on the point of alighting on a tree, the topmost branches of which are almost invariably chosen. After a little chattering and warbling, they fly off again. The flight is particularly

swift, as mentioned by Dr. Jerdon, who, however, does not notice a peculiarity in the flight of most Indian Parrakeets, and especially of this one—namely that, when on the wing, the bird turns from side to side like a badly balanced arrow.

The young of this species are at first covered with a light grey down, through which the green feathers gradually appear. They are able to fly in about fifteen days after they are hatched. They then, together with their parents, scour the country in search of food, which at that time of year consists chiefly of buds of trees, together with whatever fruit may be in season. The bird is called “Phooltoosee tota” in Maunbhoom.

155. *PICUS MAJOROIDES*. Darjeeling Black Woodpecker.
Darjeeling collection, 1862.

156. *PICUS CATHPHARIUS*. Lesser Black Woodpecker.
Darjeeling collection, 1862.

160. *PICUS MAHRATTENSIS*. Yellow-fronted Woodpecker.

Found in Maunbhoom, but very locally distributed. I saw a pair once only in the jungle, searching a pullas-tree (*Butea frondosa*) which was then (March) in full flower and without leaves. A female, with three white eggs, was taken from a hole in an aisun-tree (*Terminalia alata*), and brought to me at Baramussia on the 5th March. There was no nest. The eggs are slightly elongated, .75 inch long, by rather more than .62 inch broad. I have since procured one or two specimens, which were captured with bird-lime; but I have nowhere hitherto found it common.

The following is a description of the female:—Length 7 inches; wing 3.88; tail 2.5; tarsus .62; foot 1.5. Irides dull crimson. Bill and skin round the eyes slate-coloured, the former much lighter beneath. Legs dark slaty-blue; claws blue-black. The head is clothed with a silky crest, erectile at will, of dull yellow brown, lighter on the forehead, and changing to brown on the nape. A white streak from the corner of the eye curves round to the shoulder; below this is a brown semicircle, the two extremities of which meet on the breast; and a whitish patch, from beneath the bill to the middle of the breast, divides the brown. Lower part of the breast and belly brown and rusty-

white, enclosing a crimson patch which extends from the abdomen to the vent. The under tail-coverts consist of lanceolate feathers, brown, with white edges. Called "Surrasootee" in Maunbhoom.

173. *CHRY SOPHLE GMA FLAVINUCHA*. Large Yellow-naped Woodpecker.

Darjeeling collection, 1862.

176. *VENILIA PYRRHOTIS*. Red-eared Bay Woodpecker.

Darjeeling collection, 1862.

178. *MICROPTERNUS PHÆOCEPS*. Bengal Rufous Woodpecker.

Maunbhoom, 1864. Only one specimen, a female, seen.

180. *BRACHYPTERNUS AURANTIUS*. Golden-backed Woodpecker.

This is the common species about Barrackpore. A specimen or two procured in the Tubeel Hills, in Maunbhoom, are referable to this species or *B. chrysonotus*.

186. *VIVIA INNOMINATA*. Speckled Piculet.

Darjeeling collection, 1862.

188. *YUNX TORQUILLA*. Common Wryneck.

Perulia and Kashneghur; Maunbhoom in March 1864. Seen also near Barrackpore in October.

191. *MEGALÆMA VIRENS*. Great Barbet.

Darjeeling collection, 1862.

193. *MEGALÆMA CANICEPS*. Common Green Barbet.

Not common in Maunbhoom, where it is called "Sonterar." Frequents high trees in jungle, near rivers or on hills, where it is often heard. A pair shot, in March, at Beerachalee were feeding on the shoots and buds of the banyan (*Ficus indica*). Breeds towards the end of March. At the beginning of April two young birds and an addled egg were brought. There is no nest, as it simply uses the hollow of a tree. The young are

quite naked for some days after they are hatched. I preserved them in spirit, as they require examination. The egg is elongated and white.

Dimensions.—♂ Length 10·5 inches; tail 3 inches; wing 4·62 inches; expanse 15·5 inches; tarsus ·88 inch.

♀ Length 10·12 inches; tail (worn) 2·75 inches; wing 4·75 inches; expanse 15·5 inches; tarsus 1 inch.

Bill pinkish-brown; orbital skin orange-yellow; eyelid lighter yellow; legs dull yellow; claws greenish horn-colour.

195. CYANOPS ASIATICA. Blue-throated Barbet.

Collected at Darjeeling in 1862. The common species about Barrackpore and the neighbourhood of Calcutta, where specimens are always procurable. It has not been found hitherto in Maunbhoom.

196. CYANOPS FRANKLINI. Golden-throated Barbet.

Darjeeling collection, 1862.

197. XANTHOLÆMA INDICA. Crimson-breasted Barbet.

Rare about Barrackpore, but so extremely common in Maunbhoom that its call is heard everywhere, and at all hours; it is known as "Phoouk bussunt." This species taps trees with its beak. It lays its eggs in a hole in a decayed bough, which it excavates for itself. This fact, more than the search for insects, will probably account for its tapping propensities. Breeds in Maunbhoom at the beginning of April. The eggs are generally three in number, white, and much elongated: length 1 inch; greatest breadth ·62 inch.

A bough was brought to me, which it had excavated and formed into a nest. The length of the hole from aperture to bottom was 7 inches, and its diameter about 3. There was no nest at the bottom, the eggs being laid on the wood, which was hollowed out in an oval shape. It seems always to select the *underside* of a bough to commence operations on.

Length 6 to 6·5 inches; wing 3·25 inches; tail 1·5 inches. Bill blackish above, lead-coloured underneath, getting lighter where it meets the yellow plumage of the throat.

199. *CUCULUS CANORUS*. European Cuckoo.

I procured one specimen at Darjeeling in 1862.

201. *CUCULUS POLIOCEPHALUS*. Small Cuckoo.

Darjeeling collection, 1862.

205. *HIEROCOCCYX VARIUS*. Common Hawk-Cuckoo.

Observed in Maunbhoom, where it was rare, and also at Barrackpore in October.

208. *POLYPHASIA NIGRA*. Plaintive Cuckoo.

Maunbhoom in April, but locally distributed. It probably breeds there.

209? *POLYPHASIA TENUIROSTRIS*. Rufous-bellied Cuckoo.

At Barrackpore, in October 1864, I shot a young male which is probably referable to this species.

212. *COCCYSTES MELANOLEUCUS*. Pied Crested Cuckoo.

I procured a solitary specimen at Barrackpore, September 28, 1864.

214. *EUDYNAMIS ORIENTALIS*. Indian Koel.

Very common at Barrackpore in September 1864; but the October cyclone must have destroyed numbers, for I saw but few afterwards. It is found throughout Maunbhoom in small numbers, frequenting the thick trees in the neighbourhood of villages, but appearing to avoid the jungles.

217. *CENTROPUS RUFIPENNIS*. Common Coucal.

Tolerably common at Barrackpore as the cold weather approaches; but I do not think it is a permanent resident there. In Maunbhoom it apparently breeds; for young birds believed to be of this species were brought to me at the beginning of April, at which time it is tolerably common, more so than a month previously. The young were quite naked, with black skins. There were two of them in the same nest. One had the whole of a small snake in its stomach, which was consequently much distended. This, added to its colour, made it look very repulsive.

222. *TACCOCUA AFFINIS*. Central Indian Sirkeer.

I think that my Maunbhoom specimens are referable to this species. Dr. Jerdon's descriptions, however, of all the members of the genus are very short and unsatisfactory. In Maunbhoom they frequent the most hilly and jungly places, and, from their quiet, unobtrusive manners, are seldom seen except when beating for large game. On such occasions to fire for the sake of a specimen is to incur the certain wrath of the rest of the party, who, roused up by the report, look out with eager eyes for the expected bear, and *bless* the ornithologist afterwards for causing a false alarm.

223. *ARACHNOTHERA MAGNA*. Large Spider-hunter.

Darjeeling collection, 1862.

228. *ÆTHOPYGA IGNICAUDA*. Fire-tailed Honey-sucker.

Darjeeling collection, 1862.

229. *ÆTHOPYGA NIPALENSIS*. Maroon-backed Honey-sucker.

Collected at Darjeeling in 1862. Frequents the low bushes close to the station on the new cart-road.

231. *ÆTHOPYGA SATURATA*. Black-breasted Honey-sucker.

Darjeeling collection, 1862.

232. *LEPTOCOMA ZEYLONICA*. Amethystine Honey-sucker.

Tolerably common in the neighbourhood of Barrackpore, but more so in Maunbhoom, where it breeds in March and April, and is known by the name "Ungatoonee." Two nests were brought to me on the 27th March, from which I take the following description:—Bottle-shaped, the entrance from one side near the top, its aperture circular, with a dome over it. Composed outside of bits of bark and fibres, firmly agglutinated with spiders' web; the top of the nest attached firmly to a small twig, from which it hangs suspended and exposed to every breeze, which must shake the nest severely and cause it to swing, but without damaging the eggs, owing to the peculiar elasticity of the silky webs employed. Extreme length of

nest 6 inches ; breadth 2·5 inches ; aperture 1 inch in diameter ; circumference, just below the entrance, 7·5 inches. The eggs were three in number, much elongated at the smaller end. Ground-colour dirty white, covered with minute ashy-brown specks, which combine so as to form a zone near the blunt end. Both nest and eggs very much like those of *Arachnechthra asiatica* ; but the former may be distinguished by its slightly smaller size, and the eggs by the zone. The eggs of both species vary considerably in colour, and, after a careful examination of fully forty nests and eggs of both species, I find it very difficult to discriminate between them, or draw an exact line of difference. The only way I could be certain of the identity was by having the females caught by bird-lime at the entrance of the nest. From captures made in this way, I find that the male of this species takes part in incubation—a fact not observed in *A. asiatica*. Three of the eggs I obtained measured respectively ·65, ·68, and ·56 inch in length, and in breadth ·43, ·46, and ·37 inch. The young, when fledged, are like the female, but with brighter yellow on the breast.

234. ARACHNECHTHRA ASIATICA. Purple Honey-sucker.

Very common in Maunbhoom, where, like the last, it is also called “Ungatoonee”; but I have not observed it at Barrackpore. The male has a very shrill, clear song, which can scarcely be called “a feeble but sweet chirping note,” as it is by Dr. Jerdon (vol. i. p. 371), apparently on Mr. Blyth’s authority. This is generally uttered from the topmost spray of a high tree, sometimes on the wing when moving from one tree to another. The bird is often seen associated with the last species on flowering trees and shrubs in the jungles. It breeds in March and April. The nest is much like that of the English Wren, but, instead of being placed against a tree, is pendent from the end of a bough, and sways to and fro in the wind. Its length is from 5·5 to 6·5 inches ; its breadth from 2·5 to 3 inches, with a circular aperture on one side near the top. In shape it is nearly oval, and is very softly but strongly made up of bits of leaves, cotton-wool, bents, and the like, well interlaced with spiders’ webs, which substance plays an important part in

the structure, and serves to hang it by. The interior of the nest is lined with the softest cotton or other accessible material, and is slightly larger at the bottom than the top. There is a dome over the entrance. The eggs, as mentioned by Dr. Jerdon, are of a greenish-grey tinge, with dusky spots. The usual number is three.

Having had so many nests and eggs of this species brought to me in Maunbhoom, with the female bird in most cases caught on the nest, I can assert with confidence that during the breeding-season this sex does not put on the black livery of the male, but retains her own sombre garb. I believe this species migrates to Maunbhoom and the Chota Nagpore district for the purpose of nidification.

238. *DICÆUM MINIMUM*. Tickell's Flower-pecker.

Tolerably common in Maunbhoom, especially in the breeding-season. It has a weak piping note, and is met with in heavy jungles in thick trees, busily engaged seeking amongst the leaves for insects. The plumage is of such a dull colour, and the size of the bird so small, that it is not easy to get specimens. It breeds earlier than the last two species. The first nest was brought to me at Beerachalee on the 16th March, with three pure white eggs, which measure .6 inch by .4 inch. The nest is much like that of *Arachnechthra asiatica*, and of the same description, being suspended by spiders' web from a bough; but it is a good deal smaller, rather less oval and more round, and the inside more carefully constructed. It is lined with the softest materials, so as to put me much in mind of the cocoon of the tusseh silk-worm (*Antheræa paphia*), it was so smooth and well made. In length it was 3.5 inches; in breadth 2 inches; and the circumference 7 inches. Several nests, with young ones fully fledged, were brought to me about the beginning of April. There is no dome over the entrance of the nest.

240. *PIPRISOMA AGILE*. Thick-billed Flower-pecker.

This bird cannot be considered common in Maunbhoom, although it is certainly tolerably abundant during the breeding-season, which is in March and the beginning of April. The

first nest was brought to me on the 26th March, with only two eggs, the usual number being three. The nest is very peculiar—a pocket-like structure suspended from a small bough which forms the roof, the entrance being from one side near the top. It is composed entirely of spiders' web and other silks, with which a pinkish-brown fluff (probably from some tree in flower) is felted together, making the nest look entirely of that colour. There is no lining; only the material employed is denser at the bottom than at the top of the nest. The great peculiarity is that the nest is as if woven in one piece, and, like a bit of cloth, can be shaken or compressed without doing it any injury. The length is 3 inches; breadth 2 inches; entrance-hole 1·5 inch long, by ·87 inch broad. The eggs are moderately elongated, of a light pink ground-colour, blotched indistinctly with pink spots, more frequent and massed at the obtuse end. They are large for the size of the bird, their length being ·62 inch, and their breadth a little over ·37 inch.

The dimensions of a female caught on the nest are—whole length 3·87 inches; tail 1·15 inch; wing 2·25 inches; tarsus barely ·5 inch; expanse 6·5 inches. Bill bluish lead-colour; lips a little darker. I am inclined to think that this species feeds occasionally on the ripe fruit of the banyan and other *Fici*.

246. ? *SALPORNIS SPILONOTA*. Spotted Grey Creeper.

Although I have hunted long for this species in Maunbhoom, I have never yet seen anything like it except on one occasion; and then I may have been mistaken, as I could not secure the specimen.

248. *SITTA HIMALAYENSIS*. White-tailed Nuthatch.

Darjeeling collection, 1862.

254. *UPUPA EPOPS*. European Hoopoe.

“Doobchirka” in Maunbhoom, where it is rarely seen, and then in pairs. Dimensions of a specimen killed at Budhpore, March 18th, 1865:—From tip of the bill to end of the tail 11 inches; from top of crest to end of tail 12 inches; wing 6 inches; tail 4 inches. Bill at front 2·15 inches; tarsus ·87

inch. From eye to top of the crest 2·75 inches. Bill dark horn-colour, fleshy at base ; legs greenish-brown.

256. *LANIUS LAHTORA*. Indian Grey Shrike.
Rare in Maunbhoom.

260. *LANIUS HARDWICKII*. Bay-backed Shrike.
Occasionally seen in Maunbhoom, but appears to be rare.

261. *LANIUS CRISTATUS*. Brown Shrike.
“Khurkuteea.” Migrates to the neighbourhood of Barrackpore in the cold weather : I procured my first specimen there on 28th September, 1864. Not common in Maunbhoom.

265. *TEPHRODORNIS PONDICERIANA*. Common Wood-Shrike.
Appears to come to the Maunbhoom district (where it is called “Arsun chota”) for the purpose of breeding. I procured the nest and eggs early in April, and the young were nearly fledged by the 20th of that month. They appear to come, year after year, to particular localities to breed. Several nests were brought me from the neighbourhood of Kashurghur both in 1864 and 1865, whereas none were seen elsewhere. The nest is very small for the size of the bird, and the material of which it is composed closely resembles the bird’s plumage in colour. The nest is round and very shallow, something like a Chaffinch’s, being very neatly made ; diameter inside 2 inches, depth 1 inch ; composed of grey fibres, bits of bark, grass, and the like, cemented with spiders’ web. The eggs are two in number, greenish white, spotted with brown and slate-coloured dots, which in most specimens form a well-defined zone round the thickest part of the egg, leaving both ends without marks. Length of the egg ·75 inch ; breadth ·59 inch. This bird was not observed in Maunbhoom except during the breeding-season.

267. *HEMIPUS PICATUS*. Little Pied Shrike.
Darjeeling collection, 1862.

269. *VOLVOCIVORA MELASCHISTUS*. Dark-grey Cuckoo-Shrike.
Darjeeling collection, 1862 ; Maunbhoom in 1864 and 1865, where it was occasionally seen, but was by no means common.

271. *PERICROCOTUS SPECIOSUS*. Large Minivet.

Darjeeling collection, 1862. Tolerably plentiful at Maknee, in Maunbhoom, in January 1865, in flocks nearly all composed of females or young males. I observed a flock, early one morning, feeding on, or clinging to, the stalks of a grass close to the ground. In the daytime they are very actively engaged in searching for insects in thick trees: the various species of *Fici* appear to be preferred. Usual length from 8·5 to 8·75 inches.

273. *PERICROCOTUS BREVIROSTRIS*. Short-billed Minivet.

Darjeeling collection, 1862. In Maunbhoom I found it in the same locality and at the same time as the last species, in small flocks, chiefly frequenting mango-trees. The female has a yellow wing-band, the abdomen white, and the outer tail-feathers with more or less yellow, most on the outer pair of lengthened ones. Both this and the last species appear to prefer the well-wooded, jungle-covered hills. I have not seen them elsewhere, with the exception of an occasional straggler.

274. *PERICROCOTUS SOLARIS*. Yellow-throated Minivet.

Darjeeling collection, 1862.

276. *PERICROCOTUS PEREGRINUS*. Small Minivet; "Raja-ranee"*..

Tolerably common in flocks, on high trees, in the hilly parts of Maunbhoom, but not confined to these, as it is occasionally met with all over the district, wherever suitable localities present themselves.

278. *DICRURUS MACROCERCUS*. Common Drongo, or King-Crow.

"Dhenkchooar" and also "Pābdhooa" in Maunbhoom, where it is common, especially when the pullas-tree is in flower, feeding greedily, not, I imagine, actually on the flowers them-

* "Raja-ranee," *i. e.* "King and Queen," with reference probably to the difference of colour of the sexes. I think the name is used indiscriminately for all the species of *Pericrocoti* known in Maunbhoom to the natives..

selves, but on the insects attracted by them. I think that *D. longicaudatus* ought also to be included amongst the Maunbhoom birds, as I have possibly confounded this species with it on one or two occasions.

280. *DICRURUS LONGICAUDATUS*. Long-tailed Drongo.
Darjeeling collection, 1862.

281. *DICRURUS CÆRULESCENS*. White-bellied Drongo.

Tolerably common in the well-wooded hilly parts of Maunbhoom, but very wary and difficult of approach. It is always seen solitary.

284. *EDOLIUS PARADISEUS*. Large Racket-tailed Drongo, or Bhimraj.

Observed on one or two occasions near the Cossye River, in Maunbhoom; but I could not secure a specimen.

286. *CHIBIA HOTTENTOTA*. Hair-crested Drongo.

Darjeeling collection, 1862. Observed on several occasions in Maunbhoom, on the semul (*Bombax heptaphyllum*) in flower, and also in heavy tree-jungle near streams. It is very wary and difficult to approach, and is nowhere common. It is said by the natives to breed in that district.

187. *ARTAMUS FUSCUS*. Ashy Swallow-Shrike.

I observed a small party, and collected specimens, near Darjeeling, at an elevation of about 5000 feet, in May 1862. After swooping about for some time, they settled on the boughs of a dead tree. I also obtained it in the neighbourhood of Barrackpore, in January 1864.

288. *TCHITREA PARADISI*. Paradise-Flycatcher.

I procured a few specimens of this beautiful bird at Kashurghur, in April 1864. Amongst them were two full-grown males, in white plumage. In one, the central tail-feathers were black-shafted and 15 inches in length. A third specimen was a young male partially assuming the white plumage of the adult bird; a portion of the long tail-feathers were white, the rest chestnut. I did not see a single specimen in 1865.

There seems to be no doubt that this and numerous other species of birds migrate to Maunbhoom when the new leaves come on the trees at the end of March. About the middle of that month the jungles are comparatively bare, all the old leaves having fallen; and they are then set fire to by the natives. In a fortnight or so the fresh vegetation springs up (as I have already mentioned in the introduction to this paper), and new species of birds appear, most of which at once set to work making their nests. The fresh vegetation and consequent increase of insect life has, no doubt, a great deal to do with the arrival of some species, which do not breed until much later.

290. *MYIAGRA AZUREA*. Azure Flycatcher.

Procured in October, in the neighbourhood of Barrackpore, whither it probably migrates for the cold months only. In Maunbhoom it is frequently seen in suitable localities in January and February, but does not apparently make a lengthened stay.

291. *LEUCOCERCA FUSCOVENTRIS*. White-throated Fantail.

Darjeeling collection, 1862. I observed a Fantail, probably of this species, in the neighbourhood of Barrackpore, in October 1864.

295. *CRYPTOLOPHA CINEREOCAPILLA*. Grey-headed Flycatcher.

I came across this pretty little bird for the first time at Ambekanuggur, in Maunbhoom, in December 1864, and found it tolerably plentiful in high trees near the Cossye River. It occasionally visited the mango-tope in which our camp was pitched, frequenting the low boughs near the ground; but it was generally rather shy.

296. *HEMICHELIDON FULIGINOSA*. Sooty Flycatcher.

Darjeeling collection, 1862.

301. *EUMYIAS MELANOPS*. Verditer Flycatcher.

This is the common species at Darjeeling, where it is abundant in the station, and goes by the name of the "Blue Bird." I found it tolerably common in Maunbhoom, in the cold weather.

312 ? MUSCICAPULA SAPPHIRA. Sapphire-headed Fly-catcher.

A specimen procured in Maunbhoom in 1864 is, I think, referable to this species.

314. NILTAVA SUNDARA. Fairy Blue Chat.

Darjeeling collection, 1862.

316. NILTAVA GRANDIS. Large Blue Chat.

Darjeeling collection, 1862.

319. SIPHIA STROPHIATA. Orange-gorgeted Flycatcher.

Darjeeling collection, 1862.

323. ERYTHROSTERNA LEUCURA. White-tailed Flycatcher.

"Tirkee dama" in Maunbhoom, where it is common in the cold weather ; also at Barrackpore.

324. ERYTHROSTERNA PUSILLA. Rufous-backed Flycatcher.

Darjeeling collection, 1862.

326. ERYTHROSTERNA MACULATA. Little Pied Flycatcher.

Darjeeling, 1862 ; Maunbhoom 1864 and 1865, where it was rare, though occasionally seen in cold weather. It frequents moderately large trees in the jungles.

327. TESIA CASTANEOCORONATA. Chestnut-headed Wren.

Darjeeling collection, 1862.

329. PNOEPYGA SQUAMATA. Scaly-breasted Wren.

Darjeeling collection, 1862.

I procured a Wren very much like the English species, on the top of Mount Tongloo, in 1862, but am not sure whether it was that bird or *Troglodytes nipalensis*, Hodgson.

343. MYIOPHONUS TEMMINCKI. Yellow-billed Thrush.

Darjeeling collection, 1862.

344. HYDRORNIS NIPALENSIS. Large Nepal Ground-Thrush.

Darjeeling collection, 1862.

351. PETROCOSSYPHUS CYANEUS. Blue Rock-Thrush.

Noticed at Sahebgunje, on the Ganges, in 1861.

355. GEOCICHLA CITRINA. Orange-headed Thrush.

Found in Maunbhoom in 1865, on two occasions. It is rare and solitary, frequenting low thickets, and perching in trees when flushed.

361. MERULA BOULBOUL. Grey-winged Blackbird.

Darjeeling collection, 1862.

362. MERULA ALBOCINCTA. White-collared Ouzel.

Found abundantly on Mount Tongloo, in 1862, where they were in flocks, busily feeding on the rhododendron-flowers. The beaks of those I killed were covered with pollen. Specimens of both sexes were procured.

370. OREOCINCLA MOLLISSIMA. Plain-backed Mountain-Thrush.

Darjeeling collection, 1862.

371. OREOCINCLA DAUMA. Small-billed Mountain-Thrush.

A solitary specimen procured at Kashurghur, Maunbhoom, in 1864.

[To be continued.]

XXXIV.—*On a supposed New Species of Pheasant, of the Genus Argus.* By D. G. ELLIOT, F.Z.S., &c.

THE subjects of the following descriptions are contained in the collection of the British Museum, and are said to have come from Borneo, the specimens from which country, in Dr. Sclater's opinion (P. Z. S. 1863, p. 124), "may probably constitute local varieties." They seem, however, to possess characters sufficient to entitle them to specific distinction. I therefore venture to designate them as belonging to a new species, which I have much pleasure in naming after Mr. George Robert Gray, F.R.S., the