XIV.—*Notes on the Nidification of Indian Birds not mentioned in Hume's 'Nests and Eggs.'*—Part II. By E. C. Stuart Baker, F.Z.S.

[Concluded from p. 113.]

Dicrurus annectens.

Oates, F. B. Ind. i. p. 312.

I have nothing to add to my description of the nesting of this King-Crow, which is met with in our district in some numbers throughout the breeding-season; but we have found a certain type of egg to be singularly dominant here, and as it is one which seems different to that laid by the other species of the genus, it deserves notice.

The normal egg laid by the members of the genus *Dicrurus* is a broad regular oval, not much compressed towards the smaller end, and marked with spots, the most prominent character of which is their roundness. The majority of eggs of the Crow-billed Drongo, as taken in Lakhimpur, are, on the contrary, long ovals, well drawn out and often conspicuously pointed at the small end, whilst the markings convey the idea of having been laid on in longitudinal splashes.

The colour of these eggs varies considerably: in some the ground-colour is white, or white with a faint creamy tinge, and the marks consist of spots and blotches of deep purple-red or blood-red, with others underlying them of dark reddish lavender. In this type of coloration the marks are generally sparing everywhere, but less so at the larger end. Another common type is of a comparatively dark brick-red pink, profusely covered with small and large longitudinal blotches of brick-red and red-brown and the usual underlying pale lavender spots. Yet a third type has the ground bright dark salmon-pink, with bold longitudinal blotches of red-brown and lavender, sometimes dense everywhere, sometimes less numerous and shewing up the more boldly. In the majority of eggs, however, the markings, though more numerous towards the larger end, form no cap or ring there.

My eggs taken in Lakhimpur are on average a good deal larger than those taken in North Cachar, being about 1·05 by ·75 in.

96. Dicrurus nigrescens.

Oates, F B. Ind. i. p. 315.

Dr. Ernst Hartert, after a comparison of the Ashy Drongo of Eastern Assam with the types of various species, has come to the conclusion that our bird is *D. nigrescens* and not *D. cineraceus* as determined by Oates.

This species breeds fairly freely throughout the Province, though not so common a bird as the Common Indian Ashy Drongo is within its own limits.

I can see no points of difference in the breeding of *D. nigrescens* and *D. longicaudatus* either as regards nests or eggs, nor do I think that they could in any way be discriminated one from the other. On the whole, the eggs of *D. nigrescens* may be more richly and darker coloured than those of *D. longicaudatus*, eggs with a white ground being uncommon.

It breeds throughout April, May, June, and July, and I believe that Dr. Coltart has taken eggs in March. It seems to prefer the plains near to the foot of the hills for nesting purposes, and is seldom to be found during the breeding-season far from them.

The number of eggs laid by *D. nigrescens* is quite as often three as four, although *D. longicaudatus* seems generally to lay the latter number.

97. Phylloscopus affinis.

Oates, F. B. Ind. i. p. 401 ; Osmaston, B. N. H. S. J. xi. p. 68.

Although this little Warbler is exceedingly common in certain localities in Kashmir above 10,000 feet, its nest for long escaped observation. Mr. B. B. Osmaston, of the Forest Department, was the first collector to take it in the Tons Valley ; he records *loc. cit.* :—" On June the 7th (1896) I noticed a small greenish-yellow bird frequenting the low scrub on the mountain side at about 12,000 feet

elevation. This scrub consists chiefly of dwarf juniper, *Lonicera*, and a small yellow-flowering rhododendron which grows only two or three feet high. There are few trees, except here and there a birch, and the bird keeps chiefly to the low scrub. It has a rather loud monosyllabic chirp, which it frequently utters. After a considerable search I was rewarded by finding two nests of this species, both in the above-described scrub and raised about one foot from the ground. The nests were domed, with a small side entrance, and were made of grass and lined with feathers.

"The eggs were four in each nest, very broad ovals, either pure white or white with a few very pale pink spots. They gave the following measurements :—

"Largest egg	·61 by ·48 in.
Smallest egg	·56 by ·46 in.
Average of 8 eggs	·60 by ·47 in."

Since this was written nests and eggs have been taken by numerous collectors, who have confirmed what was written by Osmaston. The majority of the eggs are, perhaps, pure white, but many have specks and spots of red, as a rule very sparsely scattered over the larger end and very pale, but sometimes fairly distinct and plentiful.

Mr. S. L. Whymper writes to me from Kashmir, 1200 feet :—"This is a most common nest up here and I have taken numbers. The birds generally seem to lay four eggs, three pure white and the fourth faintly speckled with red ; I have, however, found one clutch of four in which all were spotted."

I have had clutches of four sent me which were all pure white ; on the other hand, I have seen clutches all spotted, and some again containing eggs of both kinds, so that there would seem to be no certainty as to what may be expected.

The eggs in my collection vary between ·54 by ·60 in. in length and between ·45 by ·48 in. in breadth.

Typically they are broad ovals, distinctly pointed at the smaller end, though occasionally quite obtuse. The grain is

very fine and close, and there is an appreciable amount of gloss on the shell, which is stout for so tiny an egg.

The birds seem to lay from the beginning of June to late in August, and the full complement of eggs is four.

98. Acanthopneuste magnirostris.

Oates, F. B. Ind. i. p. 415; Buchanan, B. N. H. S. J. xii. p. 777; Whymper, ibid. xv. p. 521.

The Large-billed Willow-Warbler had long been known to breed in Kashmir, but it was not until 1899 that its nest was taken. In that year Major Buchanan sent a bird for my identification which he had shot off its nest and which proved to be of this species. The nest was taken at Changla Gali, about ten miles from Murree, at an elevation of some 8500 feet.

Buchanan thus describes the nest:—"The female was shot off the nest, which was a large, loosely-made, domed structure of moss and maiden-hair stems, lined with fine grass. It was situated under an overhanging bank, on the side of a steep, wooded hill, supported by the projecting root of a tree. The nest contained four fresh pure white eggs, average length ·72 and breadth ·51 inch."

Mr. S. L. Whymper, in another number of the same journal, also records his experience. The first nest taken by him "was entirely of moss with a very slight lining of hair and domed, although placed well inside a hole in a tree, about ten feet up. There were four fresh eggs, pure white." Afterwards he found two more nests in precisely similar positions.

Rattray, Ward, and others have also taken the nests of this Warbler. It seems to be always made mainly of moss, but sometimes to have fern-roots and maiden-hair stems mixed with it. The lining may be of fine grasses, fern-roots, or hair, but I have never heard of a lining of feathers. The normal complement of eggs is four, but rarely five are laid. They are always pure white with a high gloss. The shell is stout and fine-grained. In shape the eggs are broad ovals, not much compressed towards the smaller end, but in a few cases some of mine are rather lengthened and pointed.

My eggs average ·71 in. by ·54, and vary between ·68 by ·74 in length and between ·52 and ·57 in breadth.

99. Cryptolopha affinis.

Oates, F. B. Ind. i. p. 422.

I have seen but one nest and eggs of this little Warbler, which I owe to the generosity of Dr. Coltart. The nest was one brought in to him by Nagas from the foot-hills above Margherita just outside the borders of the extreme east of Assam. It was of the usual type of Flycatcher-Warbler's nests—that is to say, it was made of moss and very thickly lined with Bombax-cotton. It was, of course, globular in shape, and had an entrance high up on one side, and measured, roughly speaking, about six inches high by four inches broad.

The eggs were five in number, and were, as might be expected, pure white, less glossy than those of *C. poliogenys* or *C. burkii*, more so than those of *C. xanthoschista* or *C. jerdoni*. The texture is close and very fine, and the shell is stout. In shape they are broad ovals and very little compressed towards the larger end. They vary in length between ·58 and ·59 in. and in breadth between ·48 and ·49 in. The nest was taken on the 14th of April, 1903.

The Allied Flycatcher-Warbler is very common in Lakhimpur and Eastern Assam as far as Cachar and Sylhet in the cold weather; but I failed to find it breeding even on the highest ranges of the North Cachar Hills, and the majority of the birds, at least, must go some way off to breed.

100. Cryptolopha castaneiceps.

Oates, F. B. Ind. i. p. 427.

Hodgson's description of the nest of this little bird would agree well with those that I have taken except in one point, and that is that I have never seen any stems used in its construction and very seldom any lichen.

The nest may be placed either on the ground itself, in amongst the roots of some tree, or from two to four feet from the ground in bamboo-clumps, masses of creepers, or

in the moss and other vegetation covering some old tree. In the latter case it is always more or less built into some shallow hollow, but is never, so far as I know, placed inside a hole.

The eggs, which have not been described hitherto, are, of course, pure white. They are the least glossy of all the eggs which I have seen of this genus and are not so strong, though by no means fragile in proportion to their size. In shape they are typically broad ovals, with the smaller end decidedly compressed and quite pointed.

They measure about ·55 by ·41 in. on the average, but vary in length between ·53 and ·57 and in breadth between ·40 and ·42. The birds are, as a rule, early breeders, the majority laying in April and early May, but I have taken a single fresh egg as late as June the 12th and have found young still in the nest in August. I have, however, seen nearly fully fledged young in the first few days of April.

I have not taken the nest below 3500 feet, and the majority were between 4000 feet and 5000 feet.

101. Cryptolopha cantator.

Oates, F. B. Ind. i. p. 427.

Tickell's Flycatcher-Warbler occurs throughout the hills of Assam, both north and south, but is nowhere at all common, and in the fifteen years that I was stationed in the North Cachar Hills I took less than half a dozen nests. These were, however, sufficient to shew that the accounts of its nidification as given in Hume's 'Nests and Eggs' (second edit.) were wrong.

My first nest was taken at Laisung in 1893. This was a most beautiful little moss-ball wedged in between the branches of a dead sapling lying on the ground amongst dense bushes. The moss used in its construction was of the brightest and greenest, and all in very fine bits, so that the nest was very compact and well made, measuring barely 4½ inches high by under 4 inches wide. The lining was entirely of down from Bombax-seed, but this had been flattened down by the three young birds which the nest contained. The parents hovered round in a great state of anxiety

whilst I was examining the young, but returned at once to their nest as soon as I left. My second nest was brought to me by a Naga the next day, who took it in the same valley, catching the cock bird on it. It contained a single egg, which took some finding amongst the cotton-down which filled the interior. It was placed on a mossy bank amongst stones.

The third nest taken was wedged amongst the moss-covered roots of a large tree; it agreed exactly in description with the others, but was somewhat larger, measuring about six by four inches. It contained four hard-set and unblowable eggs.

Yet a fourth nest was found in the lower part of a bamboo-clump, between two huge dead bamboos which had a little moss and much lichen on them. The nest was like that last described, and had the normal lining of cotton-down completely filling the interior and sticking out through the opening. It contained two fresh eggs, even smaller than those of *C. castaneiceps*, measuring only ·48 by ·40 in. and ·48 by ·39 in. In shape they are broad ovals, hardly at all compressed towards the smaller end. The texture is very fine and close, and the shell extremely tough for so tiny an egg: they are, of course, white and fairly glossy.

The other eggs which I have seen were exactly similar, but were, I think, bigger, though I have not their exact measurements.

This bird breeds in April and May and, in North Cachar, not under some 4000 feet.

102. Tickellia hodgsoni.

Oates, F. B. Ind. i. p. 432; Osmaston, B. N. H. S. J. xv. p. 512.

The only collector who has ever taken the nest and eggs of this tiny Warbler is Mr. Osmaston, who thus describes them in the Bombay Journal:—

"I came across one on the 6th of June in a thicket of saplings in a lofty forest at about 6800 feet.

"The nest was placed in a fork at the top of a Symploces sapling, seven feet from the ground. It is roughly egg-

shaped, with a hole 1½ inches in diameter near the top, and measures 6 inches in height by 3 inches in width. It is composed entirely of dry leaves (chiefly bamboo) with a lining of black rhizomorph, and, lastly, inside the latter a lining of bits of soft dry bamboo-leaf.

"The eggs, three in number, were nearly fresh. They have little or no gloss. The ground-colour is a pale claret, and they are spotted, speckled, and streaked, chiefly at the large end, with darker claret markings.

"The mean of the measurements of the three eggs is ·63 by ·47 in."

103. Horeites brunneifrons.

Oates, F. B. Ind. i. p. 440; Osmaston, B. N. H. S. J. xiv. p. 816.

The description given of the eggs of this species in Hume's 'Nests and Eggs' is wrong, but has fortunately been rectified by Osmaston, who took several nests on the Singalila Range, Sikkim, at a height of some 10,000 to 11,000 feet, where he found the bird to be quite common. He says:—

"I found four nests of this species containing 4, 3, 3, and 2 eggs respectively, all in the first week in June, built in low scrub about a foot from the ground at an elevation of about 11,000 feet.

"The nest is domed and rather oval in shape, 6 or 7 inches high and 4 inches thick, with a circular opening near the top about 1½ inches in diameter. It is composed externally of moss, dry grass, and dry bamboo-leaves, and lined rather scantily with fine grass and lastly with feathers.

"The eggs are slightly glossy ovals. In colour they are peculiar, the ground being terra-cotta with darker markings of the same colour, chiefly at the big end.

"The average of 12 eggs gives the following: length 0·72, breadth 0·49 in."

Two eggs sent me by Mr. Osmaston agree well with the above description. They are rather long ovals, the broad end not very obtuse, and the smaller end almost pointed

though not much more compressed than the larger. The ground-colour is bright pale pink terra-cotta, and at the extremity of the broader end there is a dense ring of specks of dark terra-cotta and brick-red which coalesce with numerous underlying markings of dull grey and lavender. Over the rest of the egg are scattered sparingly very faint freckles of lavender and terra-cotta, hardly to be noticed unless the egg is closely examined.

104. Lanius colluroides.

Oates, F. B. Ind. i. p. 462 ; Harrington, B. N. H. S. J. xiv. p. 598.

Capt. Harrington and others have taken many nests of the Burmese Shrike since Blanford and Oates wrote the 'Fauna of British India,' but the only record that I can find is that of the first named.

He notes (*loc. cit.*) :—"It is a wonder that this bird's nest has not been described before, as it is very common up here, especially during the breeding-season, which is from April to the beginning of June. All the young birds have left their nests now (23rd June), and everywhere one goes one is greeted with the angry chatter of the old birds. Whilst they had eggs in their nests they were very silent and generally kept out of sight. The nest is usually placed on the top of small saplings, against the trunk of trees, and between the fork of good-sized branches at 5 to 12 feet from the ground. It is neatly made of leaves, lichens, and feathers, &c., covered with cobwebs and lined with fine grass. The size of nest varies a good deal, if placed in between branches it is much smaller and matches the tree-trunk, if concealed by leaves it is much larger. The eggs are very much like the English Butcher-bird's and vary in the same way, there being two more or less distinct types, one pinkish white with brown and purple spots, the other greenish white with sepia and ash-coloured spots, a few have a dull yellow ground-colour with spots the same as the last. Size ·8 to ·86 by ·67 to ·66 in."

I have a fine series of these eggs which I owe to Capt.

Harrington and other Burmese collectors. They agree well with the above description, but I have two clutches which deserve mention, one with a bright pink ground and brilliant red-brown markings, and one with a grey ground and grey-brown and green-brown markings.

The birds appear to lay from four to six eggs in a clutch, five being the most common number.

105. Pericrocotus albifrons.

Oates, F. B. Ind. i. p. 489.

I have received two pairs of eggs of this Minivet from Mr. K. Macdonald, and a nest from Capt. Harrington taken at Monyma, Upper Burma.

The nest sent me is a tiny shallow cup, composed of the finest grasses and roots all matted together with cobwebs. Lining there is none, beyond two small feathers stuck to the grasses with spiders' webs, but the whole of the outside of the nest is covered with tiny scraps of silver-grey and light brown bark, all closely massed into the very structure of the nest itself, so that there are no ends or loose bits of any sort. The nest is placed on the horizontal fork of a small sapling. It does not hang between but is actually placed on the two twigs, these forming part of the base itself and shewing bare through it.

It measures 1·8 in. in diameter and is about ·6 in. deep. Nowhere are the walls over ·4 in. thick, and in most places they are ·2 in. or less, the actual rim being about ·1 in.

The eggs are typical Minivet's eggs, though very pale in coloration, indeed they are not unlike washed-out specimens of those of *P. brevirostris*. The ground-colour is pale grey, and the markings consist of small blotches and specks of dark brown fairly thickly scattered over the whole surface, in one egg more so at the larger end than elsewhere, in the other three about the same all over. In character these marks are mostly longitudinal, as in *P. brevirostris* and *P. perigrinus*, but they are neither so large nor so numerous, so that the prevailing tint is that of the grey ground-colour.

In shape they are rather broad ovals, one being slightly

compressed towards the smaller end, the others being very regular. The surface is smooth, but almost glossless; the texture is fine and the shell strong.

They measure on an average ·63 by ·51 in.

Both nests were taken in May, 1901.

106. Oriolus andamanensis.

Oates, F. B. Ind. i. p. 504; Butler, B. N. H. S. J. xii. p. 396.

The first nests taken, or at all events described, were those recorded by Butler. He writes :—" I found two; the first on May the 19th, situated about 8 feet from the ground on a small Bain-tree (*Pithecolobium* sp. ?) by the road-side, was a very small and slight nest of the usual Oriole type, and contained one large young bird only. The other nest, taken on June 1st, was some fifteen feet from the ground in a *Hibiscus* of some sort, standing some forty yards from the jungle edge, and contained three hard-set eggs. This nest was much larger and more solid than the first, almost double the size; it was lined with fine roots and fibres, underneath which was a layer of strips of dead plantain-leaf (one of these pieces as large as 6 inches by 2 inches). Then came the foundation of dead and skeleton leaves held together and suspended from the fork of the branch by fibres of the Cocoanut Palm.

" *Eggs* : ground-colour white with a strong pinkish-brown tinge, spotted at the larger end with madder-brown, with a few underlying purplish-grey spots. Some of the larger spots have a pinkish-brown nimbus round them, giving them the appearance of having been put on a wet surface and having run."

107. Graculipica nigricollis.

Oates, F. B. Ind. i. p. 534; Harrington, B. N. H. S. J. xiv. p. 598.

A short note by Capt. Harrington in the Bombay Journal describes the bird as building " a large conspicuous nest at the end of branches. Nest composed of straw, grass, feathers, &c. Eggs pale blue, measuring 1·35 by ·96 inch."

His eggs were taken at Taungyi, Upper Burmah.

In a letter he writes :—" *G. nigricollis* is very common in the Southern Shan States east of Taungyi and Fort Stedman; it is also found sparingly up the Chindwin River. It makes a huge nest of the same description as *Sturnopastor superciliaris*, generally placed near the top of a *Ficus*, but I have found it low down in a hedge in the Shan States. The eggs are of the usual Myna type, but larger. Burmese birds breed in April, May, and June."

Capt. Harrington was good enough to send me several clutches of this Myna's eggs, as well as the skins of the parent birds. The eggs are just like those of *Acridotheres tristis*, but are generally perhaps rather darker blue, and, possibly, rather finer in texture. My clutches number either three or four. Ten eggs sent to me average 1·31 by ·91 inch.

108. Graculipica burmanica.

Oates, F. B. Ind. i. p. 535.

The only note that I have on this bird's breeding is one kindly sent me by Capt. Harrington. In a letter to me he writes: " *G. burmanica* is the common Myna of Upper Burmah in the jungles. It breeds both in holes in trees and in *zyats* and houses. I found a pair building in the verandah of the Kalaura dak-bungalow in May, and outside the nest was the remains of a former tenant, suspended by the leg by a piece of string which had been used in the construction of the original nest.

" It breeds, probably, from April to June."

Capt. Harrington sent me several clutches, two of which consisted of five eggs. They are much smaller than those of *G. nigricollis*, and all those sent are distinctly paler; moreover, they differ also in shape, for whereas the eggs of *G. nigricollis* are generally rather long ovals and are distinctly gracefully shaped, those of *G. burmanica* are shorter ovals, more suddenly compressed towards the smaller end and, on the whole, more pointed.

My eggs average in size 1·05 by ·81 in.

109. Æthiopsar grandis.

Oates, F. B. Ind. i. p. 541; Harrington, B. N. H. S. J. xiv. p. 598.

Capt. Harrington remarks that this Myna "builds in holes of trees, making a rough nest of straw and feathers. Eggs generally two, sometimes three. Pale blue, measuring 1·16 by ·85 inch. Breeding-season, April and May."

Later in a letter to me he gives an account of the nesting of this bird and *Æ. albicinctus*, which I quote under the latter bird. He also informs me that they rarely lay as many as four eggs. Six eggs in my collection, which I owe to him, are just like eggs of *Æthiopsar fuscus*. They range between 1·15 and 1·26 inches in length, and between ·8 and ·87 inch in breadth, and average 1·22 by ·84 inch.

110. Æthiopsar albicinctus.

Oates, F. B. Ind. i. p. 541; Harrington, B. N. H. S. J. xiv. p. 598.

The only notes that I have on this bird, as also specimens of its eggs, I owe to Capt. Harrington. In the Bombay Journal he merely gives the following note:—"Habits exactly the same as the last, in fact the two very often build in company in holes in old trees. Eggs pale blue, four in number, measuring 1·1 by ·8 inch."

In a letter to me, however, he gives the following interesting account. Writing of this bird and the preceding he says that he found "both common birds in the Shan States, and Bhamo and Onyetmyina districts, and on the Upper Chindwin, but they are not found in the dry zone of Burmah so far as I know. They are both fond of nesting in company in holes of trees, making the usual untidy Mynas' nests of straw, feathers, and other odd materials. I have found *Æ. grandis* nesting in the roofs of houses, but not *Æ. albicinctus*. The strangest site, however, chosen by both kinds on the Upper Chindwin was the sandy banks of the river. Thousands must nest in holes in the banks of the Chindwin from about sixty miles above Kendat up to Honalui. The holes, I think, must have been either made or enlarged by

the birds themselves, as they were bigger than those made by the Bee-eaters which were also nesting in their thousands in the banks of the same river.

"The extraordinary thing about these nests in the sand-banks was that every nest pulled out by us was lined with pieces of cast snake-skin, and we must have taken out a dozen or more. Except for these discarded snake-skins the nests were of the usual untidy type.

"These nests were taken in the latter end of May, when the majority had either young birds or were already empty; still even then a good number contained eggs, so the season probably lasts from the middle of April up to the end of May.

"Whilst *Æ. grandis* lays either two, three, or four eggs, *Æ. albicinctus* almost invariably lays four, very rarely five.

"The eggs, of course, are of the usual Myna type. Those of *Æ. grandis* are rather larger and are somewhat more pointed at the smaller end, those of *Æ. albicinctus* are smaller and are more blunt at the smaller end.

"There is no confusing the two birds, as they are both conspicuous from some distance, and as we went up the river in a steamer we could see them constantly going in and out of the holes, dozens at a time."

Two clutches of eggs sent to me are as described above, and average 1·05 by ·78 in., varying between limits of 1·02 and 1·12 inch in length and ·76 and ·81 in breadth.

111. Siphia strophiata.

Oates, F. B. Ind. ii. p. 8; Osmaston, B. N. H. S. J. ix. p. 190.

The only record of this Flycatcher's nesting is that of Mr. B. B. Osmaston, of the Forest Department, who obtained two nests whilst touring in the Tekri-Garwal at an elevation of some 8000–12,000 feet.

As Mr. Osmaston shot the cock bird off the nest there can be no question of wrong identification, nor is it a bird about whose identification any difficulty can exist. In spite of this, I think that it is most likely that future collectors will find that Mr. Osmaston's nest and *white* eggs were

abnormal, and that the eggs will agree with those of other members of the genus *Siphia*. With this comment, I reproduce Mr. Osmaston's note :—

"The first nest to be described is that of the Orange Gorgetted Flycatcher (*Siphia strophiata*). On May 23rd I noticed a bird fly into a hole, about 8 feet from the ground, in a dead yew branch, in which I found, on examination, a nest containing two freshly hatched young birds and one addled egg.

"I watched the parent birds for some time with binoculars. They were very wary and would not again visit the nest; however, I saw sufficient to satisfy myself as to their identity.

"On the following day I found a second nest of the same species in a rift in a Karshu oak, about five feet from the ground. It contained three much-incubated eggs, exactly similar to the egg found on the previous day. The nest was rather a loose structure, cup-shaped, composed of moss and maiden-hair rachis, lined with the latter chiefly, but also with a few feathers and some papery substance resembling birch bark. I shot one of the parent birds (the male) for identification.

"The eggs were pure white elongated ovals and fairly glossy. The average of their measurements gave :—

"Length	·76 in.
Breadth	·53 „

"These nests were both found at an elevation of about 9000 feet."

112. Cyornis cyaneus.

Oates, F. B. Ind. ii. p. 13.

We have twice had the nest and eggs of this bird brought to us by Nagas living on the eastern borderland of Assam.

A single egg in my own collection is an enlarged facsimile of many eggs of *C. tickelli* and *C. rubeculoides*.

The ground-colour is pale yellow-grey stone and the markings consist of innumerable tiny freckles of rather bright reddish brown scattered all over the surface, but most

thickly at the larger end, where they are confluent and form a cap. There is a distinct gloss and the surface is very smooth with a strong compact shell—more stout in proportion to its size than those of most *Cyornis*, which are usually brittle. The shape is a broad oval, a little compressed towards the smaller end, which is obtuse, and the size is ·93 by ·69 in. The egg was taken on the 25th of June, 1902.

The three eggs in the collection of Dr. Coltart are just like mine.

The nests were bulky structures of moss, and were said to have been placed on the ground on the banks of a hill-stream.

113. Cyornis melanoleucus.

Oates, F. B. Ind. ii. p. 18.

I obtained this Flycatcher's nest in North Cachar, but it was not until I had been there many years and had almost given up hope that at last I found it.

The first nest which I took was a tiny cup of moss, moss-roots, and stems of maiden-hair ferns, all neatly and compactly interwoven, the moss alone shewing outside. The lining was of the very finest hair-like roots alone, many of these being of considerable length, yet wound round with the greatest possible neatness. It was placed on the ground on the rocky side of a steep hill and was semi-protected both above and on each side by stones, in the hollow between which it was fitted. All around grew bracken, wild balsams, and small ferns, and the nest was quite concealed from view, but was found by a Naga through the actions of the parent birds.

By the time that I arrived both parents had been snared in nooses, and I took the contents, two tiny eggs, so tiny that I fear they must be abnormal, for they measure only ·54 by ·46 and ·52 by ·44 in.

They are typical little *Cyornis*-eggs, pale stone in ground-colour with numerous minute freckles of dull reddish. In one egg these are numerous everywhere, though mostly at

the larger end, where they form a faint ring. In the other they are almost absent over the smaller half, but are even more profuse over the other end, where they coalesce and form indefinite cloudy blotches.

There is no gloss, but the shell is fine and close though rather fragile. In shape the eggs are stout little ovals, the two ends being almost equal.

This nest was taken on the 29th of April. Another found on the 14th of April, 1899, contained four young just hatched. This nest was like the other, but was placed amongst the protecting roots of a large tree. Outwardly it measured about 4 by 6 inches and the diameter of the cup was some 2 inches by about 1·25 inches deep.

Both nests were at an altitude of between 5000 and 6000 feet.

114. Cyornis sapphira.

Oates, F. B. Ind. ii. p. 20.

This little Flycatcher was not uncommon in North Cachar on the highest peaks to the extreme north-east, yet, though I took several nests, I never obtained a male in full breeding-plumage, and nearly all the specimens that I collected—mostly trapped on their nests—were young males in autumn plumage.

I took no nests of this species on the ground nor did any of my collectors; all were placed either in, or half in, holes and hollows of tree-stumps. Where they were altogether inside, the entrance was often quite exposed, but where they projected at all they were always well concealed by moss, lichens, ferns, or orchids.

For the size of the bird the nest was often bulky, the materials filling up hollows, sometimes eight inches across, and the depth of the nest itself being sometimes as much as three or four inches.

In all cases the materials used were of the same kind, principally moss, and this, in the main, consisting of long thin sprays taken from the neighbouring trees, which were covered with hanging moss often as much as 18 inches in length.

At the base of the nest this was thrown in anyhow and was much mixed with roots, lichen, fern-stems, small bits of bark, and other similar articles; but as the nest itself began to evolve from the materials, the rougher articles were discarded, and finally a neat little cup was formed almost entirely of moss, moss-roots, and the rhachis of maiden-hair ferns, while in a few cases feathers were also incorporated with the other materials, or sometimes a little cotton-down. The interior of the cup was rather more than 2 inches in diameter, rather less than 1 inch in depth, but in some cases the depth exceeded the width.

I took four nests with eggs and several with young, and the full complement of eggs is undoubtedly four. These vary from the type of those of *Stoparola* to the paler forms of those of *Cyornis*, and even the small series which I have seen shews great variation.

A clutch of four fresh eggs taken on the 21st of June, 1899, is of the palest form found in *Cyornis*. The ground is a pale grey-green stone-colour and the marks consist of very pale greyish-red freckles scattered thinly all over the surface, but rather more numerous towards the larger end, where, in two eggs, they form indistinct caps. These four eggs are normal ovals, neither very broad nor very long. One end is a good deal smaller than the other, but is neither compressed nor pointed. The shell is smooth, close, and fine, but glossless and brittle. They measure ·72 by ·53 in., ·71 by ·52, ·70 by ·53, and ·68 by ·51.

In another clutch taken on the 4th of May, 1891, the eggs in every respect the extreme opposite of these and in type like those of *Stoparola*. The ground is white with only the faintest tinge of cream, and the marks consist of tiny freckles and specks of reddish brown disposed in a ring at the extremity of the broader end. The texture is the same, but there is a decided gloss, and in shape they are longer ovals, the smaller end rather compressed and well pointed and the larger end also inclined to be somewhat pointed.

These two measure ·63 by ·44 in. and ·62 by ·44 in.

The female belonging to this nest was caught, but I did

not identify it for some years, when I had an opportunity of comparing it with the British Museum skins.

My other eggs are intermediate between these two clutches, but are more of the true *Cyornis*- than of the *Stoparola*-type. They were all taken either on the highest peaks to the east of the district or in the valleys just below them. None were found under some 4000 feet.

115. Cyornis pallidipes.

Oates, F. B. Ind. ii. p. 22; Cardew, B. N. H. S. J. x. p. 147; Davidson, ibid. xi. p. 667.

Long ago Mr. Davidson took the nests and eggs of this Flycatcher in Kanara, but was unable to capture or identify the parents, so the first authentic account of this bird's nesting is that given by Mr. Cardew (*loc. cit.*). Writing from Ootacamund, he notes :—

"In the same month I found the nest of another bird, of whose identification I can find no record, namely the somewhat scarce little Flycatcher, *Cyornis pallidipes* (Jerdon). . . . . The nest was found at an elevation of 4000 feet above the sea. It was placed in a hole in a bank, under the protection of a large rock, and by the side of the old ghat-road or riding-path to Coonoor, on which scores of persons pass up and down daily. It was composed of roots on the outside, with a few dry leaves, and lined with fine fibres, and contained three young birds a few days old. On another occasion, in the last week in May, I came on a pair of these birds at about the same elevation, with fully fledged young, so the breeding-season must extend from April to June. . . . . The young of this Flycatcher . . . . . are much marked with orange, and resemble the young of *Ochromela nigrorufa*, but are, of course, larger and without the orange quills."

Mr. Davidson thus writes of the eggs he took in Kanara, above mentioned :—

"At Supa also I once obtained a nest which I believe belonged to it. This was brought to me on the 15th May, 1893, by a man who had noticed it a day before, but when he saw me

in the morning in the neighbourhood of the rice-field he was working in, instead of telling me about it and taking me to the nest, he rushed off to the nest and brought it to me, in so doing breaking one of the three eggs it contained. As it reached me within twenty minutes of its being taken, and I started at once to the spot, I hardly doubted that I should be in time to identify the owner, but though I waited two hours not a bird came near the nest, and I then reluctantly left a man near it and searched the whole forest round. It was singularly devoid of birds, and all I saw was a pair of *Zosterops*, another of *Kittocincla*, and a pair of this bird and a few Woodpeckers. . . . . The nest was in a hollow in the top of a dead stump about one and a half feet from the ground, and was composed of green moss lined with white lichen and with a few threads of fine grass and black roots. The eggs had been originally three in number, and were of a dull greenish white with bold brownish blotches over the larger end. They were not exactly what one would have expected the eggs of this bird to be, and were considerably larger than those of *C. tickelli*."

Later, Mr. Bell found *C. pallidipes* breeding in Kanara and took nests and eggs, some of which he sent to Mr. Davidson; the eggs proved to be similar to those taken by the latter in the same district, and enabled him to identify them correctly.

A clutch of three eggs was generously given to me by Mr. Davidson, and these agree well with what he has written about them. They are certainly *not* typical *Cyornis* eggs, yet, as the uniformly coloured eggs of some clutches of *C. tickelli*, *C. rubeculoides*, and others stand at one end of the series, so these might form the limit at the other end.

The ground-colour is a pale yellow stone and the markings consist of bold blotches, specks, and spots of reddish brown with others underlying them of pale purple, lavender, and reddish grey. At the larger end these markings are numerous, often running into one another, and forming a rough cap or broad ring, but over the smaller half they are more sparse

and are also smaller and more speckly in character. The surface is smooth and has a slight gloss, whilst the texture is the normal fine but fragile texture of all eggs of *Cyornis*.

In shape they are broad blunt ovals, measuring ·79 by ·57 in., ·78 by ·56, and ·77 by ·57.

116. Alseonax latirostris.

Oates, F. B. Ind. ii. p. 35; Shelly, B. N. H. S. J. ix. p. 223; Davidson, ibid. xii. p. 6.

This Flycatcher's nest has of late been taken by several collectors, the first record that I can find being that of Lieut. B. A. G. Shelly, who sent a note to the Bombay Journal as follows:—

"I am forwarding to-day a nest and four eggs of the Brown Flycatcher (*Alseonax latirostris*), as I understand that the eggs of this bird have not yet been recorded. These eggs I obtained near here on the Ghauts (Mhow). The first nests were taken by Sergt. Kemp and myself on the 17th June, on which occasion the eggs were mostly fresh; the last were taken on the 29th, when fresh and hard-set eggs and young birds were met with. . . . .

"With one exception all the nests have been found on the dwarf teak-trees which grow so plentifully on the Ghauts. They are, as a rule, built on thick, bare, horizontal branches, at some little distance from the trunk and, on average, eighteen feet from the ground. The bird seems to prefer the more secluded nullahs to breed in, generally selecting for this purpose a tree close to the bank. The nest is rather large for so small a bird, and except for being placed so high would not be difficult to find. Four seems to be the full complement of eggs, though three hard-set eggs have been met with."

The following year I received a clutch of four eggs from Mr. Kemp, which were taken on the 16th of May, 1895.

Mr. Davidson took the eggs of this bird the same year in North Kanara on the 4th of May. He writes:—"I saw one of these birds fly from a tree overhanging the road. I followed it into the forest to be sure it was *A. latirostris*, and had I

had any doubt I would have shot it; as there was none, however, I walked back to the road and was moving off, when the bird flew again over my head to the same tree, a *Matti*. I glanced at it as it flew, and saw it light on a lump in the branch, and returning saw that there was a nest. I sent a boy up the tree and he reported four eggs, which after some difficulty were safely brought down, and I shot the bird as a proof of its breeding so far south. The nest was large and solid, composed of moss and lichen, and lined with a few fibres and some feathers, mostly Oriole's. It was about fifteen feet from the ground and in the middle of a horizontal branch. It contained four extremely small olive-green eggs, a good deal smaller than others of this bird received from the neighbourhood of Mhow."

I have several clutches of this bird's eggs taken by different friends, and the complete clutch seems to be either four or three.

They are typical little *Cyornis* eggs, as might be expected from the very close affinities between *Cyornis* and *Alseonax*, and I doubt if they could be distinguished from some of the eggs of the smaller species of the first-named genus.

In ground-colour they are very pale stone-colour, varying somewhat in tone between reddish and greenish. The markings consist of microscopical specks of reddish, which cannot be distinguished without a good glass, and the eggs appear to be uniform, though rather deeper in coloration at the larger end, where there is sometimes a faint indication of a ring or cap. One clutch which I have appears to be uniform pale grey-green and a second pale olive-brown.

In shape they are regular ovals, in one clutch rather compressed and pointed towards the smaller end.

The texture is smooth and close, but glossless, and the shell is, perhaps, comparatively stronger than in the *Cyornis* group.

My eggs vary between ·62 and ·67 in. in length and between ·48 and ·51 in. in breadth.

117. Alseonax ruficaudus.

Oates, F. B. Ind. ii. p. 36; Wilson, B. N. H. S. J. xii. p. 637; Davidson, Ibis, 1898, p. 22.

The only notes that I can find of this bird's breeding are those by Col. Wilson and Mr. Davidson above cited, although I believe that several other observers have taken the nest.

The first note referred to is: "We found one nest on the 18th June, on a pine-branch at Sonamorg, situated about ten feet from the ground; it was very well concealed, and, had not the bird flown off, it would certainly have escaped observation. It was a small cup-shaped nest of moss, lined with hair and feathers. It contained two slightly incubated eggs. The ground-colour was buff with a rufous clouding and a few brown spots on the larger end. They measured ·72 by ·52 inch. We shot the bird, and, though we made a careful search, saw no others during our stay."

Davidson in 1896 took a number of nests, one at Sonamorg and several at Gund, where he found the bird very common. Whereas Wilson describes the nest as small, Davidson states that his were "large, solid cups generally built within reach or at the most fifteen feet or so from the ground on the stumps of pollarded trees." He says that the birds were very shy, and that nests which were in any way touched or interfered with were promptly deserted.

The number of eggs he found to be either three or four, and a clutch of the latter number I owe to his generosity. These eggs agree well with his description.

In colour they are pale clear olive-green, the green being so pronounced that it might almost be called sea-green. If looked at casually they appear to be uniformly coloured, the tint merely deepening slightly at the larger end. But when they are examined with a powerful glass it is seen that they are green-grey in ground-colour with stipplings of pale red-green all over, these becoming deeper and more pronounced at the larger end.

The texture is in every way exactly like that of *A. latirostris*, already described.

The eggs measure from ·65 to ·66 in. in length and from ·49 to ·51 in. in breadth. In shape they are broad ovals, with very obtuse smaller ends.

118. Oreicola jerdoni.

Oates, F. B. Ind. ii. p. 66.

Jerdon's Bush-Chat was common in North Cachar and undoubtedly bred in the high grass-covered hills to the north of the district, but I never succeeded in finding its nest or in obtaining any birds which shewed that they were, without doubt, breeding in the place where they occurred.

In April 1904, when touring in the north of Lakhimpur, I found these birds extremely numerous in the wide grass-plains running along the foot of the hills; they were present literally in hundreds and soon shewed by their actions that they were breeding. A Miri, who was with me, told me that he knew of a patch of grass where they nested, and we accordingly went to a wide grass-plain, about two miles across, covered with sun-grass some four feet high, and situated, in a bee-line, about eight miles from the nearest hills. Here four of us hunted hard for about four hours, but, though there were many birds and they were undoubtedly engaged in nesting, we could not find a single nest. At last, as work called me back to camp, I called a halt, and we all returned to the road. As we reached it, my foot struck a tuft of grass and out flew a female *O. jerdoni*, and on looking down and parting the grass we found the much sought for prize, a nest with four eggs. It should be explained that the road was nothing but a wide track through the grass-plain, covered with short grass and with tufts of stubbly sun-grass dotted about its surface. In one of these tufts at the edge of the road the nest was placed, right in amongst the roots, which appeared to have been worked out by the birds to form a hole in which it could be placed. Until the roots were torn on one side and the tangle of grass parted, nothing could be seen, except the outer edge of the nest. This was a compact little cup, made entirely of black roots and coarse black fibres and lined with fine grasses and grass-roots. It was so well put

together that, though the outer material was all interlaced with the grass-roots growing round, it still retained its shape and consistency when torn out.

The inner cup was very tiny, only 1·8 in. in diameter and about 1 in. deep, but the outer diameter and depth were, roughly speaking, about 6 by 4 inches respectively.

The nest contained four eggs, rather hard-set. This was on the 20th of April.

In 1904 we found only one other nest, although men were specially set to hunt for them for days together; they are most terribly hard nests to find.

This year (1905) I have procured six more nests: two of which, taken by Mr. H. Stevens at the foot of the Dafla Hills, were found in the roots of ekra.

The other four were taken by myself and my men. Two were found in places just like that first described, except that they were situated in the grass-plains themselves and not in openings. The remaining two were taken from holes in banks. One was placed in a hole in a sandy bank, forming the side of a rough pit from which soil had been taken to make a road. The bank was covered with very coarse, short grass, but except for a few scattered bushes the surrounding country was quite open—in fact, grazed down to within a few inches by numerous cattle. The pit itself was more or less overgrown with coarser grass, as the cattle could not conveniently graze there.

The last nest was taken from a hole in the bank of a so-called road. All over this part of the road the grass was some inches high and extremely dense: on one side the ground sloped upwards and formed a shelving bank where the grass was longer, and there were many weeds and small bushes. Amongst the grass-roots was a small natural hollow, and in this the nest had been placed and was discovered by the bird flying out as we passed.

Judging by the actions of the birds, I think more breed inside ekra-jungle than elsewhere; but in such places it is long odds against finding the nest, although the bird is extremely common during the breeding-season in certain

places. It is curiously local in its habits and will haunt one grass-plain or patch of ekra in great numbers, yet will not be found at all in the adjoining patch, although to human eyes they appear much the same.

I have taken altogether thirty eggs, of course many unblowable, and find that four is invariably the full complement. I have never seen less than four hard-set and have never found five.

The nests were all much the same as that first described, and it was very noticeable that in the majority of instances very dark material was used. In a few, however, the nest was composed chiefly of stuff that looked like cocoanut-fibre, and was, I believe, the fibrous outer part of ekra-roots; this was light yellow in colour. In shape externally the nest merely fits the place in which it is built, but the inner cup seems always to be very neat and well finished, averaging some two inches in diameter and being a very regular semi-sphere.

When trying to find the nest by watching the birds, I was doomed to many disappointments, as they kept dodging into holes and crannies in the roots, apparently in search of food, and constant inspections of these places resulted in nothing.

The eggs are the most brilliantly coloured of all those of the *Saxicolinæ*, a uniform bright blue, even brighter than in the Accentors. In only one clutch have there been any markings: even in this two eggs are unmarked; one has a few very faint specks and spots of pale rufous, forming a faint ring round the larger end, and only the fourth has the same markings at all defined. In this, however, there is a fairly well-marked ring of tiny rufous blotches and freckles about ·15 inch wide, and it looks like a very brightly coloured, but faintly marked, egg of *Pratincola maura*. Curiously enough, though I have been constantly on the look-out for such markings, this was the last clutch of all obtained.

The texture is very fine and compact, and the shell exceedingly stout for so tiny an egg. The surface has a slight gloss.

In shape the eggs are broad ovals, but with one end distinctly pointed, though not compressed.

In length they vary between ·60 and ·71 inch and in breadth between ·49 and ·53 inch. The average of thirty is ·63 by ·50 inch.

119. Saxicola isabellina.

Oates, F. B. Ind. ii. p. 77; Rattray, B. N. H. S. J. xii. p. 339.

In 1898 Col. Rattray was successful in finding the nest of this bird at Thull:—

"I was lucky enough on June 7th, 1898, to find a nest with two eggs; unfortunately the native with me handled the nest rather roughly before I could stop him. I left it three days in hopes of more eggs being laid, but I found it deserted; I, however, originally saw the bird fly off the nest. It was a neat cup of grass under a stone, with a deep egg-cavity lined with finer grasses: eggs, two, of a clear pale blue, marked all over with rusty-red spots like dried blood; shape, long narrow ovals, slightly pointed at the small end: elevation about 4000 feet. I found a second nest in a similar situation with young ready to fly on the 24th July, 1898."

I have a clutch of five of these eggs taken in Turkestan on the 14th of May, 1902. They are very pale blue, indeed they look white unless placed against really white eggs, and the marks consist of minute specks of red dried-blood colour sparsely scattered at the larger end.

They are ordinary ovals, slightly pointed, and measure ·80 by ·61 inch.

120. Saxicola deserti.

Oates, F. B. Ind. ii. p. 78; Marshall, B. N. H. S. J. xv. p. 355.

The only note to hand on this bird's breeding is the following by Capt. Marshall from Quetta:—

"I found a nest of this bird on May 24th. It was placed on the side of a bare bank of mud about ten or fifteen feet high, and was concealed under the root of a small dead shrub;

it was composed of roots and fibres, and contained three young birds nearly fledged."

121. Microcichla scouleri.

Oates, F. B. Ind. ii. p. 88 ; Stuart Baker, B. N. H. S. J. ix. p. 22 ; Rattray, ibid. xi. p. 334.

The Little Fork-tail breeds rarely in North Cachar at considerable elevations, and I have taken three or four nests; but only two with eggs, and of these one clutch was on the point of hatching.

My first nest was found at Laisung, at an elevation of rather over 4000 feet, on the 2nd of May, 1891, and was placed in a rift in a large piece of flat rock forming part of the side of a deep ravine, along which ran a tiny stream, joining the larger Laisung stream just below.

My second and third nests were taken two years afterwards in ravines about the same place, but still higher up, and were placed in exactly the same sort of situations, though in one case the side of the nest-hole was composed of more than one stone.

The fourth nest was taken at Ninglo, a peak about 6000 feet high, in the east of North Cachar, on one side of which runs the Ninglo stream. In this case the nest was placed in a hollow in the mossy bank, but well screened by moss and weeds.

The first nest contained two eggs, the next two young birds, and the fourth three eggs just hatching.

The nests were in every case similar: small rather roughly made cups of moss fitting outwardly into the hollows in which they were placed, and with cups for the eggs averaging rather over two inches across by one inch deep. In all four the lining was of skeleton leaves, but these were neither so numerous nor so well inserted as is usual with Fork-tails' nests.

In the B. N. H. S. J., I described the two first-taken eggs as follows :—

"There were only two eggs, these being of a very pale, clear stone-colour blotched with pale reddish, and, where they

form a ring at the larger end, the spots are also intermixed with a few others of pale lavender-grey. The character of the markings is longitudinal in the same way as with all the members of this family. The shell is smooth and fragile with a gloss, still the texture is not at all fine. In shape they are long ovals, compressed suddenly for fully two-thirds of their length, and they are decidedly pointed.

"They measure ·77 by ·53 in. and ·72 by ·53 in."

My other eggs agreed well with these, but were more speckled than blotched.

In 1897, Col. Rattray found this bird breeding at Mussoorie and took two nests, the description of which agrees in every detail with those taken by myself:—"The first nest was found in a hole in a rock on the bank of the Aglar River, at an elevation of about 3500 feet.... The second nest was found on the 21st June, at Kemptee Falls, at about 4000 feet, and was on a small shelf of rock, under a waterfall." The eggs would seem also to agree well with mine. Rattray describes them thus: "Large for the size of the bird, long and oval in shape, and a good deal pointed at the small end; colour white with a faint pink tinge, covered with numerous tiny pale red specks, most numerous at the larger end; very little gloss, but fine and satiny to touch.... Size, largest egg ·84 by ·63 in., smallest egg ·79 by ·58 in.; average of six eggs ·82 by ·61 in."

The eggs of my second clutch averaged, rather roughly measured, ·79 by ·56 in., so that Rattray's work out a good deal larger than mine.

XV.—*Notes on Birds observed at Monastir, Turkey in Europe.* By P. J. C. McGregor, British Consul at Sarajevo (late at Monastir).

The Turkish provinces constituting the territory commonly designated as Macedonia have received but scant attention from ornithologists in recent years, so that the following notes on bird-life at Monastir, based on observations made