

NEWSLETTER

FOR

BIRDWATCHERS

Vol. 6, No. 11

November 1966

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A LIST OF BIRDS OBSERVED IN ASSAM AND NAGA HILLS

By

Pratap Singh, I.P.S.

I give below a list of birds observed in the Assam and Naga Hills. Many of them are an addition to my list. Considering the richness of avifauna of the area the list is quite unimpressive but then a personnel of the Security Forces in Nagaland is handicapped by the restriction on his movements imposed by the conditions of the 'Ceasefire'.

My wanderings in Assam were restricted to Sibsagar district which includes the Garampani and the Kaziranga sanctuaries. Apart from that, the many scattered tea gardens in the area provide great scope for birdwatching.

In Nagaland, the restriction of thousand yards around the post and a hundred yards on either side of the road, has proved very frustrating. I would add here that much of the jungle of Nagaland has given way to 'Jhoom' cultivation. It is an eye-sore to observe ranges upon ranges completely denuded of forest. This deforestation in my opinion certainly affects the density of bird life in the area. Often forested valleys, which are rare ~~like~~ are a contrast to the scantily bird populated, deforested valleys. Apart from that, the Nagas are indiscriminate consumers of flesh and no bird is spared. One should not be surprised if even birds like the mynas, crows, sparrows, and kites are all together absent from the villages.

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The vegetation, as such, in Nagaland is patchy. The lower valleys damp and mosquito-ridden are a tangled mass of greenery where trees soar high from the entanglement of exuberant creepers. Thousands of clamouring arms claw the gnarled tree trunks in deadly embrace. From the prevalent conditions of days gone by of savagery and tribal warfare, a Naga feels safe perched on a hill-top. All villages are thus situated, while surrounding hill slopes and upper valleys are cultivated. Only the higher mountain features, like the Japvo (highest in Nagaland) and disputed valleys, are spared from cultivation. Certainly there are areas in Theusang district and the belt bordering Burma where awesome jungles blanket the hill ranges, but then my beat has been limited.

1. The Ringtailed Fishing Eagle: Should be common in the Assam plains but I only observed a pair, nesting in the Kaziranga Sanctuary in December.
2. The Crested Serpent Eagle: Commonly met in the forested areas of Assam. None observed in Nagaland.
3. The Black Eagle: Only observed one bird in Assam near Gauhati in January. None observed in Nambor or Kalyani forest or in Nagaland.
4. The Brahminy Kite: Common bird of marshlands of Assam plains.
5. The Shikra: Assam. Have not met in Nagaland.
6. The Besra Sparrow Hawk (?): A pair inhabit the slope of hill on which our post is situated. The bird very much resembles a Shikra but for the slender appearance, longer tail with distinct four bands, and heavily streaked with dark brown, head, throat, neck, breast and back.
7. The Barred Owlet: Came across one bird at Dimapur, which is down in the plains. I have not observed any in Naga hills and neither have I heard the call.
8. The Pigmy Collared Owlet: None seen or heard in Naga hills. Is a common bird in the forested areas of Assam. I have often observed the bird bravely perched on the very top of trees, in broad daylight, and calling. It seems the matutinal birds evidently accept the little fellow.
9. The Pied Harrier: A winter migrant to Assam plains. Commonly seen hawking over the paddy fields.
10. The Longtailed Nightjar (?): The bird not correctly identified but however heard calling in the jungles of Sonari.
11. The Brownthroated Spinetail Swift: These three birds have
12. The Whitethroated Spinetail Swift: been observed in the
13. Blyth's Whiterumped Swift: Naga Hills. The Brownthroated swift in its foraging descends down to Assam plains too. Mixed flocks of these birds are often met hunting on the windward side of the ridges. Three more swifts have been seen by me here but which I have failed to identify so far.
14. The Bluebearded Bee-eater: Only observed one bird at Sonari in Assam.
15. The Large Indian Pied Hornbill: It is a common bird in the Garampani sanctuary and the adjoining Nambor and Kalyani B.F. Large flocks of the bird are commonly met. It is also common in the forest belt between the Naga Hills and the plains where the Nagas hunt it for its feathers.
16. The Great Assam Barbet: It should be common in the forested areas of Assam but because of the heavy foliage it is not easily observed. I met the bird at Garampani.
17. The Lineated Barbet: Common in Assam and the lower forest of Naga Hills.
18. The Rufous Piculet: Naga Hills.
19. The Large Yellownaped Woodpecker: Naga Hills in forested areas.
20. The Rufous Woodpecker: Common in Assam. Commonly met in the shade of trees in Tea gardens.
21. The Pigmy Woodpecker: Common in Assam.

22. The Large Cuckoo Shrike: Assam.
23. The Scarlet Minivet: Assam and Naga Hills. Seen upto 6000 feet.
24. The Orangebellied Chloropses: Assam and Naga Hills.
25. The Fairy Blue Bird: Garampani Sanctuary, Assam. None met so far in Naga Hills.
26. The Olive Bulbul (?): A commonly met bulbul in the forests of Assam and lower forests of Nagaland. It is a dainty little bird, slightly smaller than the Redwhiskered Bulbul. Is uniform olive-green with the tail blending into grey. Head and neck up to the collar, black, with a prominent crest. Yellow round the eye is conspicuous.
27. The Striated Green Bulbul: Naga Hills.
28. The Whitethroated Bulbul: Naga Hills.
29. The Black Bulbul: Naga Hills. Quite common.
30. The Redwhiskered Bulbul: Common in Assam but not seen above 4000 ft. in the Naga Hills.
31. The Redvented Bulbul: A darker and heavier bird than the western race. Common in Assam and the Naga Hills up to 6000 ft.
32. The Ferruginous Flycatcher: The Naga Hills.
33. The Greyheaded Flycatcher: The Naga Hills.
34. The Redbreasted Flycatcher: Assam and Naga Hills.
35. The Whitethroated Fantail Flycatcher: The Naga Hills.
36. The Tickell's Blue Flycatcher: The Naga Hills.
37. The Slaty-blue Flycatcher (?): The Naga Hills.
38. The Verditer Flycatcher: Assam and the Naga Hills.
39. The Brown Babbler (?): A common bird in the tea gardens situated on borders of forest tracts. It is a large babbler of the same size as the Large Grey Babbler. Is olive-brown above with tail shading into dark brown -- almost black. The chin, throat, cheeks dark brown, approximating to black. This deep shade continues to breast and abdomen. Met in sisterhoods of 10-12. Shy and noisy.
40. The White Crested Laughing Thrush: Assam and Naga Hills. Not met above 4000 ft. It is very common in the tea gardens in the winter.
41. The Chestnut-bellied Rock Thrush: The bird was met in the Theusang district of Nagaland. I have not recorded it elsewhere so far.
42. The Large Brown Thrush: A common bird in the Naga Hills. It is more often heard than seen. The call is wee-too repeated at interval. A clumsy bird, partial to damp hillsides. The little note of wee-too it produces with considerable effort -- by jerking up its head.
43. The Blackheaded Sibia: Common in the forested valleys of Nagaland.
44. The Greenbacked Tit: The Naga Hills.
45. The Silver-eared Mesia: Very common in the Naga Hills. Its call is a familiar jungle sound.
46. The Redstart (?): A winter migrant to Assam. The bird I observed was in appearance exactly like the Common Redstart except for a conspicuous white wing patch.
47. The Collared Bush Chat: Probably a winter migrant. I first recorded it in the Naga Hills on 8.ix.1966.
48. The Dark Grey Bush Chat: Common in the Naga Hills in open hillsides.
49. The Forktail: So far only one bird was recorded by me in the Naga Hills in November last year.

Many wagtails appear on the passage through Nagaland. They however are a confusing lot. This year the first bird was recorded by me on 8th September. Now they are in abundance. The only ones I have been able to identify are

The White Wagtail; The Grey Wagtail; Hodgson's Pied Wagtail (?); Swinhoe's Wagtail (?)

identification of the last two is not certain.

50. The Blackheaded Shrike: Common in the Naga Hills.
51. The Brown Shrike: Probably migratory. This year the first bird was recorded on 10 September. It winters in Assam and where it is commonly met during that season.
52. The Redwinged Shrike Babbler: The Naga Hills, but not very common.
53. The Grey Drongo: Common in the Naga Hills.
54. The Haircrested Drongo: Common in Assam. Met occasionally in the Naga Hills up to 5000 ft.
55. The Bronzewinged Drongo: Naga Hills. Not very common. Only recorded by me in the Tuensang district in heavy forest.
56. The Lesser Racket-tailed Drongo: Assam forests.
57. The Tree Sparrow: Assam and the Naga Hills.
58. The Cinnamon Sparrow: The Naga Hills.
59. The Himalayan Tree Pie: Assam forests and the Naga Hills.
60. Mrs. Gould's Yellowbacked Sunbird: Assam and Naga Hills.
61. The Imperial Pigeon: A very common bird in the Garampani Sanctuary and the adjoining forest. Often large tracts of jungle echo with their deep call.
62. The Speckled Pigeon: The Naga Hills. Not very common. Usually inhabit the inaccessible deep jungles.
63. The Wedgetailed Green Pigeon (?): Common in Assam.
64. The Rufous Turtle Dove: The Naga Hills.
65. The Spotted Dove: It is the commonest member of the family in Nagaland.
66. The Kalij Pheasant: It is a much darker bird than the White Crested Kalij. Is common in the Assam jungles and the forest belt between Assam plain and Nagal hills. In winter it provides great sport in the tea gardens and the planters call it the 'Doric Pheasant'.  
In Nagaland certain pheasants are reported to occur but I have not come across any so far. Probably they inhabit the safer heights of Patkoi Range on the Burma border. I met only one bird which however offered little opportunity for identification. The bird was about the size of a village hen. The plumage was generally light fawn, heavily streaked and spotted with rufous.
67. The Red Junglefowl: Common in the Assam jungles and the tea gardens.
68. The Swamp Partridge: Common in Assam swamps. Much in abundance in the Kaziranga Sanctuary. The bird is more heard than seen. It is a difficult bird to flush.
69. The Common Hill Partridge (?): One bird observed in Naga Hills at about 5000 ft.
70. The Woodcock: It is common in Assam. The bird is occasionally seen at dusk flying low, probably changing its feeding ground.
71. The Bluethroated Flycatcher (?): Two birds were observed in the Naga Hills. Probably common, but inhabit the deeper forested valleys. The bird is about the size of sparrow with longish tail. Above azure blue with tail inconspicuously tipped with white, the chin, throat, and upper breast distinct deep blue. In flight the tail appears somewhat graduated.
72. The Greybacked Shrike (?): Probably a rare visitor in the area. Only observed one bird on 26 September. The bird I observed tallies in description closest to the bird mentioned above.
73. The Great Hornbill: Naga Hills. Two birds were seen flying at an approximate height of 5000 ft. on a steady course due west, on 26 September. The flight was powerful and steady. Except for the long trailing legs they resembled the Adjutant Storks. Evidently it was a pair and in my opinion making a season descent to the warmer jungles of Cachar and Mikir Hills from the Patkoi Range.
74. The Blackbreasted Sunbird: Naga Hills. In the denser valleys.

FRESH LIGHT ON ANTING

By

K.E.L. Simmons

(From the Countryman, sent by Mrs Maureen Thom)

Anting is in many ways the most fascinating and controversial of all bird-insect associations. My interest in it started when a friend showed me how his tame jays spread their beautifully patterned wings in front of them to allow hordes of fierce wood ants to swarm over their plumage. Since that time I have seen anting by twenty-two kinds of bird in my own aviary, at the zoo and in the wild.

This behaviour is apparently confined to the great Passerine order of perching birds, of which about a hundred and thirty birds are known to ant. They include such familiar British birds as the carrion crow, rook, magpie, jay, blue tit, mistle thrush, song thrush, blackbird, robin, starling and chaffinch. Only a minority ant in the jay's special manner. Of those named the crow, rook and three larger thrushes also occasionally permit ants to crawl on them, but most birds ant in the more typical and active way. Instead of taking an ant 'bath', they seize one or more of the insects in the tip of the bill and rapidly contort, sometimes tumbling and tripping, into a highly characteristic pose. As the head is ducked down to apply the ant, one wing is held out and forward, and the tail comes round to the same side behind it. All this is accomplished so rapidly that it is hard for the observer to see exactly what is happening; but it is generally agreed that the bird is rubbing the ant on the under side of its primary and tail feathers. It then usually eats the insect, but some discard it. Both forms of anting result in the feathers being anointed with ant secretions, chiefly formic acid. Though few observers have identified the ants used, a recent compilation of records by an American ornithologist shows that these are mainly worker ants of the sub-family Formicinae, especially the dairying ants, which keep aphids and milk them for their sugary liquids, and the generally bolder and larger Formica ants. These do not sting but spray formic acid from the end of the gaster (abdomen).

Many explanations of anting are offered by naturalists. Some interpret it as a utilitarian or defensive means of ridding the insect of harmful, unpleasant or irritating liquids. Others believe that it in some way benefits the bird's plumage; at one time the most popular theory was that the formic acid acted against feather-lice and other external parasites, but this is now largely discredited. Yet other naturalists see anting as a form of sensual indulgence or pleasure and speak in terms of intoxication, perfuming and sensuality. Recently the view has been expressed, and well received, that anting is induced mainly by the thermogenic properties of the ant, which 'burn' the bird's mouth when it picks up the insect.

We gave several kinds of ants to my pet Pekin robin on many occasions. When he received his first of the season, a yellow ant, he immediately anted with it; and he repeated the performance moderately well with about half of the initial batch of thirty but thereafter usually ate this species without anting. He preferred the garden ants, with which he would perform quite frequently, especially if he could hunt them on a branch along with the black aphids they were milking. The jet-black ant was still more effective, causing him to posture and contort intensely when applying it; but he evidently did not like its taste and, when not in anting mood, would reject it with apparent disgust. The three Formica species induced the best anting performances, especially the wood ant. Sing individuals were applied up to twenty-three times, until not a drop of fluid remained. The common red ant, on the other hand, proved to be unacceptable. The Pekin robin would not ant with it and, though he ate a few

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workers at first, he afterwards largely ignored them, often 'scolding' me when I offered them to him.

We also sampled these various kinds of ant ourselves by crushing individuals in our mouths and by allowing them to spray their acid on our tongues. Both worker and queen yellow ants produced quite a sharp but not unpleasant acid taste, rather like lemon crystals -- more prolonged if we let the insect crawl about and squirt on the tongue. There was no impression of heat. We received the same acid flavour from all the other Formicine ants. However, we soon stopped letting ants crawl on our tongues because, when removed, they often left their jaws firmly embedded; and the larger species could hurt.

From late July onwards we had the tame song thrush indoors (as I write he is tugging at the tassels on the carpet). From time to time I gave him ants we had collected, first the jet-blacks when he was twenty-three days old, then the slave ants, the robber ants and the large queen garden ants. When he was thirty-five days old, we tried him with wood ants. Anting often appears first in young birds at about this age, but not once did the thrush perform, though he found all the species to his taste in spite of the acid. I had begun to despair that he would ever ant until, when fifty days old, he immediately did so with first worker yellow and garden ants he had seen. Four days later he performed also with wood ants, since when he has not done so again.

As the summer progressed I kept a frequent look-out for birds anting in gardens and parks but did not see one behave thus, though many obviously had the opportunity to do so, especially with garden ants. I came across any number of these in most places where starlings, blackbirds and song thrushes were foraging. Quite clearly the birds, all well-known anters, were recorded for common red and yellow ants. Indeed I had seen one cock blackbird dig up the side of a yellow ants' hill early in the season; he uncovered a few workers and then, most disappointingly ate them without anting. I tipped some of these ants into the garden and, although they were overlooked by most birds, a few were eaten by a starling and a house sparrow; in the end a most unkempt cock blackbird had most of them. On another occasion a robin ate many, also without anting.

It would seem then that anting is uncommon in the wild; but clearly for many kinds of bird there are special circumstances which induce it. It seems to occur during periods of swarming, at least with the smaller dairying ants. The swarm -- that is, the workers collect together and mill excitedly about in a greater concentration than usual -- on two main occasions: when the nest is disturbed, and at the time of the marriage flight, when the winged sexes quit the nest to mate and found new colonies.

This view received support in two ways. On July 11 my stepfather, George Trenfield, uncovered an entrance to a garden ants' nest when mowing his lawn. He described to me later how a robin came down and anted in the active swarm just like my Pekin robin, which he had seen performing in the aviary. Then, on August 10, a humid day, my wife and I saw anting in nature while spending the weekend at a country house in Hertfordshire. Marriage flights of garden ants were widespread at the time, and we came across many winged males and females. Observing from the house with binoculars, we were lucky enough to witness the anting of three blackbirds during the day; each was performing at a nest of swarming ants, having come on them during the relatively short period when the winged sexes were emerging with numerous workers in attendance. Birds were ignoring routine worker activity, and robins, house sparrows, chaffinches, pied wagtails, green woodpeckers and others, as well as blackbirds, were feeding on the males and females which were landing on the lawns after flighting.

Although I was encouraged by these views of blackbirds' anting, I still realised that, if I was to observe more anting by birds in the wild, I would have to provide ants at suitable places, rather than wait indefinitely for more chance observations. We carried out an experiment in Gillmor's garden. We deposited nest debris and up to three hundred wood ants at a time near a bird-table and bird-bath which we could watch unobserved at close range. Ten kinds of bird came near these ants, and their reactions varied from active avoidance to full anting. Blackbirds, robins, starlings, nuthatches and blue tits all ate at least one ant; but house sparrows, song thrushes, great tits, dunnocks and chaffinches kept right away, some individuals showing extreme caution and fear. Only starlings and blackbirds ate the ants in any quantities and both anted more than once. A young robin also performed thus confirming my stepfather's record, which was the first for the robin), as did a young blue tit, another rarely observed anter. A young song thrush came, looked at the ants from a distance and then performed anting movements under its right wing without an ant in its bill. But the starlings were the prize anters. Up to four or five at a time would turn and contort, applying ant after ant until their bills were packed with great wads of the crushed insects. These were quivered down the primaries, which sometimes glistened noticeably, saturated with acid. All the while the birds vigorously stamped their feet, as if to prevent ants from swarming on to their bodies; and every now and then they would rub head on shoulder, blink and scratch, as acid was squirted in or near the eye.

Such is the plain tale of some of this season's results. What has been achieved? If only for the fact that birds were seen using identified kinds of ants, the work was well worth while. The ant species used by birds in the wild have rarely been distinguished, and no ornithologist had previously experimented with so great a variety. Our tests on the flavour of the Formicine ants showed that they do not have a persistent burning taste, and this suggests that heat as such is not the all-important factor it was thought to be in anting. Instead, there is a characteristic and not unpleasant acid taste, though it is not clear just how significant a role it plays.

My study of the precise movements of birds in applying ants has convinced me more than ever that the behaviour is related to preening and is in some way similar to normal preen-oil anointing. The most important discovery this year was that the typical anting movements of most birds are almost identical with those used in oiling the wings after bathing. In the once case acid is applied, in the other preen-pil, mainly to the tips of the primaries, which are extremely difficult to preen effectively. The sideways spread tail could be seen acting as a stay to make the wing-tip more rigid for the anointing. But much work remains to be done before we can hope to understand fully the mysteries of anting.

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#### FIELD CHARACTERISTICS

By

J. N. McKelvie

My wife and I were recently staying at Kumardhubi on the Bengal-Bihar border and on a single day two instances of misleading or inadequate field descriptions in Whistler's POPULAR HANDBOOK OF INDIAN BIRDS came to my notice.

On the morning of 9 September, 1966, we were walking in rough scrubby country close to the Panchet Dam when we saw a small party of Ashy-crowned Finch-Larks (*Eremopteryx grisea*). At the time I noted in my diary that they were black on the breast and throat, the black rising to an eye mark, with head and cheeks

grey. When I later looked up this bird in Whistler's POPULAR HANDBOOK it was disconcerting to read that the darker plumage is 'chocolate-brown'. Had it not been for the picture on p. 232 (second edition) I should have queried my own identification but I was relieved later to find that in his THE BOOK OF INDIAN BIRDS Salim Ali clearly describes the underparts as 'black'. This is certainly what it looked to the naked eye.

On the evening of the same day I visited the Maithon Dam, some miles away on the other side of the Grand Trunk Road. My wife and I found ourselves listening to a sweet and sustained song which we soon trace to a Large Pied Wagtail (Motacilla maderaspatensis) which was perched on a heap of stones or rocks a few yards from the water. The song was something between the twittering of a skylark and the much of a song thrush, a clear whistling call of great variety and charm. Hugh Whistler certainly does not do justice to this in his brief description 'there is a short musical song' but Salim Ali gets closer with his 'the male sings sweetly' during the breeding season. Even this hardly conveys the song as I heard it, and would September be the breeding season anyway?

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### THE BLACKHEADED ORIOLE (ORIOIUS XANTHORNIUS)

By

J.N. McKelvie

This Oriole is a common bird in Calcutta gardens (more common in my experience than Oriolus oriolus) and this year we were fortunate enough to have a pair nesting in our garden in Alipere. I am indebted to Mr. L.A. Hill of Bolani in Orissa who was staying with me at the time and who is an occasional contributor to your pages, for locating and identifying the nest on 21 April 1966, about 20 ft. up in a Gliricidia maculata. After Mr Hill had left, my wife and I watched for developments and it was in early May that we first saw the parent birds feeding the young in the nest. On 18 May, Mrs. McKelvie saw one fledgling being fed by the parent birds; it had moved from the nest and was on a branch a few feet below it; the young bird was very drab in appearance and had a crawny neck with no feathers on it. The parents were relentless in their attacks on crows whenever these came too near, dive-bombing and chasing them fearlessly and uttering a most unmusical but threatening hissing sound, quite unlike their normal fluting call.

Both parents were observed on 19 May, and the same hissing (warning?) note was heard; the young bird was not seen. On 20 May the young oriole appeared to have found its way to a Rain Tree on the other side of our lawn, still jealously guarded by the parent birds. On 21 May I saw the young bird being fed by the parents, and noted the same attacks being made on any crows that approached too near. On 23 May both parent birds fearlessly harried a common Pariah Kite in the same way. During this time the young bird appeared weak and defenceless but on 4 June, when I next recorded a clear view of it, the neck feathers had grown, the breast had acquired streaky marks giving it a tawny appearance and the bird had evidently reached a stage when it could more or less look after itself. The deep black of the adult bird was markedly absent, except in a very restricted area of the head. On 9 June the young bird was seen for the last time, more mature still but with one parent bird still in attendance (but not feeding it). At this stage the bill had not yet acquired its familiar orange colour.

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THE GREAT INDIAN BUSTARD IN AHMEDNAGAR AREA

By

B. J. Dangre

While I was reading the old records of this city and of the district Ahmednagar during last month, I came across a page entitled - 'The fauna of the district' and found that the description claims the presence of the Great Indian Bustard in this district.

So I was very eager to see the bird. I asked Mr Mathew Sonaware, our laboratory assistant, to accompany me, as he is well ~~known~~ acquainted with most of the villagers of this district.

We both set off for the area as was described in the records on 6 October 1966, crossed the distance of nearly six miles and reached the village Araugaon. We refreshed ourselves in the roadside village canteen and Mathew inquired there about the birds. We got the information that the bird known here as karduk or maldhok is seen at times and the description thought not correct gave us the idea that it was a large bird. We decided to try our luck. We requested the boy who described it to us to come along with us and show us the place where he saw the bird.

He took us nearly two furlongs deep near the old firing range. These ranges are to the east of the river names Mendhaka. From these range hills he showed the site. I took out the binoculars and kept them at the ready. As we were walking on he stopped saying: 'Look there'. But we were unable to see anything.

I asked the boy to wait for us and we went ahead nearly a hundred feet and Mathew asked me to look at the left hand corner of the bajari fields. I carefully looked through the field glasses and I saw the Bustards.

There were two birds. The height was between 2 and 2½ feet and the coloration as it was black capped with white neck, brownish back, long whitish legs and most of the lower side white.

I could observe these birds for not more than three to four minutes as one of them ran the distance of nearly 8 to 10 feet and took to its wings while the other one followed it immediately.

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ORIENTATION OF SUNBIRD'S NEST

By

Joseph George

While studying the nest construction technique of the Purple Sunbird in Dehra Dun it was found that out of 24 nests observed in one season, 13 had the entrance hole facing west, 7 north, and 2 each east and west (George, J. Bombay nat. Hist. Soc. 55: 420). Das observed 46 nests in Baroda. Of these 16 faces west, 11 north, 10 east, 6 south, 2 south-west and one south-east (Pavo 2:71). He concluded that there was no preference to any particular direction in the location of the entrance hole.

On the face of it over 40% nests facing in one direction appeared significant. The data was therefore, presented to Dr V.J. Chacko, Statistician, Forest Research Institute, Dehra Dun, who very kindly carried out an analysis and gave the following conclusions.

"There is no evidence of inconsistency in the direction of

entrance hole of the nests between the two sets of observations.

"The hypothesis that the entrance hole facing any of the four directions is equally likely is not true.

"George's observations show that the preference is towards west as compared to east or south. However, there is no significant difference between west and north directions. These conclusions are corroborated by analysis of the combined data of the two observers.

"The number of observations should be larger to find out whether there is a definite directional preference."

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#### NOTES AND COMMENTS

Last month we celebrated our IXth Wild Life Week. On that occasion, the Government of Maharashtra distributed a leaflet, the text of which is reproduced below:

"We have by now celebrated nine Vanya Prani Saptahas so that it is unnecessary to explain again what their purpose is. It is clear to everyone, that wild life and wild nature has to be preserved for aesthetic, scientific, economic and moral reasons. It would be more to the point to determine exactly what we propose to do, during the coming months, to implement the objectives about which we are all agreed.

"With the industrialisation that is taking place in Maharashtra, and the great pressure that is building up on the land, due to increasing population, the position of wild life will become more and more precarious. The most important step that we can take for preservation of wild birds and animals is to ensure that their habitats are not disturbed. Every animal has its own special requirements. The Sambhar and the four-horned antelope need thick forest cover, black-buck needs scrub and open grassland, panthers and tigers live in jungles where they can rest during the day, and hunt by night. The Cheetah unfortunately now reported to be extinct needs wide open country with moderate cover, where it can utilise its great speed in bringing down antelope, hare and other mammals. No species of life can survive for long until it gets both natural protection and adequate food from the environment.

"As with animals, so with birds. In spite of their great mobility, each species has very definite requirements, and some are extraordinarily selective about their environment. Some Flycatchers and Warblers live almost entirely on insects that are found among the top storeys of a tree; some find their sustenance around the middle storey, and others still prey on insects on the ground. Among waterbirds too, some prefer to feed on the water's edge, some in knee-deep water, and others go deeper still. It is, therefore extremely important for us to understand the ecological requirements of each form of life, for without this knowledge we will not be able to ensure its survival.

"Before we change the landscape of an area by cutting down a forest or draining a marsh or diverting the course of a river, or inundating a valley by building a dam, we must study the entire complex of life and make an assessment of the total picture before us. By using our imagination, it is often possible to strike a balance between conservation and development. It is our duty to preserve the superb beauty of the landscape of Maharashtra, of its hills, estuaries, coast line and marsh lands, and yet go ahead with our development plans. This is a dilemma which is being tackled the world over, by associating biologists and scientists with the planning that is being done.

"Let us take the example of the beautiful country and forests

around the Koyna Valley. Electricity had to be generated and industries established in that area. But at the same time, it is possible to preserve the forested tracts on the hillside, and to ensure that no undesirable structures are erected in the surrounding area to mar the natural beauty of the countryside. (The birds illustrated in this brochure will show what a variety of birds live in the forests and plains around Koyna and how much they can contribute to our enjoyment.)

"There are many forested areas in Maharashtra which need similar protection. All of us must play our part in preserving these areas and their inhabitants by preventing damage by illicit wood-cutters, and assisting the authorities in enforcing the Maharashtra Wild Animals and Wild Birds Protection Act which is a very well thought out piece of legislation. Government is also considering the question of declaring more areas as National Parks and wild life sanctuaries on the advice of the State Wild Life Advisory Board. We have in our State only one National Park at Taroba and one wild life sanctuary at Karnala fort is being active pursued, which when formed will remain as a permanent nature reserve not only for birds but also for mammals like the four-horned antelope, the panther and langur, which could multiply there with a little encouragement and protection. These plans will only be realised if the public is whole-heartedly behind it, and takes pride in preserving the rich inheritance with which nature has endowed Maharashtra.

"The picture on the cover page shows the bulbul, a bird pet for its beauty and melodious voice; as a bird of love, it has figured in poetry."

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#### CORRESPONDENCE

##### About 'Kotur', the Coppersmith chick

This has reference to the comment of Sri D.N. Mathew on "Kotur's" behaviour in the September issue of the Newsletter. Of his four points two merit further consideration.

1. Sandpicking as exploratory activity: As for the exploratory activities kotur had enough but sandpicking seemed to have originated from an altogether different urge. It would come down to the ground only to select and gulp suitable grit, while exploratory activities such as pecking at bark, leaves and fruits of trees and playing mock-chase were confined to place above ground. Learning by trial and error does help the young to perfect the instinct inherited from its parents, but the instinct to descend and explore ground is not known to be existing in a coppersmith bird.

2. Colour perception in 'Kotur': I have repeatedly seen (though all the events had not appeared in the Newsletter) Kotur pay attention to red colour, yet I do not dare say, it could see red colour in the manner and extent we would. For the perceptive capacity of an organism is strictly restricted to serve its business of life and that ours is different from that of coppersmith's is clear. It is well to quote what R.H. Smythe says in his book ANIMAL VISION, page 174: "... that colour vision and its origin have been subjects of an immense amount of experimental work, and of even a greater amount of argument, for the past two centuries, at least. The outcome of it all is that up to the present moment nobody can provide a complete explanation of colour consciousness and its mechanism."

T.V. Jose

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The National Bird of Nepal

Sri S.R. Shah's letter (Newsletter, Sept. 1966, p. 9). The National bird of Nepal, DAGPHEY (g-nasal) in Nepali is Lophophorus impejanus. Some hill people near Gothavari call it NIL MOHR, which incidentally seems to be local name for the bird in Kashmir.

## References

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J. Mangalaraj Johnson

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'Theen thara thithrric'

July-August means torrential rains, impenetrable grass, thick undergrowth of vegetation hiding the footpaths and leeches; not an ideal time for roaming around the peripheral scrub jungle and grassland.

Theen thara thithrric, the piercing call of the Black Partridge (Francolinus francolinus) stabbing the silence of the cornfields and the valley is irresistible and you automatically collect the binoculars and walk in the direction of the call. The bird often learning your presence before you could see it, vanishes from the place where you are focusing the binoculars to startle from a grassy river bed, some three furlongs away. The bird it seems enjoys this hide and seek game and almost always is the winner.

The call is rendered also as sheer daram shakarak (Persian) and subhan teri kudrat. Dr Fleming renders it as pan beedi cigaret, the call one does not miss in the railway stations.

The bird gives out a milk trink 2-3 seconds before the vigorous theen thara thithrric. This trink is audible at a distance of 30 to 50 ft only. And sometimes is not followed by theen thara thithrric. Out of the 18 occasions I heard this season, three times it stopped with the trink.

J. Mangalaraj Johnson

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Unusual mating behaviour of the crow

Shri Pratapchandran's note on the above subject in the October issue of the Newsletter was quite interesting. One can ask several questions about the 'corvine pyramid' he described. For instance, what type of a behaviour was this? I think this was some kind of mimetic behaviour. In gregarious species (Hinde 1961) performance of a particular pattern of behaviour by one member of the flock induces others to perform similarly. I think in this case the three 'extras' were all males. Pratapchandran (personal communication) noted that all the three extras tried to complete the motor pattern of copulation. The sight of a copulating pair may have released similar behaviour in the other three males. Again, if there was only one female, why did the three extras try to complete copulation? Animals -- if one follows the Lorenz-Tinbergen school -- are not concerned with the achievement of a goal in the same way man does. The discharge of the instinctive act, in this case copulation with a fellow member in mounting posture consumes the nervous excitation, be that member biologically correct one or not.

Piling up into a pyramid was probably due to the fact that there was one common source of stimulus for all the three 'extras'. They had to copulate with a conspecific individual in suitable posture and hence the 'pyramid'.

Food-begging-posture struck by the female before copulation if common, is biologically significant. One does not know if crows can distinguish a potential mate from an intruder. If they cannot, the first reaction on seeing a fellow member is likely to be aggressive. Here, the female can indicate her submission by taking a food-begging posture. An unnecessary fight is avoided. Pratap-chandran (personal communication) has noted food-begging before copulation on a few other instances. It will be interesting to know if the behaviour will be ritualised.

D.N. Mathew

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