

THREE NOTES ON THAI BIRDS

by

H. Elliott McClure¹

SUMMARY

Three observations of Thai birds are discussed: 1. Roosting habits and population densities of hornbills at Khao Yai National Park especially the Wreathed, *Rhyticeros undulatus*. 2. The seasonality of two drongos, Black, *Dicrurus adsimilis* and Hair-crested, *D. hottentottus* as noted from roadside counts and observations at Khao Yai. 3. The sleeping habits of Blanford's Bulbul, *Pycnonotus blanfordi*, in a garden in Bangkok.

INTRODUCTION

I consider it an honor to participate in this issue of the Natural History Bulletin of the Siam Society dedicated to H.G. Deignan who did so much to increase the world's knowledge of Thai birds. I first met Bert in Japan when he visited me there early in 1950's. I admired him tremendously and always enjoyed our short visits together. I never had the privilege of going into the field with him, but he did give me guidance in the identification of Thai birds.

The following notes are meant to add a bit to the information available about the bionomics of several of Thailand's birds and to call attention to some of the areas where we know very little.

ROOSTING HABITS OF HORNBILLS

Because of its great length, extending through 15 degrees latitude (from 6° to 21° N) Thailand supports a wide variety of habitats from tropical dipterocarp rain forest to deciduous oak forests. Within these forests it has 13 species of hornbills, nearly a third of the world's species. Very little has been done with the bionomics of these species and the life history of none has been studied.

Unless they have been hunted out for food or sale, all of Thailand's forests have hornbill populations. Historically we know

1) Address : Migratory Animal Pathological Survey, Applied Scientific Research Corporation of Thailand, 196 Phahonyothin Road, Bangkok, Bangkok, Thailand.

nothing of the densities of these populations or what species were most abundant in which forests. Five years ago the area known as Khao Yai, 120 miles north east of Bangkok (14.05-14.15 N., 101.05-101.50 E.) was set aside as a National Park. There are no records of the avifauna of this 2085 square kilometer area before Dickinson (1963, 1967) began his studies, so we do not know what species were present, in what numbers, or what the effect of protection has been. There were some cleared areas for cultivation, now dominated by lalang, *Imperata* spp., grasses, and there probably was and still is heavy hunting along the periphery, for the area is surrounded by logging and cultivation.

I became interested in the hornbill populations when I first visited the park in August 1965. Dr. Boonsong Lekagul had told me of great flocks over the forest and on this occasion we saw groups flying above the forest and lalang at a big game lookout. A brief survey indicated that there was a large population of Northern Pied, *Anthracoceros albirostris*, Great, *Buceros bicornis*, and Wreathed, *Rhyticeros undulatus*, and Mr. Somtob Chaiyaphun reported having once seen Tickell's, *Ptilolaemus tickelli*, along a streamside.

It has not been possible to make regular trips to the area, but on 21 days between 20 August 1967 and 24 May 1969 morning and evening tallies have been made from several lookout points where the horizon and crests of trees could be watched.

Dawn counts have been uniformly low, for the birds leave their night roosts after a few squawking calls and then move through the tree crowns, feeding, watching, playing and preening. Dawn to 0800 counts of the Wreathed Hornbill averaged only three birds. It is the evening counts that are spectacular. When they have finished feeding and preening they gather into flocks and, flying above or through the trees (Pl. XXIII, fig. 1.), seek a communal area from which they stream in long lines to some favored tree or trees to roost for the night. Such a tree may hold 200 to 400 of these immense birds by the time night falls. How long or how regularly a sleeping tree will be used has not been determined. A large leafless tree in a wooded valley visible from an animal lookout contained 264 birds at sundown

on 20 August 1968. The next evening there were 116 in it. On the evening of October 22 only about 20 birds visited this tree while over four hundred had sought a clump of trees across a lalang area about 1/2 mile to the north. They did not remain to roost here but streamed west just before darkness to an unseen roost beyond the wooded horizon. On the following two evenings this performance was repeated by hundreds of birds. By December 22 these great flocks and movements were no longer evident, just a few feeding birds during the day. Table 1 (p 341) illustrates this remarkable seasonality. By what pattern the birds leave a roost to return to their feeding grounds was not determined.

In captivity this species is almost silent. The female was reported by J.K. Stanford (Smythies, 1953) as roaring like a lion. This we learned was true when we tried to handle an untamed female. Her raucous roars were earsplitting. A gentle male was induced to give this call only once or twice and then much less vociferously. His usual call was a begging whine or grunt. A modification of this grunt is heard in the wild and is given as a flocking call that can be heard when the flocks move through the trees or assemble at their councils or roosting places. In flight the species is usually silent, but the loud wing whistle can be heard as far as 1/2 a mile.

In this species the female appears to be much more dominating than the male. The male is slightly larger and has a yellow throat pouch. The female pouch is blue. Both sexes have the loud wing whistle in flight. In Malaya we noticed that we could detect this species flying in or above clouds in the mountains from the wing whistle. Because of the pouch color it is easy to determine sex at a distance. Flocks moving toward the council or roost or over the canopy appeared to be family groups. Twenty-five groups moving toward the council area averaged two males and two females. When the flock left the council area to head for the roost the groups were much larger, averaging 29 individuals. In 10 of 18 observations a female led these family groups and often the larger groups as well. (Pl. XXIII. fig. 1).

The Great Hornbill apparently follows a similar seasonality to that of the Wreathed. They are more conspicuous at dawn because

they are vociferous and squawnk loudly before leaving their sleeping place to seek food. Morning counts, dawn to 0800, averaged five birds on thirteen days. Evening counts averaged 38 birds on ten days. The distribution of these flocks is shown in Table 2 (p. 341).

No large roost were discovered, but in August 1968 several flocks greater than family size were seen moving through the forest crown and across open lalang.

The Pied Hornbill is noisy and gregarious and moves through the forest in search of food. No flocks were seen aggregating into larger roosting or feeding groups. Six dawn to 0800 observations averaged six birds while sundown observations averaged only 2. This difference reflected the fact that the birds were more vociferous in the morning than the evening.

Questions arising from these observations include such problems as "How long are communal roosts used by the Wreathed Hornbills? From what distances do the smaller flocks fly to join the others in the council areas? What triggers these flights so that the birds all arrive at about the same time? How are these flocks related to the breeding season? Are they involved in mate selection and pair permanence?" Similar questions might be posed for the Great Hornbill. In an environment supporting several species of hornbills are their flocking habits integrated in any way? Much needs to be learned of this fascinating family before they are extirpated from large areas by the removal of the forests or of trees large enough to support hollows big enough for such immense birds.

DRONGO MOVEMENTS

Black drongos of several species are found in many habitats in Thailand. The most conspicuous is the Black Drongo, *Dicrurus adsimilis*, which is commonly seen on power lines or fences along roads. The Hair-crested Drongo, *D. hottentottus*, is conspicuous at times in the dipterocarp forests. Other species *D. paradiseus*, *D. remifer*, *D. aeneus*, and *D. annectens* are much fewer with more scattered populations.

Roadside counts quickly revealed that *D. adsimilis* had seasonality. Deignan (1945), mentions that juveniles appear in the vicinity of Chiangmai in October and November, "presumably from farther north." Smythies (1953) notes that they nest in many areas of Burma and that "migration down the Sittang Valley to Rangoon, from the 1st October onwards, is very striking." In China this species ranges as far north as Manchuria and Formosa. Cheng (1958) maps it as over-wintering in the provinces adjoining Burma and in Hainan. For Central Thailand the population densities are illustrated in Table 3 (p. 342) by roadside tallies. This suggests a low permanent residency with an influx of migrants from Burma or China. Since people in neither country are permitted to correspond with Americans or Thais, the recoveries of rings from Thailand, which would tell us where the Thai birds come from, are not reported. The picture was further confused when we captured twelve juveniles in a brushy riverside habitat near Bangkok in June. *Adsimilis* had not been taken in this habitat during any other month of the year.

Hottentottus also poses a problem. The forest of Khao Yai National Park is moist dipterocarp at 3000 to 4000 ft. elevation. It is extensive and is bordered by drier forests at lower elevations which have been cut over or heavily thinned for cultivation. *Hottentottus* is a regular resident (or visitor) in this forest. Early morning counts were made along a regularly traversed study route each time that the park was visited. On October 25, 1968 eight birds were tallied. On December 26, 1968 ten birds were tallied, but on January 12-13, 1969 eighty birds were tallied along the same route. The tree *Abarema montana* which has a large loose purple flower with a deep nectary was in full bloom all over the forest on January 12 and 13. It was widespread along any moist valley or ridge. Observations in other parts of the park showed equal concentrations of the drongo feeding on the nectar of these flowers (or on the insects caught in the nectar). Problem: Was this a concentration of a local resident population or is this species also a migrant? Ordinarily this is a solitary species in the forest like *adsimilis* of the open lands.

SLEEPING HABITS OF BLANFORD'S BULBUL
(*Pycnonotus blanfordi*)

In Bangkok our home had a small garden or lawn around it bordered by mango trees, hibiscus shrubs, bananas and palms. A large Tamarind (*Tamarindus indica*) at the north served as perching for all of the resident species and the fruit provided food for a few squirrels. *Flacourtia indica*, a small tree that produces edible berries the year round, was on the south border and was the favored feeding tree of all of the Blanford's Bulbuls, *Pycnonotus blanfordi*, in the neighborhood. Pl. XXIII fig. 2. shows the arrangement of the trees in the SW corner of our lawn including this *Flacourtia* and several mangos (*Mangifera indica*).

In 1967 it was noted that the lawn and its tree border was included in the territory of one and possibly two pairs of bulbuls. Other residents of the lawn included a pair of Magpie Robins, *Copsychus saularis*, a pair of Common Myna, *Sturnus tristis*, a pair of Spot-necked Doves, *Streptopelia chinensis*, and up to 100 Tree Sparrows, *Passer montanus* and 20 domestic pigeons, *Columba livia* (both attracted by a feeding station). A Brown Shrike, *Lanius cristatus*, was winter resident, and Coppersmith Barbet, *Megalaima haemaceplala*, Tailorbird, *Orthotomus* sp., Common Iora, *Aegithina tiphia*, and Scarlet-backed Flowerpecker, *Dicaeum cruentatum*, were occasional visitors.

Bulbuls, robins, mynas and sparrows nested in the vicinity and brought their young to the garden to feed. This is a report of the roosting habits of one pair of bulbuls.

Pl. XXIII fig. 2. and Pl. XXIV. fig. 1. show the location of sleeping places for the young of this pair. A twig in Mango 1 at about 12 ft. height on the north side of the tree was designated as Roost 1 and was the favored roost for the six months between February and September 1967. Each new brood of young was urged to roost there.

The evening procedure was as follows: fledglings would be attended in the hibiscus shrubs most of the day at different locations as they moved to beg from their parents. When first off the nest they would remain in one place most of the day, but by the end of the first week after fledging they followed their parents as they

searched for food. During this period a large proportion of their diet was insects, the harried parents even stuffing them with a small cigar-case bearer larva (Lepidoptera) which they did not take time to free from the case.

Between 1800 and 1830 depending upon the cloud cover, the parents would coax the young to Mango 1. This took much effort, for newly fledged young often could barely make the tree or the sleeping place. As they became stronger and more adept they flew directly to it.

The move was accompanied by much activity and vocalization. Young were enticed by food and were fed when they arrived in the tree. The parents repeatedly flew to the twig and rested there calling to the young. Often one parent would stay on the twig until a young arrived. The parent might or might not feed it there. When this activity was going on no attempt was made at secrecy or stealth. The garden was full of noise and busy birds, but often they crept into the roost so quietly that I was not aware that they had arrived.

When the young had finally bedded down, preened, put their heads under their wings and gone to sleep, usually by 1830, then both parents flew off to the north behind the house to a roost or roosts that I never discovered.

The differences in personalities of the young were remarkable. One would be obedient, go right to the roost, settle down and go to sleep. Another would be individualistic and would leave the roost to beg from the parents who then had to coax it back to the roost, sometimes more than once before it would settle down. A few of the young were recalcitrants who refused to say in the roost. Each evening the parents would coax such a bird to the twig and when they turned to go it would follow them. No amount of coaxing would get it back. Sometimes at 1830 they would give up and leave it no matter where the young was perched. At other times it would leave the roost after the parents had left and seek another.

The persistence of the use of this roost is illustrated in Pl. XXIV fig. 2. In Mango 2 at the south side, where I could not see from my observation point on the verandah, was a second roost, Roost 2. This

was occasionally used instead of Roost 1. On other evenings, blanks on the chart, the birds did not roost in the garden at all.

No young were ringed in 1967 so that the identity of individuals could not be assured. However, actions and habits identified some birds. In March 1967 two young were brought to Roost 1 and used it for most of the month. The latest date that the young were seen in the roost was March 27. The following day there was only one. This bird continued to sleep there each night until April 1 at which time it was at least 30 days out of the nest.

The parents (which we believed to be this juvenile's parents as well) had a newly fledged young on April 1 and took it to the old roost. My field notes read, "About 1750 the bulbuls (in the garden) became agitated in the mangos beneath the coconuts. They called and coaxed and at 1800 a youngster just off the nest flew to Mango 1 with two parents. Although it was very young, probably left the nest today, it was strong. One parent went into the roost and coaxed and the juvenile which flew up to it managed to get there. That parent fed it and left and the second parent brought food. In this way they told it to stay put which it did, fluffed down quietly. The parents returned to the coconuts in further agitation. The one juvenile from the previous nesting came to the tree to feed. The three birds flew to a shrub by Mango 1 and they argued for several minutes. By now it was 1820 and the older juvenile went to a nearby Queen Palm. Still it wanted to roost in the mango but was driven away by the parents. At 1830 it returned and went directly to the roost, knocking the new young out, which flew to the adjacent Mango 2. The parents drove the older juvenile out and away and it left the garden, going north. It was now too late so the new juvenile was not brought back to the roost and it went unattended. The parents flew off north to their roost."

The following evening "at 1755 the new juvenile showed up on the mango beneath the coconuts. Both parents fed it green moth larvae which they got in the hibiscus. It was an obedient youngster and at 1805 flew up higher in the same tree, hiding among the leaves. The parents continued to go into the tree to sit and preen. At 1815 the older juvenile arrived. The parents argued with it and it went to



Fig. 1: Wreathed Hornbills flying above the forest at Khao Yai National Park on the way to an evening roost. Sex of the leaders is indicated.

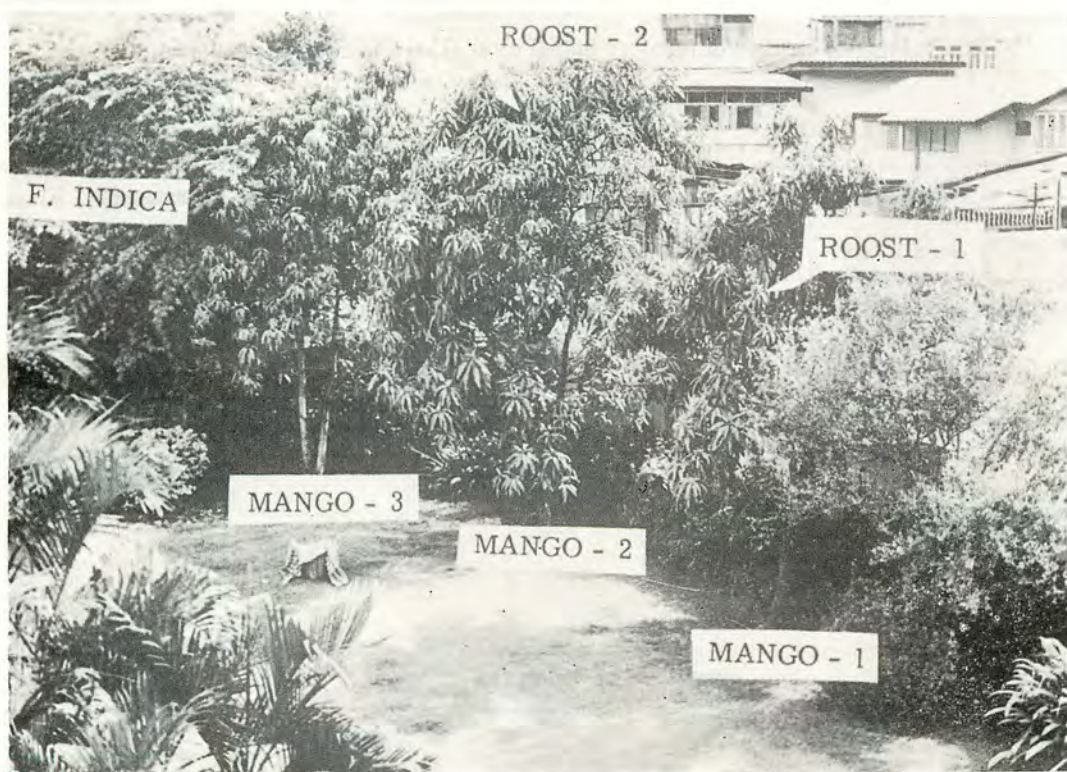


Fig. 2: The SW corner of the **McClure** garden in Bangkok showing the arrangement of trees and the positions of the **Blanford's Bulbul** sleeping places.



Fig. 1. Position of Blanford Bulbul roost as seen from the ground level.

1967 ROOST I

[illegible]

Fig. 2. The use of sleeping roosts by Blanford's Bulbul fledglings at a garden in Bangkok. Black bars indicate that the roost was in use.

a Queen Palm to eat bag worms. At 1820 it went to Mango 1 and into the roost." It had won the argument, but on April 5 the parents again attempted to dislodge it unsuccessfully. On April 10 the old juvenile remained away and the parents put their young one in the roost. It was not used again until the next brood in May.

In 1968 the complexity of the social life of this bulbul became even more evident. On January 27 the first young of the year seen in the garden was banded, R 11.

By this time growth in Mango 1 had so altered Roost 1 that it was no longer desirable to the birds. As the season progressed the family put its babies to roost in Mango 2. The first banded young was seen feeding in the garden, but no further juveniles were brought by the parents until March when they appeared with one. R 11 was seen feeding the new juvenile.

In April a new fledgling was brought into the garden. R 11 took over much of its care, feeding it and even sleeping with it in the same roost in Mango 2. This behavior was quite different from that of juveniles of the previous year. In June R 11 also helped with the next two young that were brought to the garden.

Table 4 (p. 343) lists the broods for 1967 and 1968. The number for 1968 appears to be too high to be those of one pair. If there were two pairs, why did they use the same roosts for each brood? Did the presence of R 11 and its feeding of fledged young relieve the parents of responsibility and shorten the interval between nesting attempts?

In 1969 I hoped to learn more about this. The season was late and no young appeared in the garden. On March 1, R 11 with a mate brought one young to Mango 2. They came each evening until the ninth. On that day R 11 broke its right leg, bearing the ring, high up on the tibia. It was a compound fracture. For ten days it suffered with the shattered dangling leg which finally broke off, leaving the bird one legged. R 11 was too ill to care for the young and the remaining parent tried, but the young died in its sleep on March 13, when off the nest about 10 days.

Blanford's Bulbul is the commonest bulbul of towns and farms in Thailand. Much remains to be learned about it.

LITERATURE CITED

- Cheng Tso-hsin**, 1958. A Distribution List of Chinese Birds. II. Passeriformes. Zoological Institute, Academica Sinica, Peiping.
- Deignan**, H.G., 1945. The Birds of Northern Thailand. Bull. 186. Smithsonian Institution, Washington, D.C. 616 pp.
- Dickinson**, E.C. 1963. A Preliminary List of the Birds of Khao Yai National Park, Nat. Hist. Bull. Siam Soc. 20: 183-204
- Dickinson**, E.C. 1967. A Further Contribution on the Birds of Khao Yai National Park. Nat. Hist. Bull. Siam Soc. 22: 173-184.
- Smythies**, B.E. 1953. The Birds of Burma. Oliver and Boyd, London, 668 pp.

TABLE 1

Evening counts of Wreathed Hornbills *Rhyticeros undulatus* moving toward roosts at Khao Yai National Park, Thailand. First figure the tally, second figure the number of observations.

	MONTH												TOTAL
	J	F	M	A	M	J	J	A	S	O	N	D	
1967								3/2					3/2
1968							58/1	477/3		1134/3		10/3	1679/10
1969	13/2		21/1										34/3

TABLE 2

The average number of Great Hornbills *Buceros bicornis* noted during observations in Khao Yai National Park.

TIME	MONTH											
	J	F	M	A	M	J	J	A	S	O	N	D
0600-0800	1				0		1	2		35		5
1600-1800	23				0		4	111		3		39

TABLE 3
Roadside tallies of Black Drongos *Dicrurus adsimilis* in Central Thailand

YEAR	AREA	J	F	M	A	M	J	J	A	S	O	N	D
1966	Bangkok to Saraburi (Riceland)												184
	Saraburi to Khao Yai (Upland)												9
1967	Bangkok to Saraburi (Riceland) }								6		327		
	Saraburi to Khao Yai (Upland) }												
1968	Bangkok to Saraburi (Riceland)		31			6		3	1		242		124
	Saraburi to Khao Yai (Upland)					0		2	12		40		10
1969	Bangkok to Saraburi (Riceland)	95				9							
	Saraburi to Khao Yai (Upland)	10				0							
1968-69	25 mile route near Bangkok	19		13	4	2	1	1	.5	1	23	36	29
	TOTAL	124	31	13	4	17	1	6	19.5	1	632	36	356

TABLE 4

The presence of fledgling Blanford's Bulbuls *Pycnonotus blanfordi* at the McClure garden in Bangkok.

DATE FIRST NOTED			NUMBER OF YOUNG	INTERVAL SINCE LAST BROOD
1967	4	Mar.	2	?
	1	Apr.	1	28 days
	2	May	2	29 „
	12	Jun.	1	40 „
	13	Jul.	2	30 „
1968	27	Jan.	2	?
	20	Feb.	1	24 days
	8	Mar.	2	18 „
	1	Apr.	1	23 „
	1	Jun.	2	61 „
	21	Jun.	2	21 „
	26	Jul.	1	36 „
1969	5	Mar.	1	?
	9	Mar.	Banded bird broke leg ----- breeding stopped	

