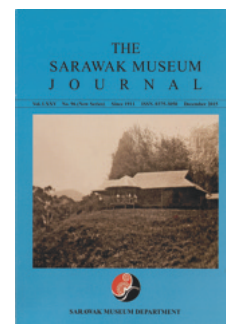




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### RINGING DATA FROM LANJAK-ENTIMAU WILDLIFE SANCTUARY: 1993 TO 1994

**Robert B. Grubh, Slim Sreedharan and Sim Lee Kheng**

#### INTRODUCTION

A Series of bird surveys were conducted in the Lanjak-Entimau Wildlife Sanctuary, between June 1993 and July 1994, as the ornithological component of an International Tropical Timber Organization Project (No. PD 106/90 Rev.1(F) of the Sarawak Forest Department - "Development of the Lanjak-Entimau Wildlife Sanctuary as a totally protected area"). These surveys were conducted by the International Consultant of the Project, Robert B. Grubh. He was assisted in the field by Sim Lee Kheng who was attached to him as a trainee from the Sarawak Forest Department.

A total of 114 days were spent in the field, observing, studying and trapping birds. The data collected was tabulated, verified and computerized, and the taxonomy updated by Slim Sreedharan who, from 1973 to 1975, had worked alongside him in India. A total of 1709 birds, of 114 species, were caught and ringed during this period. However, final work schedules did not permit data sets from the last two surveys, on the Ulu Engkari and Ulu Katibas, conducted between 11<sup>th</sup> June to 18<sup>th</sup> July 1994, to be computerised. As a consequence, details of only 1457 birds, of 114 species, were computerised and are listed below.

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### The Main Study Areas

The main survey sites, listed below, are located in an extensive tract of primary or old secondary lowland and hill dipterocarp forests, the elevation ranging from 100 m to 499 m above sea level, the hills ranging from 600 to 700 m, the highest peak being Bukit Lanjak at 1284 m, and Bukit Entimau at 975 m.

1. Bukit Tuang Pikul
2. Bukit Lanjak
3. Sungei Berkiat
4. Sungei Bloh
5. Sungei Engkari
6. Sungei Lelap
7. Sungei Melinau

8. Sungei Semawang
9. Sungei Skrang
10. Sungei Jelak
11. Ulu Sungei Ensirieng
12. Ulu Skrang

### Study Methods

At the outset, a week-long initial training on mist-netting in the rain forests was given by Slim Sreedharan, to the technical personnel who would accompany Grubh to the field. The team moved into the interior rain forests of the study area only after this training session.

About twenty 4-shelf mist nets, each 12 metres in length, each with four shelves, were put up at every site to trap birds found at lower- and ground-storey levels. The number of nets set up sometimes varied, according to the terrain. A minimum of three days were spent at each site. The nets were opened at 06:30 and closed at 18:00 daily. The nets were checked several times a day in order to prevent distress to the birds, and were brought to the ringing site in porous cotton bags. The birds were examined, ringed and released at the site as and when they were brought. The birds were handled without causing discomfort to them – many birds even slept in the hand of Grubh! Grubh did the examining, ringing and measuring of each and every bird in order to minimize human error. Sim wrote down the data in the data sheets prepared by Grubh. The field assistants from the Forest Department, and the local labourers who accompanied Grubh, helped in setting up the nets and retrieving birds from the nets.

An attempt was made to determine the gender and, where possible, age of each bird, using the following age codes:

- 3 – Definitely hatched during current calendar year.
- 4 – Hatched before current calendar year – exact year unknown.
- 5 – Definitely hatched during last calendar year.
- 6 – Hatched before previous calendar year – exact year unknown.

The date and place of capture was recorded before the birds were ringed and released. Initially, rings from the Wildlife Office, Kuala Lumpur, were used, bearing the legend “PO Box 611”. From May 1994 onwards, Sarawak Forestry rings were used, bearing the legend “Inform Forest Department, Sarawak”, the latter rings having been made according to specifications and serial numbering provided by Robert B. Grubh.

The following measurements were taken for each bird:

- wing length (in mm), using the longest chord method
- tail length (in mm), from the base of the tail to the tip of the longest feather
- bill length (in mm), from the base of the skull
- tarsus length (in mm), from the knee joint to the last complete scale above the ankle
- weight (in gms), using a range of Pesola balances
- total length (in cm), with the bird laid flat on its back, in slightly relaxed mode, on a ruler.

Full plumage descriptions of some species were sometimes taken to help determine age/sex characteristics in their plumage.

Each bird was examined for moult, often on a present (W = wing, T = Tail or W, T = wing and tail), or absent (-) basis. The bird's breeding status was assessed on the presence (Y) or absence (-) of a brood patch.

## Species Accounts in Family order

1. Malaysian Honeyguide *Indicator archipelagicus*

Location	Date	Ring No:	Age	Sex	Wing	Tail	Bill	Tarsus	Weight	Length	M	BP
1. Bkt. Taung Pikul	19/09/93	D 11525	4	M	94	64	15.5	13	37.5	17.0	W,T	-
2. Ulu Skrang	28/03/94	D 11706	6	F	86	54	14	14	33.5	-	-	-
3. Sg. Lelap	23/05/94	C 0054	6	F	91	57	14	15	33.0	17.0	-	-
4. Sg. Bloh	11/07/94	C 0109	6	?	91	56	14.5	14.5	34.0	16.5	T	-
5. Sg. Bloh	12/07/94	C 0132	6	M	96	64	15	15	36.0	18.0	T	-
6. Sg. Bloh	12/07/94	C 0133	5	?M	95	62	16	15	35.5	17.0	-	-
7. Sg. Bloh	12/07/94	C 0134	6	M	93	61	15	15	36.5	17.0	-	-
8. Sg. Bloh	12/07/94	C 0141	6	F	88	58	16	15	35.0	16.0	-	-
9. Sg. Bloh	12/07/94	C 0145	6	?F	86	55	14	15	35.0	16.5	W	-

1. Shoulder patch bright yellow. Feet and tarsus brownish-buff, tinged greenish in front and fleshy-pink behind, toes pale brown. Upper mandible brownish-black, lower fleshy-brown basally, dark at tip.

2. Shoulder patch absent. No gape.

4. Shoulder patch very faint on both shoulders. Iris medium brown. Bill blackish-brown above, fleshy below except tip blackish-brown. Tarsus and toes dirty greenish-brown.

5. Shoulder patch prominent.

6. Shoulder patch faint.

7. Shoulder patch prominent.

8. No shoulder patch. Iris red.

9. No shoulder patch.