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BIRD RINGING DATA AND FIELD NOTES FROM THE KELABIT HIGHLANDS: 1993 TO 2010

Slim Sreedharan

ABSTRACT

The initial bird surveys of Sarawak, from 1985 to 1992, covered a few National Parks, and several other lowland sites. From January 1993, until November 2010, a new survey began, to explore a wide expanse of the Kelabit Highlands, including parts of the Pulong Tau National Park. During this eighteen-year period, the sites selected ranged from lower montane areas of the Kelabit plateau close to its border with Kalimantan to the higher montane slopes of Mount Murud massif to the north. The duration of these surveys, largely self-funded, ranged from short-term ones, of ten to fourteen days each, to several extended ones that lasted as long as three continuous months at the same location.

A large volume of data, on 227 species, was collected during this time. A small part of it has been analysed to support a series of short papers previously published in The Sarawak Museum Journal. Much of it, however, especially the ringing data, remains unpublished. It is now released into public domain for use by other workers. The data collected in the lowland surveys will be published in a separate paper.

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THE MAIN STUDY AREAS

The main survey sites are listed below (both the altitude and GPS coordinates are approximate):

1. Bario – 3° 44' 27" N, 115° 27' 59" E (Altitude: 1066 m), an area of disturbed submontane MDF and kerangas forest interspaced with scrub vegetation and rice fields, principally around the old airport at Padang Pasir and along the trails to Pa' Ukat, Kampong Bharu and Pa' Umor.
2. Arur Tumuh – 3° 42' 58" N, 115° 27' 13" E (Altitude: 1097 m) behind Pa' Darung longhouse and on the trail to the former Penan settlement at Pa' Berang, an area of undisturbed submontane ridge forest interspaced by several small streams, with some marshy terrain, stands of pole forest and patches of scrub vegetation.

3. Ramudu - 3° 33' 09" N, 115° 29' 40" E (Altitude: 914 m), an area of disturbed submontane MDF interspaced with scrub vegetation, open meadows, clearings and rice fields. There were two survey sites here, one a forested ridge some five hundred metres behind the longhouse, another along clearings and scrub vegetation by the banks of the Kelapang river, to monitor migratory movement.
4. Camp Five - 3° 29' 04" N, 115° 28' 44" E (Altitude: 883 m), an area of ridge forest located between lowland and submontane MDF along the banks of the Kelapang River, short of its confluence with the Da'pur River, and about three hours south of Ramudu longhouse. This area has, since 1996, been clear-felled by logging.
5. Pa' Da'lih - 3° 34' 00" N, 115° 33' 15" E (Altitude: 971 m), a mixture of submontane MDF interspaced with scrub vegetation, cultivated areas and rice fields, located around Pa' Da'lih longhouse.
6. Pa' Di'it - 3° 29' 00" N, 115° 36' 00" E (Altitude: 1362 m), largely of stunted montane forest with traces of mossy forest, with some scrub vegetation and grasses by the waterfall, located some twelve hours south-east of Pa' Da'lih, and very close to the Kalimantan border.
7. Pa' Gelawat - 3° 48' 17" N, 115° 28' 36" E (Altitude: 1455 m), along the lower south-eastern slopes of Pulong Tau National Park, an area of ridge forest, with very few large trees, dense understorey vegetation, mostly gingers, rattans, wild *pantu* palms and lots of small emergents, a closed-canopy and poor vertical and horizontal visibility.
8. Arur Buluh Betung - 3° 50' 07" N, 115° 32' 54" E (Altitude: 1100 m), an old open *temuda* forest lying between an unending series of low and tall ridge lines, with very little level ground in between, located some three hours north of Pa' Lungan longhouse, just short of Ra'an Bulu' Barit, the ridge before Long Rapung, an abandoned longhouse.
9. Mount Murud Summit Trail
The habitat types ranged from higher montane forest to dwarf mossy forests rich with orchids and nepenthes species, and taller trees on the ridges. Field studies were conducted at and between the following five locations:

- a. Lepo' Bunga – 3° 56' 33.4" N, 115° 32' 40.6" E (Altitude: 1740 m)
- b. Ridge Camp – 3° 56' 10.2" N, 115° 32' 20.5" E (Altitude: 2074 m)
- c. Church Camp – 3° 55' 33.0" N, 115° 30' 52.7" E (Altitude: 2102 m)
- d. Rock Garden – 3° 54' 23.3" N, 115° 29' 20.0" E (Altitude: 2347 m)
- e. Summit – 3° 54' 18.6" N, 115° 29' 18.0" E (Altitude: 2432 m)

Study Methods

The nomenclature used follows *The Annotated Checklist of the Birds of the Oriental Region* (Inskipp *et al.* 1996).

Field observations were made using 10 x 50 binoculars, during daily walks through the study areas and supplemented by random sightings during mist-netting sessions. Field notes were recorded at, or shortly after, the time of sighting. Bird calls and songs were noted only for birds actually seen calling or singing.

Mist nets were used to trap sedentary and secretive jungle species found at lower and ground storey levels. Varying numbers of 4-shelf mist nets, each 12 or 18 metres in length, were put up, set to a maximum height of 3 m, the bottom shelves being 0.3 m above ground level. The nets were opened at 06:00 and closed at 18:00 daily, except when inclement weather intervened. Net rounds were conducted at regular 45-minute intervals.

Once a bird had been positively identified, an attempt was made to determine its gender and, where possible, its age, using the following age code:

- 1 – Pullus
- 1J – Fledged, but flying so weakly, it could not have travelled very far from the nest.
- 2 – Fully grown, year of hatching quite unknown - current year not excluded.
- 3J – Definitely hatched this year and still partly or completely in juvenile plumage.
- 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.
- 7 – Definitely hatched two calendar years ago.
- 8 – Hatched three or more calendar years ago - exact year unknown.

The date, time and place of capture were recorded for each bird before they were ringed and released. In some short term surveys, of two weeks or less, some birds were not ringed so as to conserve a limited supply of rings. To prevent duplication of data, the tip of a wing feather, usually P3 on the right wing, was slightly clipped so that unringed birds could be readily identified when retrapped.

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
- tarsus diameter (in mm), with vernier calipers, to ensure the use of a correct ring size.

During the later stages of the study, to compensate for deficiencies in most reference books, full plumage descriptions were taken to help determine age/sex characteristics in their plumage. The first few birds of each species were thus treated, subsequent ones only when variations were noted.

Each bird was examined for moult, often on a present (Y) or absent (N) basis. Where moult scores are given, the primaries numbered descendantly, from the inside outwards (P1 = innermost primary), the secondaries ascendantly, from the outside inwards (S1 = outermost secondary), and the tail feather numbered in pairs from the centre outward (T1 = central pair). Moult scores were taken from the right wing, the left wing being checked to exclude feather replacement due to accidental loss.

In most passerine species, and many non-passerines, the female develops an incubation patch before it starts the incubation process. In many species, the males, too, exhibit brood patches during the breeding season. Breeding status was sometimes assessed on the presence (Y), or absence (N), of brood patches. At others, the following codes were used to assess a bird's breeding status:

- 1 – wing length (in mm), using the longest chord method
- 2 – tail length (in mm), from the base of the tail to the tip of the longest feather
- 3 – bill length (in mm), from the base of the skull
- 4 – tarsus length (in mm), from the knee joint to the last complete scale above the ankle
- 5 – weight (in gms), using a range of Pesola balances
- 6 – total length (in cm), with the bird laid flat on its back, in slightly relaxed mode, on a ruler
- 7 – tarsus diameter (in mm), with vernier calipers, to ensure the use of a correct ring size.

Species Accounts in Family order

PHASIANIDAE

1. Black Partridge *Melanoperdix nigra*

Red Data Book Category: Vulnerable. Other names: Black Wood Partridge. Known range: Lowlands, to 1200 m. A small plump bird, about 25 to 28 cm long and all black, was seen walking, almost running, away from me in sub-montane ridge forest at Arur Tumuh (22/2). It was very obviously a partridge and, by its colour, a Black Wood Partridge which is said to be found only in the lowlands. No previous record for the Bario area.

One of the camp staff, while collecting firewood at Arur Bulu' Betung (12/6), reported having seen one farther down the trail to Pa' Lungan – a viable enough record since there are no other all black partridges in Sarawak.

2. Blue-breasted Quail *Coturnix chinensis*

Other names: Blue-breasted Button-Quail, Painted Quail. Known range: Lowlands, to 1200 m.

A family party of about seven birds were seen feeding by small drainage runnels in an apple orchard at Ba' Kelalan. When put up, they flew into tall grass. According to the Kelabits, it was common in the tall grass by Ramudu airstrip. A pair was reported to have been seen there on 5th June.

3. Red-breasted Partridge *Arborophila hyperythra*

Endemic to Borneo. Red Data Book Category: Lower Risk/Near Threatened. Other names: Red-breasted Tree Partridge. Known range: Sub-montane to 1500 m.

In 1994, at Arur Tumuh, one was seen almost daily walking down a sloping jungle trail, feeding in a desultory manner until just before dark, when it would fly up to a regular roost in a bushy branch some ten feet above ground

level. Seen in the tall grass by Ramudu airstrip. According to the Kelabits, it is common in old jungle. An adult male seen at Arur Bulu' Betung, during a net round, walked hurriedly away, right *under* my nets, then scuttled away down the slope away from the nets.

4. Crested Partridge *Rollulus rouloul*

Red Data Book Category: Lower Risk/Near Threatened. Other names: Crested Green Wood Partridge. Known range: Lowlands, to 1100 m.

Seen feeding along a jungle trail on a ridge near Ramudu, taking off with a loud squawk and a whirr of wings when alarmed by my approach.

Fairly common at Camp Five, the males appearing dark bluish-green, females leaf-green. They walk very fast up and down the ridges, the tail canted downwards at 45° angle, lifting each foot to step high, with jerky forward movements of the head with each step. Wary bird, the head jerkily moving to scan all directions while feeding. When alarmed, they explode steeply upwards with a very noisy whirr of wings, sometimes running very fast, then taking a short flight to hit the ground again and continue running without a break. They constantly makes soft contact calls, like that made by young chickens, *chip-chip-chip* or occasionally *chip-chip-chip-chiyiyuh*. Alarm call also like that of domestic chickens, a loud *keeyoh*. Very soft plumage.

Location	Date	Time	Ring No:	Age	Sex	Wing	Tail	Bill	Tarsus	Weight	Length	TD	BP	M
1. Camp Five	26/3/96	09:00	Not Ringed	6	M	147	66	25	44	276.0	26.0	6.0	N	N
2. Camp Five	26/3/96	09:00	Not Ringed	6	F	138	60	22	41	303.0	25.5	6.6	N	Y
3. Camp Five	26/3/96	09:00	Not Ringed	6	M	147	59	24	44	305.0	25.0	6.0	N	Y
4. Camp Five	19/4/96	12:00	Not Ringed	6	F	142	58	22	44	285.0	25.0	5.3	N	N
5. Camp Five	28/5/96	12:00	Not Ringed	6	M	148	64	24	44	274.0	24.5	5.1	N	Y

1. Head and nape jet black. Dark reddish-brown crest (42 mm high), extending from top of head to nape. Lower forehead black, with bold bar of white across the upper forehead at base of crest. Several long black