

## **A BRIEF SURVEY OF BIRD SPECIES AT MAHUA BASECAMP AND ULU SENAGANG, CROCKER RANGE NATIONAL PARK, SABAH**

Shahrul Anuar Mohd Sah, Mohd Hifni Baharuddin and Ganesan Muthaiya<sup>1</sup>

### **ABSTRACT**

*A survey of the avifauna found around two base camps located in the vicinity of the Crocker Range National Park (CRNP); namely the Mahua campsite, Tambunan and Ulu Senagang, Tenom, was conducted from the 14-21 October 1999 as part of the Scientific Expedition organised by the Universiti Malaysia Sarawak and the Sabah Parks. Field observations and mist-netting were carried out in both primary and secondary forests. From a single day survey at Mahua campsite, our study recorded a total of 11 bird species from eight families while a six-day field observation and mist netting at Ulu Senagang recorded 41 bird species from 18 families. A total of 22 bird species were mist-netted.*

### **INTRODUCTION**

Two research groups were involved in the avifaunal survey during the Crocker Range Scientific Expedition in October 1999. The first group from Universiti Malaysia Sarawak was based at the Crocker Range Park Headquarters, Keningau and the second group from Universiti Sains Malaysia were based at Ulu Senagang, Tenom. The objective of the survey was to provide a list of bird species found in the primary and secondary forests of both areas. The information generated from these brief surveys could potentially serve as the baseline data for future conservation effort and long-term monitoring of avifauna found in the CRNP.

### **METHODOLOGY**

Preliminary visual observations were made along the Mahua Trail up to the Mahua Waterfall and the forest edges near the Mahua campsite for one day (14 October 1999). Our Mahua campsite was located at about 1000m above sea level.

The period of survey at Ulu Senagang was however longer in comparison, i.e. 6 days, and both primary and secondary forest areas were covered. The primary forests were primarily hilt dipterocarp forests at an altitude of between 500 and 540m above sea level. The secondary growths were represented by patches of exposed habitats and had been heavily disturbed by human activities which included village settlements, hill rice planting and other cash crop cultivations such as rubber, cocoa, coffee, banana and passion fruit. Most of the secondary forest areas surveyed were at an altitude ranging between 400-420m above sea level.

Mist-nettings were carried out for three consecutive days (16-18 October 1999) along a 2-km

trail in the primary forests. In the secondary growth areas, mist-nets were placed at various locations for three consecutive days (19-21 October 1999). A total of 10 mist-nets (12m x 2.6m, 30mm mesh) each was placed in the primary and secondary forests surveyed. The height of the mist-nets was about 0.5m above ground and each mist-net was supported by two wooden poles. The nets were set up at dawn (0730hr) and taken down just after dusk (1900hr). Throughout the day, the net was regularly checked for any entangled or trapped flying object every two hours. Captured birds were identified based on King *et al.* (1971), Smythies (1981) and MacKinnon & Phillips (1993). After all the necessary measurements (weight, total length, beak, tarsus and wing length) were recorded, the birds were released at the site of capture. In addition to mist-netting, daily visual observation and video recording were carried out during the mist-netting period.

## RESULTS AND DISCUSSION

Our one-day survey at Mahua campsite recorded a total of 11 bird species from eight different families. The Family Dicuridae (drongos), Muscicapidae (flycatchers), Turdidae (thrushes) and Nectariniidae (sunbirds, spiderhunters) were among the families observed. A list of bird species observed at Mahua Basecamp is shown in Table 1. Only half-a day was spent at Mahua campsite to conduct our field observation and this might account for the lower number of bird species recorded here compared to Ulu Senagang site.

A six-day field observation and mist netting were undertaken at both the primary and secondary forest areas of Ulu Senagang. A total of 41 bird species from 18 families were recorded from here. The number of species captured and observed in the field appeared to be high for the The Family Pycnonotidae (bulbuls), Muscicapidae (flycatchers), Cuculidae (cuckoos) and Eurylaimidae (broadbills) (Table 2).

Four species from three families (Eurylaimidae, Muscicapidae and Turdidae) were observed at both the Mahua campsite and Ulu Senagang forest areas which included *Corydon sumatranus* (Dusky Broadbill), *Cyanoptila cyanomelana* (Blue and White Flycatcher), *Niltava grandis* (Large Niltava) and *Copsychus saularis* (Magpie Robin). During the period of study a total of 45 resident species and four migrant species were recorded. The migratory species were *Motacilla cinerea* (Grey Wagtail), *Cyanoptila cyanomelana* (Blue and White Flycatcher), *Motacilla alba* (Pied Wagtail) and *Erithacus cyane* (Siberian Blue Robin).

All the species netted were also directly sighted during field excursions. Although most of the species were only netted once, some species in the primary and secondary forests were netted more than three times. For primary forest species, those caught more than once included *Arachnothera longirostra* (Little Spiderhunter), *Alophoixus phaeocephalus* (Yellow-Bellied Bulbul) and *Pycnonotus atriceps* (Black-Headed Bulbul). Twelve individuals of *Arachnothera longirostra* were caught and one was recaptured. Four individuals of both *Alophoixus phaeocephalus* and *Pycnonotus atriceps* were also caught. For secondary growth areas, two species that were commonly netted included *Copsychus malabaricus* (White-Rumped Sharma) and *Copsychus saularis* (Magpie Robin). Four individuals were netted for each species.

Although granivorous species such as *Lonchura malacca* (Black-Headed Munia) and *Lonchura fuscans* (Dusky Munia) were common in the secondary growth areas and frequently seen flying in big numbers, only one individual of *Lonchura fuscans* was successfully netted.

Table 1. List of bird species captured at the Mahua Basecamp, Crocker Range Park, Sabah

| Family and Species   | Habitat Conservation | Migrant Status | Method of observation |
|--|----------------------|----------------|-----------------------|
| <b>CORVIDAE</b>  |                      |                |                       |
| <i>Dendrocitta cinerascens</i><br>Bornean Treepie          | P, Endemic           |                | Sighted               |
| <b>DICRURIDAE</b>  |                      |                |                       |
| <i>Dicrurus aeneus</i> Bronzed Drongo                      | P                    |                | Sighted               |
| <i>Dicrurus leucophaeus</i> Ashy Drongo                    | P                    |                | Sighted               |
| <b>MEROPIIDAE</b>  |                      |                |                       |
| <i>Merops viridis</i> Blue-Throated Bee-Eater              | P                    |                | Sighted               |
| <b>EURLAIMIDAE</b>   |                      |                |                       |
| <i>Corydon sumatranus</i> Dusky Broadbill                  | P                    |                | Sighted               |
| <b>MOTACILLIDAE</b>  |                      |                |                       |
| <i>Motacilla cinerea</i> Grey Wagtail                      | P                    | X              | Sighted               |
| <b>MUSCICAPIDAE</b>  |                      |                |                       |
| <i>Cyanoptila cyanomelana</i><br>Blue-and White flycatcher | P                    | X              | Sighted               |
| <i>Cyornis banyumas</i> Hill Blue flycatcher               | P                    |                | Sighted               |
| <i>Niltava grandis</i> Large Niltava                       | P                    |                | Sighted               |
| <b>NECTARINIIDAE</b>                                       |                      |                |                       |
| <i>Aethopyga mystacalis</i> Scarlet Sunbird                | P                    |                | Sighted               |
| <b>TURDIDAE</b>  |                      |                |                       |
| <i>Copsychus saularis</i> Magpie-Robin                     | S                    |                | Sighted               |

Table 2. List of bird species at Ulu Senagang, Crocker Range Park, Sabah

| Family and Species                                | Habitat Conservation | Status Migrant | Method of Observation |
|---|----------------------|----------------|-----------------------|
| <b>ALCEDINIDAE</b>                                |                      |                |                       |
| <i>Alcedo meninting</i><br>Blue-Eared Kingfisher  | P                    |                | Sighted               |
| <i>Lacedo pulchella</i> Banded Kingfisher         | P                    |                | Mist-netted           |
| <b>COLUMBIDAE</b>                                 |                      |                |                       |
| <i>Chalcophaps indica</i><br>Green-Winged Pigeon  | P, S                 |                | Mist-netted           |
| <i>Ducula badia</i><br>Mountain Imperial-Pigeon   | P                    |                | Sighted               |
| <b>CORACIIDAE</b>                                 |                      |                |                       |
| <i>Eurystomus orientalis</i> Dollarbird           | P, S                 |                | Sighted               |
| <b>CUCULIDAE</b>                                  |                      |                |                       |
| <i>Cacomantis merulinus</i> Plaintive Cuckoo      | S                    |                | Sighted               |
| <i>Cacomantis sonneratii</i><br>Banded-Bay Cuckoo | S                    |                | Mist-netted           |

|   |            |         |             |
|---|------------|---------|-------------|
| <i>Centropus sinensis</i> Greater Coucal                      | S          |         | Sighted     |
| <i>Phaenicophaeus chlorophaeus</i><br>Raffles's Malkoha       | S          |         | Sighted     |
| <b>DICAEIDAE</b>  |            |         |             |
| <i>Dicaeum trochileum</i><br>Scarlet-Headed Flowerpecker      | S          |         | Sighted     |
| <b>EURLAIMIDAE</b>  |            |         |             |
| <i>Calyptomena viridis</i> Green Broadbill                    | P          |         | Mist-netted |
| <i>Corydon sumatranus</i> Dusky Broadbill                     | P          |         | Mist-netted |
| <i>Cymbirhynchus macrorhynchus</i><br>Black-and-Red Broadbill | S          |         | Sighted     |
| <b>MOTACILLIDAE</b>   |            |         |             |
| <i>Motacilla alba</i> Pied Wagtail                            | S          | X       | Sighted     |
| <b>MUSCICAPIDAE</b>   |            |         |             |
| <i>Cyanoptila cyanomelana</i><br>Blue-and White Flycatcher    | P          | X       | Sighted     |
| <i>Cyornis unicolor</i> Pale Blue-Flycatcher                  | P          |         | Sighted     |
| <i>Hypothymis azurea</i><br>Black-Naped Monarch               | P          | Sighted | Sighted     |
| <i>Niltava grandis</i> Large Niltava                          | P          | Sighted | Sighted     |
| <i>Rhinomyias umbratilis</i><br>Grey-Chested flycatcher       | P          |         | Mist-netted |
| <b>NECTARINIIDAE</b>  |            |         |             |
| <i>Meiglyptes tristis</i><br>Buff-Rumped Woodpecker           | S          |         | Mist-netted |
| <b>PLOCEIDAE</b>  |            |         |             |
| <i>Lonchura malacca</i><br>Black-Headed Munia                 | S          |         | Sighted     |
| <i>Lonchura fuscans</i> Dusky Munia                           | S, Endemic |         | Mist-netted |
| <b>PYCNONOTIDAE</b>   |            |         |             |
| <i>Alophoixus phaeocephalus</i><br>Yellow-Bellied Bulbul      | P          |         | Mist-netted |
| <i>Pycnonotus atriceps</i><br>Black-Headed Bulbul             | P,S        |         | Mist-netted |
| <i>Pycnonotus brunneus</i> Red-Eyed Bulbul                    | P,S        |         | Mist-netted |
| <i>Pycnonotus erythrophthalmus</i><br>Spectacled Bulbul       | P, S       |         | Mist-netted |
| <i>Pycnonotus eutilotus</i><br>Puff-Backed Bulbul             | S          |         | Mist-netted |
| <i>Pycnonotus plumosus</i><br>Olive-Winged Bulbul             | P          |         | Mist-netted |
| <b>RALLIDAE</b>   |            |         |             |
| <i>Amaurornis phoenicurus</i><br>White-Breasted Waterhen      | S          |         | Sighted     |
| <i>Malacopteron magnum</i><br>Rufous-Crowned Babber           | P          |         | Mist-netted |
| <i>Pellorneum capistratum</i><br>Black-Capped Babbler         | P          |         | Mist-netted |

**TURDIDAE**

|  |      |   |             |
|--|------|---|-------------|
| <i>Copsychus malabaricus</i><br>White-Rumped Shama | S    |   | Sighted     |
| <i>Copsychus saularis</i> Magpie-Robin             | S    |   | Mist-netted |
| <i>Erithacus cyane</i> Siberian Blue Robin         | P, S | X | Mist-netted |

Abbreviations used:

**P** - Found in primary forest

**S** - Found in secondary growth area

Two endemic species, *Dendrocitta cinerascens* (Bornean Treepie) and *Lonchura fusca* (Dusky Munia) were recorded. Many of the bird species observed in the undisturbed forests of the study area were found to be regular visitors from the adjacent forests. These species appeared to have inhabited either habitats for their feeding and nesting activities. Many of the bird species found in this study could also be found in other habitat types such as large open clearings, inland freshwater swamps and orchards.

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<sup>1</sup> School of Biological Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia.