

THE LOWER MONTANE AVIFAUNA OF MT. TRUS MADI

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ABSTRACT. - Ornithologically, Sabah is perhaps the most thoroughly studied area in Southeast Asia. However, our knowledge is based on data from relatively few sites such as Danum Valley and Mt. Kinabalu. We surveyed the lower montane forests of Mt. Trus Madi in August 1999. Despite its proximity to Mt. Kinabalu, only two expeditions have previously visited Trus Madi, resulting in one published survey. We observed 62 species of birds in the study area (ca. 1,500 m), including six new records for the mountain and 12 Bornean endemics. Also of note were several new elevation records for Sabah and observations of a diverse frugivore guild attracted by fruiting trees in disturbed forest.

KEY WORDS. - Sabah, Borneo, Trus Madi, birds, montane.

INTRODUCTION

The island of Borneo is home to 37 endemic species of birds. Of these, 26 inhabit montane regions of the island (MacKinnon et al., 1996). Lower montane forest, in particular, provides the primary habitat for many of these endemic species, including Bornean Barbet (*Megalaima eximia*) and Whitehead's Broadbill (*Calyptromena whiteheadi*). This strip of habitat on the flanks of major mountain ranges and encircling isolated peaks is also home to little known bird taxa, such as Orange-headed Thrush (*Zosterops citrina*) and Short-tailed Frogmouth (*Batrachostomus poliolophus*), as well as rare or patchily distributed plants (e.g., *Rafflesia* and *Nepenthes*) and other animals (e.g., the frog, *Leptolalax*, the colubrid *Rhabdophis murudensis*, and Ferret-badger, *Melogale orientalis*). The montane forests of Borneo have been designated an Endemic Bird Area (EBA) by Birdlife International (Stattersfield et al., 1998). A priority level of "urgent" has been assigned to this EBA because of a lack of sufficient distributional and ecological data.

The distribution, abundance, and habits of montane bird species in one montane area, Mt. Kinabalu, are being documented fairly thoroughly (Jenkins, 1978; Jenkins & de Silva, 1978; Wells & Philipps, 1996; Biun, 1999; see also Sheldon et al., 2001 for a review

of collections and expeditions to Mt. Kinabalu). However, general applicability of these data to similar habitats in Borneo is not known, and simple presence/absence data for these montane species is available for few other peaks. More detailed information such as habitat preference, elevational distribution, and seasonal abundance is sparse. Only when such data are available can the effects of elevation, isolation, and habitat size on avifaunal communities be examined.

Although the second highest mountain in Borneo (2,643 m) and separated from Mt. Kinabalu by less than 60 km, Trus Madi is seldom visited by ornithologists and only one avifaunal survey has been published (Sheldon & Francis, 1985). The findings of a Cambridge University survey in 1956 were never published. Both surveys documented new records of montane species for Trus Madi, extending the range of several Bornean endemics and revealing a montane avifauna potentially as diverse as that on Mt. Kinabalu.

A certain degree of avifaunal similarity between Mt. Kinabalu and Trus Madi is expected. Considering their proximity and elevation, the species lists from these peaks ought to be fairly congruent. From a scientific and conservation viewpoint, however, the subtle differences between the mountains are just as important as their similarities. On a broad scale,

mountain areas isolated even by a narrow valley (or opposing slopes of a single range) can experience different weather patterns and thus support different fruiting cycles or breeding seasons, affecting the seasonal distribution patterns. On a more local scale, plant community differences can also alter local abundances of birds. Ultimately, these factors and a reduced rate of dispersal through intervening lowlands can lead to genetic differentiation between mountain populations.

This paper describes the results of an 11-day survey and collecting trip to the lower montane forest of Mt. Trus Madi from 2-12 August 1999. One purpose of the trip was to collect samples for a population genetics study of montane bird populations (to be published at a later date, voucher specimens are deposited in the Sabah Museum and Louisiana State University Museum of Natural Science). The second purpose of the trip, and the subject of this paper, was to increase our knowledge of the presence, abundance, ecology, and seasonality of birds on the mountain. Also included in this paper is information from the journal of John Boys, the Cambridge ornithologist who participated in the 1956 Trus Madi expedition, and an unpublished manuscript by Boys and Tom Harrison, the former curator of the Sarawak Museum. When relevant, we include the observations or specimen records of that trip as comparative material and to make public some previously unpublished data (several records were published in Sheldon & Francis, 1985, and Smythies, 1983, 2000).

MATERIALS AND METHODS

The 1999 expedition was a collaborative effort between the Sabah Museum and the Louisiana State University Museum of Natural Science. This small-scale expedition also included three Sabah Museum staff members (Albert Lo, David Kung, and Patrick Francis), and a Sabah Museum driver (Üling Lakim). From Tambunan we approached Trus Madi from the west via logging roads on 2 August 1999. Although the valleys and foothills approaching the mountain were heavily logged, the forest was less disturbed on the mountain. The roads became more dispersed and the forest patches larger. At approximately 1,500 m the logging road was washed out where it crossed a stream, and we stopped to make camp (5° 34' 51" N, 116° 29' 30" E). This site was 47.5 km from Kinabalu Park headquarters, 17.3 km south-southeast of Tambunan, and lay at an altitude of 1500 m - 1550 m. All net locations and observations were within 2 km of the camp and approximately at the same elevation.

Twenty mist nets were set for the duration of the survey (9 days), but were moved on several occasions. At first, nine 5-meter nets were set on a ridge line in primary forest, one 10-meter net was set over a small stream, and ten 10-meter nets were set on slightly overgrown logging roads in secondary forest. After three days the nine small nets were moved to a ridge of secondary forest closer to the long nets. Finally, on 9 August eight of the long nets were removed from the logging road and hoisted 10-15 meters up into secondary forest. Nets were unfurled at dawn (approximately 0600) and closed just before dusk (1730-1800). The nets were taken down at dusk on 11 August. Nets were checked every hour. Specimen data included sex, mass, color of soft parts (irides, maxilla, mandible, tarsi, and toes), moult condition, skull ossification, and size of bursa. Morphological measurements were not taken.

Ecological observations and sight lists of bird species were recorded after the dawn unfurling, at midday, and before the dusk furling of the nets. Primary objectives were to compile as complete a species list as possible and opportunistically collect breeding, diet, and behavioral data. Time spent checking the mist nets and preparing the bird specimens precluded quantifying the relative abundance of species. Birds were identified by sight and/or vocalization. The surveys were restricted in habitat variety, elevational extent, and intensity due to the time constraints. They must be viewed as a snapshot of a small area of forest over two weeks. From the survey results we assigned each species a qualitative abundance value. This technique does not necessarily measure the true abundance of a species, but rather the likelihood of encountering them in the field. The four categories are Abundant, Common, Uncommon and Scarce. The criteria for each category are listed below:

Abundant. – These species were encountered on >90% of the surveys and required little or no searching to find. They may be habitat specific, but were abundant within that habitat.

Common. – These species were encountered on >50% but <90% of the surveys and may require a minimal amount of searching.

Uncommon. – These species were encountered on <50% but >5% of the surveys and often required extensive searching to find.

Scarce. – These species were encountered on <5% of the surveys. Extensive searching did not greatly increase the chance of finding them.

These values can be compared with the netting results to assess the strengths of the two methods. Secretive

understory species are expected to be under-represented in the surveys, but commonly caught in the nets, while conspicuous canopy species may be common in the surveys but rarely, if ever, caught in the nets. The nets were moved frequently to increase genetic sampling. This might seem to reduce our ability to estimate relative abundance of species. However, mist-net data are most useful for detecting the presence of secretive species, not estimating abundance (Remsen & Good, 1996). We believe that these data, combined with the survey lists and ecological data, provide an accurate snapshot of the avifaunal community at 1500 m during our visit.

The Cambridge University Expedition visited the Trus Madi area from 4 August until 24 September 1956. It spent about ten days between 2,100 m and 2,400 m on a ridge north of the summit. They spent an additional 18 days at Kiduk Arok at 1,350 m on the north slope. Their team consisted of two geographers that remained in Tambunan, 2 Dusun hunters, John Boys, Peter Bryant, Jack Woodall, and R. Nayandoh (described as a Land Dayak collector from Kuching). A general trip account was written by Bryant, but never published. All material that we cite is from a manuscript by Harrison and Boys, intended for the *Sarawak Museum Journal*, which was never completed. Henceforth these notes are simply referred to as "Boys". Sheldon & Francis (1985) is henceforth referred to as "1985".

RESULTS

A total of 62 species of birds was netted and/or observed during the 11 days on Trus Madi. None of the species is unexpected for this region of Borneo, and no major range extensions were discovered. However, surprising altitudinal records were documented, several species not on Boys' or the 1985 lists were encountered, and we recorded a number of ecological observations. A complete list of species and abundance categorization is given in Appendix A. Below we comment on some of the more important findings and contrast these data with the findings of the other two Trus Madi expeditions.

Pheasants. - We recorded no phasianids during our stay on Trus Madi. Both previous expeditions listed Red-breasted Partridge (*Arborophila hyperythra*) as common in our elevational range. In addition, Sheldon & Francis (1985) found Crimson-headed Partridge (*Haematortyx sanguiniceps*) to be common. There are two likely explanations for this omission. First, the level of human disturbance has risen

dramatically in the Trus Madi area in the past two decades. Extensive logging roads have allowed tourists and hunters access to most of the habitat. We encountered two hunting parties during our eleven days, and gunshots were not uncommon. Second, we may have overlooked some species. In going over the species lists for all three expeditions, it is obvious that each group missed some fairly common montane species. This is likely due to temporally varying abundance and the secretive nature of some species. Both partridges have distinctive calls, but assuming a breeding season of January-April (Smythies, 2000; Sheldon et al., 2001) they might not have been calling frequently in August.

Pigeons. - Mountain Imperial Pigeon (*Ducula badia*) and Little Cuckoo-Dove (*Macropygia ruficeps*) were abundant around our camp and net areas. These species were part of a diverse and conspicuous large frugivore guild. In contrast, Mountain Imperial Pigeon is not on the 1985 species list and Boys only lists one "possible" sighting of a pair of large pigeons. Also see general comments below on the abundance of large frugivores.

Barbets. - Another major component of the diverse group of large frugivores, barbets were often encountered. All three Bornean endemics, Mountain Barbet (*Megalaima monticola*), Bornean Barbet (*Megalaima eximia*), and Golden-naped Barbet (*Megalaima pulcherrima*), were observed as well as Brown Barbet (*Calorhamphus fuliginosus*) and Blue-eared Barbet (*Megalaima australis*). Bornean Barbet is not on Boys' or the 1985 list and there are few records from Sabah away from Mt. Kinabalu (Sheldon et al., 2001). A single pair of this scarce lower montane species was sighted in tall secondary forest.

Broadbills. - Whitehead's Broadbill was seen several times daily. On one occasion, six individuals were seen in a single small fruiting tree. The most popular food source seemed to be berries of *Litsea cubica* (Lauraceae). This tree is called "Lindos" in Dusun and has a very strong odor. Netted birds often smelled strongly of these berries. Whitehead's Broadbills were also calling frequently ("chek, rrrrrrt"). This species is not on the 1985 list and was only seen three times by the Cambridge group.

Babblers. - The endemic Mountain Wren-Babbler (*Napothera crassa*) was common, but elusive, along streams in primary forest. A pair of Rufous-fronted Babblers (*Stachyris rufifrons*) was observed and subsequently netted along an old logging track. This

species appears on neither of the previous survey lists and there are no Sabah records above 1100 m (Sheldon et al., 2001). Biun (1999) does not report this species in a Mt. Kinabalu survey starting at 700 m. The usual montane *Stachyris* species in Borneo, Grey-necked Babbler (*S. nigriceps*) was common in the same area as the Rufous-fronted Babblers.

Tailorbirds. - Boys reported none of these common birds above 2,000 ft. The 1985 trip recorded Ashy Tailorbird (*Orthotomus ruficeps*) at 750 m and Mountain Tailorbird (*Orthotomus cuculatus*) from 1,600 m to 2,100 m. We observed both species occurring together at 1,500 m. Mountain Tailorbird was more common, but Ashy Tailorbird was often found in scrub along old logging tracks.

Spiderhunters. - In addition to sighting a single Whitehead's Spiderhunter (*Arachnothera juliae*), we were surprised to find Little Spiderhunter (*Arachnothera longirostra*) and Long-billed Spiderhunter (*Arachnothera robusta*) at this elevation. Little Spiderhunter is extremely common in the lowlands, but previously the highest record for Sabah was 1450 m on Sinsuron Road (Sheldon et al., 2001). A single Long-billed Spiderhunter was caught in a net approximately 15 m up in secondary forest. This is a canopy species of lowland forest that has not been recorded above 1,150 m in Sabah (Sheldon et al., 2001). Extensive netting and observations on Mt. Kinabalu (Biun, 1999) did not turn up either of these species above 700 m. Curiously, we did not encounter a likely spiderhunter at this elevation, Streaky-breasted Spiderhunter (*Arachnothera affinis*).

Frugivores. - As mentioned above, there was a diverse group of frugivores around the camp and net areas. This guild included several Bornean endemics including the three barbet species mentioned above, Whitehead's Broadbill, and the elusive Fruithunter (*Chlamydochaera jefferyi*). The Fruithunter was not encountered as often as the other endemics, but a male-female pair was observed and two males were netted. Recently DNA and morphological evidence has indicated that this enigmatic bird is a thrush (Ahlquist et al., 1984; Olson, 1987). In addition to the endemics, bulbuls were a conspicuous component of the frugivore guild. Flocks of Black-crested Bulbul (*Pycnonotus melanicterus*) and Ashy Bulbul (*Hypsipetes flavala*) worked over the fruiting trees, as did singles and pairs of Ochraceous Bulbul (*Alophoixus ochraceus*). The most obvious attraction for these frugivores was a number of fruiting *Litsea cubica* trees in the secondary forest. Birds of all sizes were

eating these small berries (ca. 4-5 mm diameter) and often smelled strongly of its characteristic odor when netted. Wreathed Hornbill (*Aceros undulatus*) was observed once, but was not part of the frugivore assemblage at the fruiting trees.

Breeding. - The paucity of breeding observations indicates that it was not the peak breeding season on Trus Madi in August. This finding agrees with Boys' observations from the same month. The 1985 report does not mention any breeding records (early July). We encountered family groups of Little Pied Flycatcher (*Ficedula westermanni*) along the main logging road. The juveniles were in mottled gray plumage and being fed by both parents. Specimen data from Chestnut-crested Yuhinas (*Yuhina everetti*) and Grey-throated Babblers reveals that juveniles constituted a large proportion of netted individuals of those species.

DISCUSSION

Typically lowland species were a component of the Trus Madi avifauna. Both munia species (*Lonchura malacca* and *L. fuscans*) were found in grassy areas along logging roads at 1,500 m but were more common at lower elevations. Both of these species have been encountered at Kinabalu Park Headquarters, a disturbed area at approximately the same elevation. Little Spiderhunter was netted twice and Ashy Tailorbird was common in disturbed areas. It is likely that increased forest disturbance has allowed these species to recently colonize areas along logging roads on Mt Trus Madi. In 1956 Boys encountered none of these species on Trus Madi. In 1982 Ashy Tailorbird was common at 1,500 m but the other three species were not encountered (Sheldon & Francis, 1985). It is unknown if this apparent increase of lowland species in montane habitat is accompanied by a concomitant decrease in typically montane species.

The ornithological data for Mt. Trus Madi are incomplete. Even short trips like ours add significantly to our knowledge of the distribution and ecology of Bornean mountain birds. The bird community that we observed was quite different from that encountered on the previous two expeditions. Although we did not encounter the extremely restricted range endemics of the higher montane habitat, the abundance of fruiting trees during our visit attracted a diverse array of frugivores that were not common on the 1956 or 1985 expeditions. This expedition produced new records for Trus Madi (Black Eagle, Mountain Imperial Pigeon, Bornean Barbet, Rufous-

fronted Babbler, and Long-billed Spiderhunter) and observations of a number of generally scarce endemics (Mountain Barbet, Whitehead's Broadbill, and Fruithunter).

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LITERATURE CITED

- Ahlquist, J. E., F. H. Sheldon & C. G. Sibley, 1984. The relationships of the Bornean Bristlehead (*Pityriasis gymnocephala*) and the Black-collared Thrush (*Chlamydochaera jefferyi*). *Journal für Ornithologie*, **125**: 129-140.
- Biun, A., 1999. An altitudinal survey of the birds of Mount Kinabalu, Sabah, Malaysia. *Sabah Parks Nature Journal*, **2**: 59-74.
- Bryant, P. W., D. P. J. Wood, B. J. Moser, J. V. Boys & J. P. Woodall, Unpublished. A report on the 1956 Cambridge University expedition to Mt. Trus Madi. Cambridge University Explorers and Travellers Club. 17pp.
- Jenkins, D. V., 1978. The first hundred years: a short account of the expeditions to Mount Kinabalu 1851-1950. In: Luping, M., W. Chin & E. R. Dingley (eds.), *Kinabalu, Summit of Borneo*. Sabah Society, Kota Kinabalu, Malaysia. Pp. 45-74.
- Jenkins, D. V. & G. S. de Silva, 1978. An annotated checklist of the birds of the Mount Kinabalu National Park, Sabah Malaysia. In: Luping, M., W. Chin & E. R. Dingley (eds.), *Kinabalu, Summit of Borneo*. Sabah Society, Kota Kinabalu, Malaysia. Pp. 347-402.
- MacKinnon, K., G. Hatta, H. Halim & A. Mangalik, 1996. *The Ecology of Kalimantan: Indonesian Borneo*. Periplus Editions Ltd., Singapore. 802 pp.
- Olson, S. L., 1987. More on the affinities of the Black-collared Thrush of Borneo (*Chlamydochaera jefferyi*). *Journal für Ornithologie*, **128**: 246-248.
- Remsen, J. V. Jr. & D. A. Good, 1996. Misuse of data from mist-net captures to assess relative abundance in bird populations. *Auk*, **113**(2): 381-398.
- Sheldon, F. H. & C. M. Francis, 1985. The birds and mammals of Mount Trus Madi, Sabah. *Sabah Society Journal*, **8**: 77-88.
- Sheldon, F. H., R. G. Moyle & J. Kennard, 2001. Ornithology of Sabah: History, Gazetteer, Annotated Checklist, and Bibliography. *Ornithological Monographs*, **52**: 1-285.
- Smythies, B. E., 1981. *The birds of Borneo*. 3rd Edition. The Sabah Society and the Malayan Nature Society, Kota Kinabalu and Kuala Lumpur. 473 pp.
- Stattersfield, A. J., M. Crosby, A. Long & D. Wege, 1998. *Endemic Bird Areas of the World: Priorities for Biodiversity Conservation*, Birdlife Conservation Series, vol. 7. Birdlife International, Cambridge. 846 pp.
- Wells, D. R. & A. Phillipps, 1996. An annotated checklist of the birds of Kinabalu Park. In: Wong, K. M. & A. Phillipps (eds.), *Kinabalu, Summit of Borneo*, 2nd ed. Sabah Society and Sabah Parks, Kota Kinabalu, Malaysia. Pp. 397-437.

Appendix A. Species encountered and/or netted on Mt. Trus Madi during August 1999. A = Abundant, C = Common, U = Uncommon, S = Scarce.

Species	Common Name	Abundance	Netted
¹ <i>Ictinaetus malayensis</i>	Black Eagle	U	
<i>Spilornis cheela/kinabaluensis</i>	Crested/Mountain Serpent Eagle	U	
¹ <i>Ducula badia</i>	Mountain Imperial Pigeon	C	
<i>Macropygia ruficeps</i>	Little Cuckoo Dove	A	X
<i>Cuculus sparveroides</i>	Large Hawk Cuckoo	C	
<i>Cuculus saturatus</i>	Oriental Cuckoo	U	
<i>Collocalia esculenta</i>	Glossy Swiftlet	C	
<i>Apus affinis</i>	House Swift	C	
<i>Hemiprocne longipennis</i>	Grey-rumped Treeswift	U	
<i>Aceros undulatus</i>	Wreathed Hornbill	S	
² <i>Megalaima pulcherrima</i>	Golden-naped barbet	C	

Appendix A. Continued.

^{1,2} <i>Megalaima eximia</i>	Bornean Barbet	S	
<i>Megalaima australis</i>	Blue-eared Barbet	U	
² <i>Megalaima monticola</i>	Mountain Barbet	C	X
<i>Calorhamphus fuliginosus</i>	Brown Barbet	U	
<i>Picus mentalis</i>	Checker-throated Woodpecker	U	X
<i>Picus miniaceus</i>	Banded Woodpecker	U	
<i>Blythipicus rubiginosus</i>	Maroon Woodpecker	C	X
² <i>Calypomena whiteheadi</i>	Whitehead's Broadbill	C	X
<i>Hirundo tahitica</i>	Pacific Swallow	U	
<i>Hemipus picatus</i>	Bar-winged Flycatcher-shrike	C	
<i>Pericrocotus solaris</i>	Grey-chinned Minivet	U	
<i>Artamus leucorhynchus</i>	White-breasted Woodswallow	U	
<i>Chloropsis cochinchinensis</i>	Blue-winged Leafbird	C	
<i>Pycnonotus melanicterus</i>	Black-crested Bulbul	C	X
<i>Alophoixus ochraceus</i>	Ochraceous Bulbul	C	X
<i>Hypsipetes flavala</i>	Ashy Bulbul	C	X
<i>Dicrurus leucophaeus</i>	Ashy Drongo	C	X
<i>Dicrurus hottentotus</i>	Spangled Drongo	S	
<i>Oriolus cruentus</i>	Black-and-crimson Oriole	C	X
<i>Pellorneum pyrrogenys</i>	Temminck's Babbler	U	
² <i>Napothera crassa</i>	Mountain Wren Babbler	U	X
¹ <i>Stachyris rufifrons</i>	Rufous-fronted Babbler	S	X
<i>Stachyris nigriceps</i>	Grey-throated Babbler	C	X
² <i>Yuhina everetti</i>	Chestnut-crested Yuhina	A	X
<i>Garrulax mitratus</i>	Chestnut-capped Laughingthrush	C	X
<i>Garrulax palliatus</i>	Sunda Laughingthrush	S	
<i>Pteruthias flaviscapiss</i>	White-browed Shrike Babbler	U	
<i>Myophonus glaucinus</i>	Sunda Whistling Thrush	S	X
<i>Enicurus leschenaulti</i>	White-crowned Forktail	U	X
² <i>Chlamydochaera jefferyi</i>	Fruithunter	U	X
<i>Cettia vulcania</i>	Sunda Bush Warbler	C	X
<i>Seicercus montis</i>	Yellow-breasted Warbler	C	X
<i>Orthotomus cuculatus</i>	Mountain Tailorbird	C	
<i>Orthotomus ruficeps</i>	Ashy Tailorbird	U	
<i>Phylloscopus trivirgatus</i>	Mountain Leaf Warbler	C	X
<i>Rhinomyias gularis</i>	Eye-browed Jungle Flycatcher	U	X
<i>Eumyias indigo</i>	Indigo Flycatcher	C	X
<i>Ficedula westermanni</i>	Little Pied Flycatcher	C	
<i>Rhipidura albicollis</i>	White-throated Fantail	C	X
<i>Culicicapa ceylonensis</i>	Grey-headed Canary Flycatcher	S	
² <i>Pachycephala hypoxantha</i>	Bornean Whistler	C	X
<i>Sitta frontalis</i>	Velvet-fronted Nuthatch	U	
² <i>Dendrocitta cinerascens</i>	Bornean Treepie	C	
<i>Aethopyga temminckii</i>	Temminck's Sunbird	C	X
<i>Arachnothera longirostra</i>	Little Spiderhunter	U	X
¹ <i>Arachnothera robusta</i>	Long-billed Spiderhunter	S	X
² <i>Arachnothera juliae</i>	Whitehead's Spiderhunter	S	
<i>Zosterops atricapilla</i>	Black-capped White-eye	C	X
² <i>Oculocincta squamifrons</i>	Pygmy White-eye	S	
² <i>Lonchura fuscans</i>	Dusky Munia	C	
<i>Lonchura malacca</i>	Black-headed Munia	C	

¹ species not recorded by the Cambridge University Expedition or Sheldon & Francis (1985).

² species endemic to Borneo.