

Report on general survey in the mangroves area of Sugut Forest Reserve

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Introduction

Borneo is one of the mega diversity of the world. In terms of floristic plants, mammals and birds this tropical island constitutes even higher diversity compared to the other part of tropical region in the world. Sabah, in particular the lowland forest has long been transformed into oil palm plantations for the past decades. However, >50% of the state is still under forest cover of mainly a permanent forest estate which constitutes seven classes of Forest Reserves (FR). However, different forms of forest disturbance still exist within FR and this needs to be addressed to better understand the ecological and habitat requirements of threatened species.

Aim of Survey

The aim of this mangrove survey is to record the number of true mangrove species and the presence of proboscis monkey population within the Sugut FR. The survey was carried out mainly through the establishment of three (3) temporary plots of 10m X 100m along three locations of mangrove vegetation within the Sugut FR. Observations by boat were also made on wildlife present in the mangroves area especially proboscis monkeys, birds and other mammals.

Study Area

Sugut Forest Reserves – is located in the South of Sg Sugut (E 117.58: N 06.28 and E 117.73: N 06.41) within the Beluran Forestry District, and managed under the Field Manager for FMU Sugut FR. The field station can be reached by boat (PPD Beluran Jetty to Sabang Estate Jetty – 1^{1/2} hours), via road (Sapi Nangoh – Paitan road – approx. 5 hours from HQ) and helicopter from Sandakan airport (Figure 1).

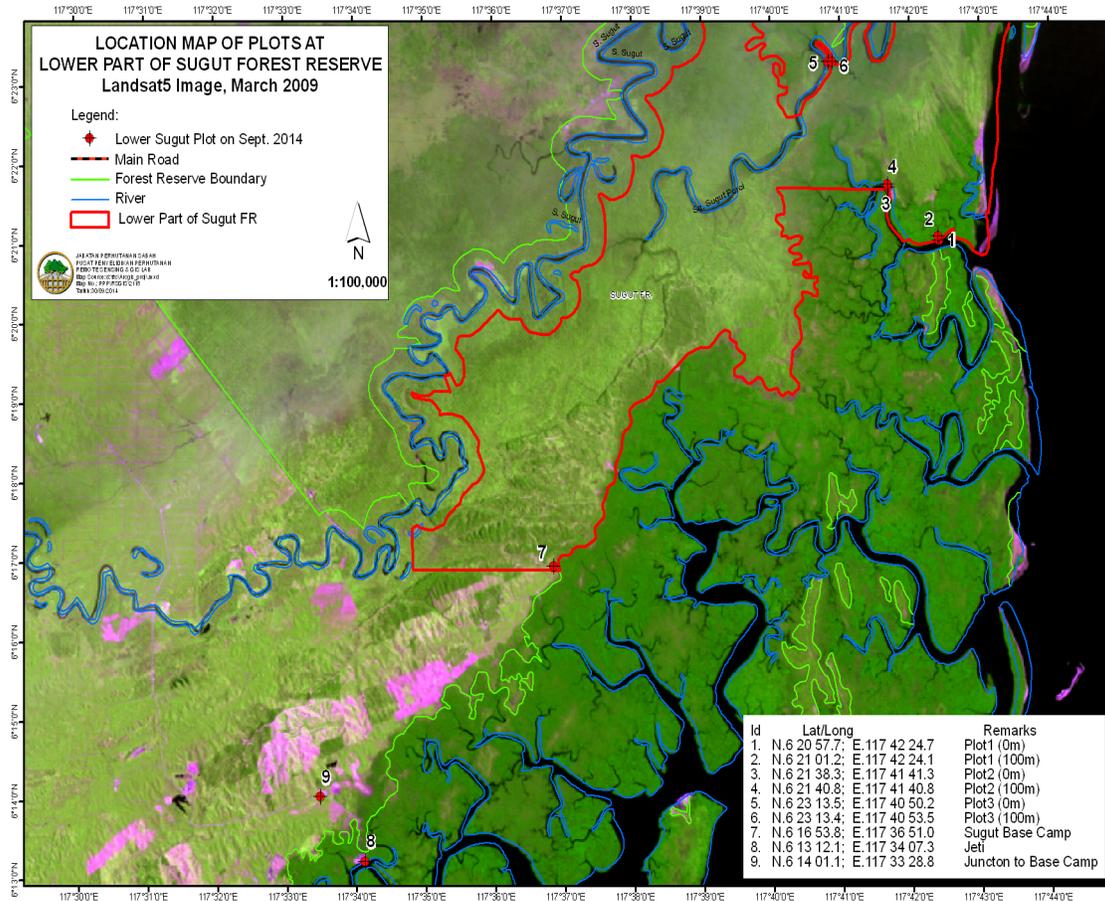


Figure 1: Sugut Forest Reserves

Mangrove vegetation

We recorded 20 plants species of mangrove and associates species (Table 1). Although the forest structure of Sugut FR was heavily affected by the practice of conventional logging in the past decades, the current shift to natural forest management through the formation of a Forest Management Unit with the absent of logging activities for certain period of time in the future may offers great potential for successful rehabilitation program of this degraded FR to recover fully. The large patches of this reserve must be preserved permanently as this area acted as the buffer zone for wildlife habitat with the surrounding conservation areas such the Timimbang-Botitian FR and Kuala Bonggaya & Kuala Labuk FR.

Table 1: Mangrove and associates species recorded during surveys (Nilus *et al.* 2010)

No	Common name	Scientific name
1	Landing Landing	<i>Scyphiphora hydrophyllacea</i>
2	Bakau Kurap	<i>Rhizophora mucronata</i>
3	Bangkita	<i>Rhizophora apiculata</i>
4	Nyireh	<i>Xylocarpus granatum</i>

5	Lengadai	<i>Bruguiera parviflora</i>
6	Tengar	<i>Ceriops tagal</i>
7	Tirog	<i>Ceriops decandra</i>
8	Geriting Putih	<i>Lumnitzera racemosa</i>
9	Nyatoh Laut	<i>Pouteria obovata</i>
10	Rotan Bakau	<i>Calamus erinaceus</i>
11	Nibung	<i>Oncosperma tigillarum</i>
12	Nipah	<i>Nypa fruticans</i>
13	Buta Buta	<i>Excoecaria agallocha</i>
14	Saka Saka	<i>Glochidion littorale</i>
15	Myrtle Mangrove	<i>Osbornia octodonta</i>
16	Dungun Laut	<i>Heritiera littoralis</i>
17	Pandan	<i>Pandanus spp</i>
18	Simpoh Bini	<i>Dillenia suffruticosa</i>
19	Jejawi	<i>Ficus microcarpa</i>
20	Kulimpapa	<i>Vitex pinnata</i>

General Observation

We also recorded twenty four (24) common bird species within the mangroves area of Sugut FR (Table 2). During the survey we also observed mammals and primates such as bearded pig (*Sus barbatus*), proboscis monkey (*Nasalis larvatus*) and long tailed macaque (*Macaca fascicularis*). The Blue Headed Pitta birds seen in Sugut FR, is the most common endemic in lowland primary and logged forest of Borneo.

Table 2: Birds recorded during surveys

No	Common name	Scientific name
1	Collared Kingfisher	<i>Todiramphus chloris</i>
2	Brahminy Kite	<i>Haliastur indus</i>
3	Red Headed Tailorbird	<i>Orthotomus ruficeps</i>
4	Mangrove Blue Flycatcher	<i>Cyornis rufigastra</i>
5	Pied Fantail	<i>Hipidura javanica</i>
6	Mangrove Whistler	<i>Pachycephala grissola</i>
7	Little Egret	<i>Egretta grazetta</i>
8	Lasser Sand Plover	<i>Charadrius mongolus</i>
9	Plumed Egret	<i>Egretta intermedia</i>
10	Pink-Necked Green Pigeon	<i>Treron vernans</i>
11	Long-Tailed Parakeet	<i>Tanygnathus lucionensis</i>
12	Lasser Fish Eagle	<i>Ichthyophaga humilis</i>
13	Thick Billed Spiderhunter	<i>Arachnothera crassirostris</i>
14	Olive Winged Bulbul	<i>Pycnonotus plumosus</i>
15	Chesnut Breasted Malkoha	<i>Phaenicophaeus curvirostris</i>
16	Banded Boardbill	<i>Eurylaimus javanicus</i>
17	Blue Throated Bee Eater	<i>Meriops viridis</i>

18	Buff Rumped Woodpecker	<i>Meiglyptes tristis</i>
19	Buff Necked Woodpecker	<i>Meiglyptes tukki</i>
20	Little Heron	<i>Butorides striatus</i>
21	Blue Headed Pitta*	<i>Pitta baundii</i>
22	Pacific Swallow	<i>Hirundo tahitica</i>
23	Finschs Bulbul	<i>Criniger finschii</i>
24	Rufous Tailed Tailorbird	<i>Orthotomus sericeus</i>

* endemic to Borneo

General distribution of Proboscis Monkey in Sabah

Proboscis monkeys are dependent primarily on mangrove forest for food and cover (Sha *et al.* 2011). Other habitat such as riverine and swamp forest are also use extensively by proboscis monkey. Generally, proboscis monkeys are found most abundantly in riverine and mangrove forest. Due to easy access by boat, densities of proboscis monkeys are much higher in riverine forest than in mangrove forest. Although densities can be even higher in swamp forest, these habitats represent only small proportion of proboscis monkey habitats in Sabah compared to riverine and mangrove forests.

It is estimated that 6,000 proboscis monkeys are still found in Sabah (Figure 2), along most coastal river systems where suitable habitats still exist. According to Sha *et al.* (2011), the populations of proboscis monkeys were found in the Klias Peninsula (818 individuals in 75 groups), Tangkarason & Paitan (90 individuals in 8 groups), Sugut River (787 individuals in 58 groups), Beluran (317 in 30 groups), Sandakan (326 individuals in 28 groups), Kinabatangan River (1,454 individuals in 101 groups), Segama River (1,040 individuals in 83 groups), Lahad Datu (188 individuals in 16 groups) Semporna Peninsula (169 individuals in 16 groups) and Tawau Bay (718 individuals in 63 groups). Proboscis monkeys are found most abundantly at distances less than 50 kilometers from the coast.

The extant Sabah population is highly fragmented, with only five major centres of continous distribution and numerous small isolated populations. The Klias Peninsula population is the only major centre of proboscis monkey distribution on the west coast and is separated from the east coast populations by the highland areas of the Crocker Range.

On the east coast, populations in Tangkarason & Paitan, Sugut and Beluran appeared connected by coastal mangroves from the west of Pitas up to the Samawang area in Sandakan. Populations in Sandakan Bay and Kinabatangan RAMSAR site are likely continous along narrow coastal mangrove strips. The population along the Segama River is probably completely isolated. Tawau Bay has a continous population along the extensive mangrove habitat, which is possibly connected with the major population of the delta of the Sesayap, Sembakung and Sebuk rivers in Kalimantan.

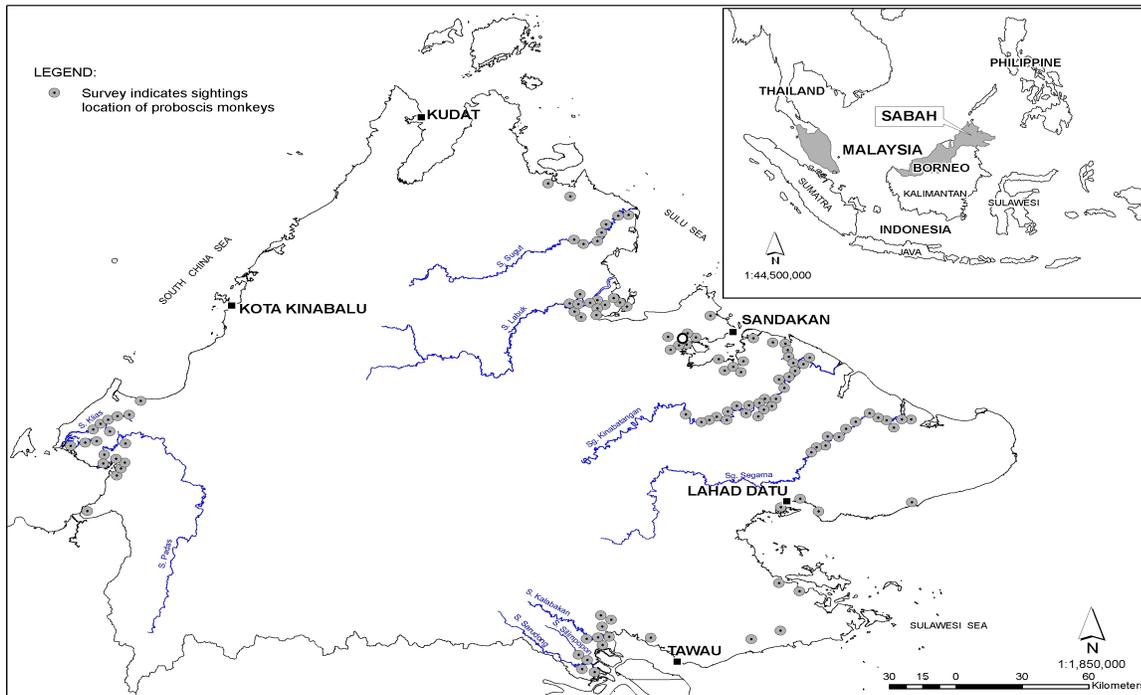


Figure 2: Distribution of proboscis monkeys in Sabah (Sha *et al.*, 2011)

Proboscis Monkeys in mangroves area of Sugut FR

Previous studies indicated that the population of proboscis monkeys within Sugut River (located adjacent to Sugut FR) is approximately 787 individuals in 58 groups (Sha *et al.*, 2011). During the recent survey that was carried out in September 2014, the Sugut Parai river which is located within the Sugut FR has a total of approximately 25 individuals proboscis monkey, with 2 harems and one all males group.

References

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