

HCV 1.3 Endemism

The HCVF Toolkit for Malaysia (2009) defines HCV 1.3 as: any forest containing endemic species as identified by FRIM, MNS, SFC, Forestry Departments and published literature, particularly in high concentrations or highly restricted distribution, can be considered HCV 1.3.

Findings

Flora

Out of 584 species recorded in TSFR, 107 were found to be endemic to Borneo, with 10 species further endemic to Sabah only (Table 6). Furthermore, out of the 107 species found endemic to Borneo, 5 are critically endangered, 3 endangered and 2 considered vulnerable according to the IUCN Red List. It is interesting to note that out of the 11 species of critically endangered, endangered and vulnerable species identified, only 2 species (*Durio acutifolius* and *Gonystylus nervosus*) are given protection status under the Sabah Forestry Enactment, 1968 (highlighted in green, Table 6).

This area is especially significant due to the presence of breeding populations of *Shorea kudatensis* as a coastal lowland, non-swamp endemic to northern Sabah, which is also critically endangered according to the IUCN Red List of Threatened Species (2015).

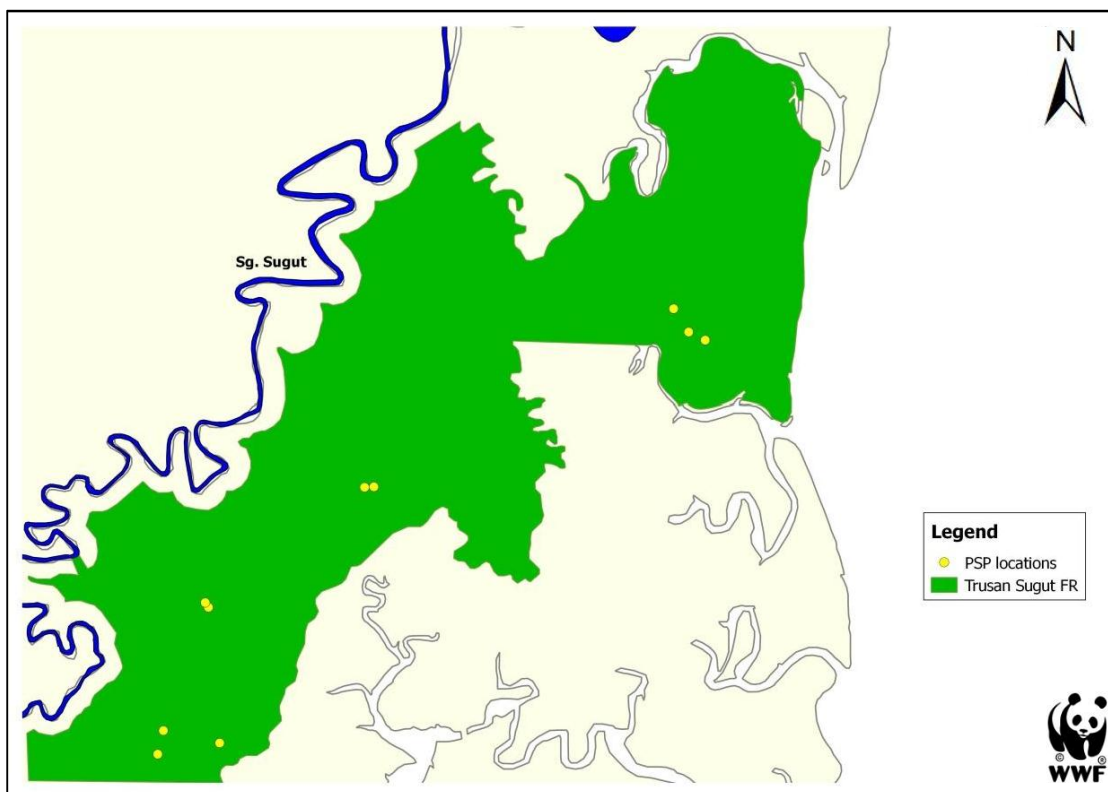


Figure 15 Locations of Permanent Sample Plots (PSPs) where HCV 1.3 plant species are found

Table 6 Endemic plants species recorded in Trusan Sugut Forest Reserve. IUCN status: NE = Not evaluated; CR = Critically Endangered; EN= Endangered; VU = Vulnerable; LC = Least Concern. Highlighted green are critically endangered, vulnerable and endangered plant species which are protected by Sabah Forestry Department whereas plant species highlighted in orange are not protected.

Family	Species	Endemism	IUCN	SFD Prohibited	SWCE
Achariaceae	<i>Hydnocarpus borneensis</i>	Borneo	NE	No	No
Achariaceae	<i>Ryparosa acuminata</i>	Borneo	NE	No	No
Achariaceae	<i>Ryparosa hirsuta</i>	Borneo	NE	No	No
Anacardiaceae	<i>Gluta oba</i>	Borneo	NE	No	No
Anacardiaceae	<i>Melanochyla castaneifolia</i>	Borneo	NE	No	No
Anacardiaceae	<i>Semecarpus lineatus</i>	Sabah	NE	No	No
Annonaceae	<i>Fissistigma elmeri</i>	Borneo	NE	No	No
Annonaceae	<i>Frieodielsia grandifolia</i>	Borneo	NE	No	No
Annonaceae	<i>Goniothalamus woodii</i>	Borneo	NE	No	No
Annonaceae	<i>Polyalthia dolichopoda</i>	Borneo	NE	No	No
Annonaceae	<i>Xylopia mucronata</i>	Borneo	NE	No	No
Apocynaceae	<i>Willughbeia lanceolata</i>	Borneo	NE	No	No
Araceae	<i>Homalomena ovata</i>	Borneo	NE	No	No
Araceae	<i>Piptospatha elongata</i>	Borneo	NE	No	No
Araceae	<i>Pothos atropurpurascens</i>	Borneo	NE	No	No
Araceae	<i>Pothos beccarianus</i>	Borneo	NE	No	No
Araceae	<i>Scindapsus borneensis</i> (= <i>S.coriaceus</i>)	Borneo	NE	No	No

Arecaceae	<i>Calamus zonatus</i>	Borneo	NE	No	No
Arecaceae	<i>Korthalsia concolor</i>	Borneo	NE	No	No
Arecaceae	<i>Licuala campestris</i>	Borneo	NE	No	No
Arecaceae	<i>Pinanga salicifolia</i>	Borneo	NE	No	No
Arecaceae	<i>Calamus acuminatus</i>	Sabah	NE	No	No
Burseraceae	<i>Canarium latistipulatum</i>	Borneo	NE	No	No
Capparaceae	<i>Capparis buwaldae</i>	Borneo	NE	No	No
Celastraceae	<i>Microtropis kinabaluensis</i>	Borneo	NE	No	No
Convolvulaceae	<i>Erycibe borneensis</i>	Borneo	NE	No	No
Convolvulaceae	<i>Erycibe impressa</i>	Sabah	NE	No	No
Cyperaceae	<i>Mapania mashalina</i>	Borneo	NE	No	No
Cyperaceae	<i>Mapania richardsii</i>	Borneo	NE	No	No
Cyperaceae	<i>Paramapania radians</i>	Borneo	NE	No	No
Dipterocarpaceae	<i>Anisoptera reticulata</i>	Borneo	CR	No	No
Dipterocarpaceae	<i>Dipterocarpus confertus</i>	Borneo	NE	No	No
Dipterocarpaceae	<i>Shorea acuminatissima</i>	Borneo	CR	No	No
Dipterocarpaceae	<i>Shorea agamii</i>	Borneo	EN	No	No
Dipterocarpaceae	<i>Shorea andulensis</i>	Borneo	EN	No	No
Dipterocarpaceae	<i>Shorea argentifolia</i>	Borneo	EN	No	No
Dipterocarpaceae	<i>Shorea macroptera</i>	Borneo	NE	No	No
Dipterocarpaceae	<i>Shorea rubra</i>	Borneo	NE	No	No
Dipterocarpaceae	<i>Shorea smithiana</i>	Borneo	CR	No	No
Dipterocarpaceae	<i>Shorea superba</i>	Borneo	CR	No	No
Dipterocarpaceae	<i>Vatica oblongifolia</i>	Borneo	NE	No	No
Dipterocarpaceae	<i>Shorea kudatensis</i>	Sabah	CR	No	No
Dipterocarpaceae	<i>Shorea symingtonii</i>	Sabah	CR	No	No
Ebenaceae	<i>Diospyros euphlebia</i>	Borneo	NE	No	No
Ebenaceae	<i>Diospyros ferruginescens</i>	Borneo	NE	No	No
Elaeocarpaceae	<i>Elaeocarpus clementis</i>	Borneo	NE	No	No
Elaeocarpaceae	<i>Elaeocarpus euneurus</i>	Borneo	NE	No	No
Elaeocarpaceae	<i>Elaeocarpus murudensis</i>	Borneo	NE	No	No
Fabaceae	<i>Archidendron cockburnii</i>	Borneo	NE	No	No
Fabaceae	<i>Bauhinia havilandii</i>	Borneo	NE	No	No
Fabaceae	<i>Crudia reticulata</i>	Borneo	NE	No	No
Fabaceae	<i>Milletia niewenhuishii</i>	Borneo	NE	No	No
Fabaceae	<i>Peltophorum racemosum</i>	Borneo	NE	No	No
Fagaceae	<i>Castanopsis clemensii</i>	Borneo	NE	No	No
Gentianaceae	<i>Fagraea belukar</i>	Borneo	NE	No	No
Gentianaceae	<i>Fagraea resinosa</i>	Borneo	NE	No	No
Gesneriaceae	<i>Aeschynanthus tricolor</i>	Borneo	NE	No	No
Gesneriaceae	<i>Henckelia crenata</i>	Sabah	NE	No	No
Gnetaceae	<i>Gnetum diminutum</i>	Borneo	NT	No	No
Lauraceae	<i>Litsea sessilis</i>	Borneo	NE	No	No
Lecythidaceae	<i>Barringtonia gigantostachya</i> var. <i>megistophylla</i>	Borneo	NE	No	No
Lecythidaceae	<i>Barringtonia lanceolata</i>	Borneo	NE	No	No
Malvaceae	<i>Durio acutifolius</i>	Borneo	VU	Yes	No
Malvaceae	<i>Durio lanceolatus</i>	Borneo	NE	Yes	No
Malvaceae	<i>Microcos pachyphylla</i>	Borneo	NE	No	No

Malvaceae	<i>Pentace laxiflora</i>	Borneo	NE	No	No
Malvaceae	<i>Sterculia stipulata</i>	Borneo	NE	No	No
Melastomataceae	<i>Memecylon argentum</i>	Borneo	NE	No	No
Melastomataceae	<i>Memecylon scolopacinum</i>	Borneo	NE	No	No
Myristicaceae	<i>Horsfieldia endertii</i>	Borneo	NE	No	No
Myristicaceae	<i>Horsfieldia laticostata</i>	Borneo	NE	No	No
Myristicaceae	<i>Knema elmeri</i>	Borneo	LC	No	No
Myristicaceae	<i>Knema oblongata</i>	Borneo	NE	No	No
Myrtaceae	<i>Syzygium creaghii</i>	Borneo	NE	No	No
Oleaceae	<i>Chionanthus pluriflorus</i>	Borneo	NE	No	No
Orchidaceae	<i>Dendrobium pinifolium</i>	Borneo	NE	No	Yes
Pandanaceae	<i>Benstonia gibbsiana</i>	Borneo	NE	No	No
Pandanaceae	<i>Benstonia pumila</i>	Borneo	NE	No	No
Pandanaceae	<i>Pandanus borneensis</i>	Borneo	NE	No	No
Pandanaceae	<i>Pandanus discostigma</i>	Borneo	NE	No	No
Pandanaceae	<i>Pandanus fusinus</i>	Borneo	NE	No	No
Pandanaceae	<i>Pandanus pachyphyllus</i>	Borneo	NE	No	No
Pentaphylacaceae	<i>Adinandra collina</i>	Borneo	NE	No	No
Phyllanthaceae	<i>Aporosa elmeri</i>	Borneo	NE	No	No
Phyllanthaceae	<i>Baccaurea trigonocarpa</i>	Borneo	NE	Yes	No
Poaceae	<i>Dinochloa scabrada</i>	Borneo	NE	No	No
Polygalaceae	<i>Xanthophyllum heterophyllum</i>	Borneo	NE	No	No
Primulaceae	<i>Ardisia megistosepala</i>	Borneo	NE	No	No
Primulaceae	<i>Ardisia oocarpa</i>	Sabah	NE	No	No
Putranjivaceae	<i>Drypetes caesia</i>	Borneo	NE	No	No
Putranjivaceae	<i>Drypetes prunifera</i>	Sabah	NE	No	No
Rhamnaceae	<i>Ziziphus borneensis</i>	Borneo	NE	No	No
Rubiaceae	<i>Ixora brevicaudata</i>	Borneo	NE	No	No
Rubiaceae	<i>Ixora capillaris</i>	Borneo	NE	No	No
Rubiaceae	<i>Ixora stenophylla</i>	Borneo	NE	No	No
Rubiaceae	<i>Lasianthus borneensis</i>	Borneo	NE	No	No
Rubiaceae	<i>Pleiocarpidia sandahanica</i>	Borneo	NE	No	No
Rubiaceae	<i>Tarenna bartlettii</i>	Borneo	NE	No	No
Rubiaceae	<i>Urophyllum nigricans</i>	Borneo	NE	No	No
Rubiaceae	<i>Timonius ophioliticus</i>	Sabah	LC	No	No
Rutaceae	<i>Maclurodendron pubescens</i>	Sabah	VU	No	No
Sapindaceae	<i>Nephelium deadaleum</i>	Borneo	NE	Yes	No
Thymelaeaceae	<i>Gonystylus affinis</i>	Borneo	NE	Yes	No
Thymelaeaceae	<i>Gonystylus nervosus</i>	Borneo	VU	Yes	No
Vitaceae	<i>Cissus angustita</i>	Borneo	NE	No	No
Zingiberaceae	<i>Alpinia havilandii</i>	Borneo	NE	No	Yes
Zingiberaceae	<i>Etlingera fimbriobracteata</i>	Borneo	NE	No	Yes

Fauna – Mammals

There were five mammals endemic to Borneo detected in Trusan Sugut FR. They are: orang-utan, proboscis monkey, bay cat, thick-spined porcupine and Bornean yellow muntjac (Figure 16).

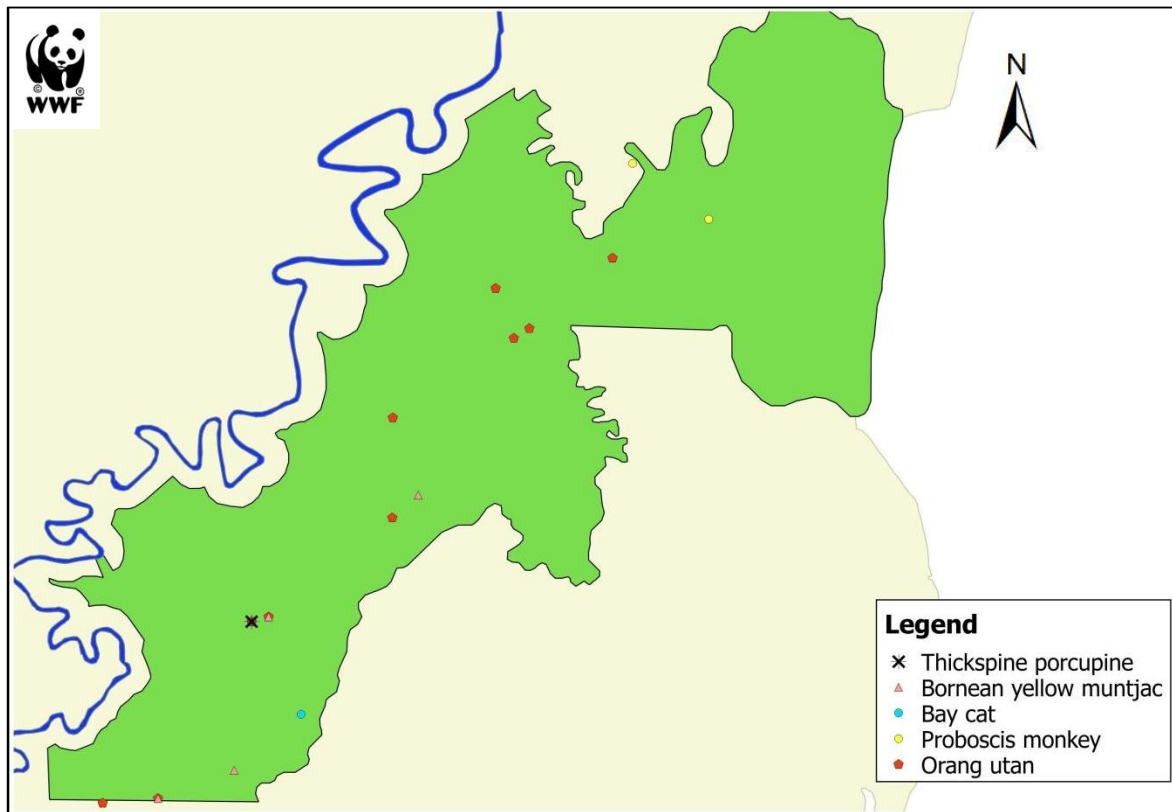


Figure 16 Locations of endemic mammals detected in Trusan Sugut Forest Reserve

Fauna – Birds

7 species of birds endemic to Borneo/Sabah were detected. Out of these, one (Blue-headed Pitta) is considered vulnerable under the IUCN Red List and also protected under the Sabah Wildlife Conservation Enactment (Table 7). There are two near-threatened endemic species – Black-throated Wren-babbler and Black-Headed Pitta which are not accorded any protection status.

Table 7 Endemic bird species recorded in Trusan Sugut Forest Reserve over a time period of six months.

Common Name	Species Name	Endemism	IUCN	SWCE (Schedule II)
Black-throated Wren-Babbler	<i>Turdinus atrigularis</i>	Borneo	NT	
Bornean Brown Barbet	<i>Caloramphus fuliginosus</i>	Borneo	LC	
Yellow-rumped Flowerpecker	<i>Prionochilus xanthopygius</i>	Borneo	LC	
Black-headed Pitta	<i>Erythropitta ussheri</i>	Sabah	NT	
Blue-headed Pitta	<i>Pitta baudi</i>	Borneo	VU	X
White-crowned Shama	<i>Copsychus stricklandii</i>	Borneo	NE	
Dusky Munia	<i>Lonchura fuscans</i>	Borneo	LC	

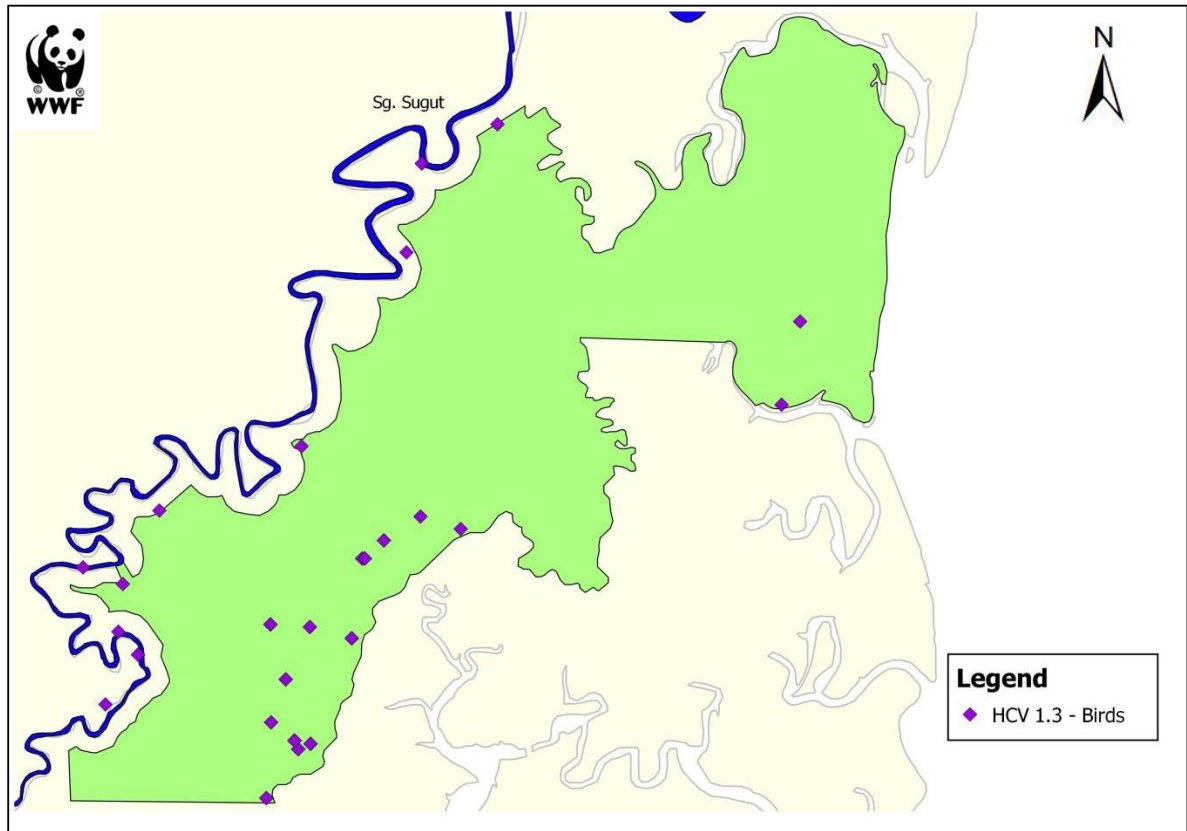


Figure 17 Locations of endemic bird species located within Trusan Sugut Forest Reserve

Management recommendations for flora

Similar to HCV 1.2

Management recommendations for fauna

Similar to HCV 1.2

Monitoring recommendations for flora

Similar to HCV 1.2

Monitoring recommendations for fauna

Similar to HCV 1.2