

jentar estate

PLANT-A-

TREE



Plantation

POCKET GUIDE



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Funded by



YAYASAN

Supported by



Foreword by EDCMD

In our effort to deliver a sustainable future for the younger generation who will one day inherit this beloved nation, Sime Darby Plantation, as a responsible company, has gone above and beyond to invest in the future. Under that premise, in 2013, we embarked on a Plant-A-Tree project in Jentar Estate, Pahang.

This pocket guide book showcases the milestones achieved under this project over the past five years. It is an easy-to-understand pictorial guide to all the endangered, rare and threatened (ERT) species planted on 136 hectares of land in Jentar Estate. With this guide book, one will be able to find the featured trees in their planted locations, identify their species through the photos and learn their local as well as their scientific names.

I would like to take this opportunity to extend my heartfelt congratulations and gratitude to every individual directly involved in the successful completion of this project – Yayasan Sime Darby (YSD) for providing the funding; Sime Darby Plantation's Group Sustainability & Quality Management, Group Research & Development, Plantation Upstream Malaysia and all individuals as well as organisations involved in making this ambitious project a reality.

This book will not become a reality without the kind assistance of experts from the Forest Research Institute Malaysia (FRIM) who played an important role in identifying and verifying the species of the featured trees. I am confident that visitors will find this book useful when visiting the planting sites.

I hope this publication will become part of an important record and will go down the company's history as one of our dedicated efforts at conserving the rainforest heritage for the future generations.

Thank you.

Tan Sri Dato' Seri Mohd Bakke Salleh
Executive Deputy Chairman & Managing Director

Introduction



The Sime Darby Plant-A-Tree Programme is an initiative driven by Sime Darby Plantation (SDP) since 2008, in support of Sime Darby Group's commitment to conserving endangered, rare and threatened (ERT) species of rainforest trees. With an aspiration to plant 1 million indigenous forest trees within designated and suitable areas in SDP's estates, the Plant-A-Tree Programme was expanded to Jentar Estate in 2013. This project received a financial sponsorship amounting to RM4.1 million from Yayasan Sime Darby (YSD) for five years and 10 months from March 2013 until December 2018. The project is spearheaded by SDP's Group Sustainability & Quality Management with strong support from Plantation Upstream Malaysia and Group Research and Development.

More than just a tree planting project, the Jentar Plant-A-Tree project was mooted with the aim of enhancing the natural habitats within the estate and increasing its value in the long run. The project is also designed in such a way to increase the biodiversity value in our plantation through the utilisation of areas that are not suitable for oil palm planting.

Located in the state of Pahang, Jentar Estate has close to 160 ha of land area that is not suitable for oil palm planting. The unplanted areas include slopes with more than 25° gradient (> 25°), ravine, river buffer zone and area bordering the Krau Wildlife Sanctuary.

The whole area is made up of three hills namely Bukit Angin (72 ha), Bukit Kiab (65 ha) and Bukit Pasir (23 ha). These three hills were chosen because of their high rehabilitation value and the presence of endemic tree species due to their close proximity to the Krau Wildlife Forest Reserves and the availability of water sources which contribute to the creation of new forest corridors and wildlife habitats.

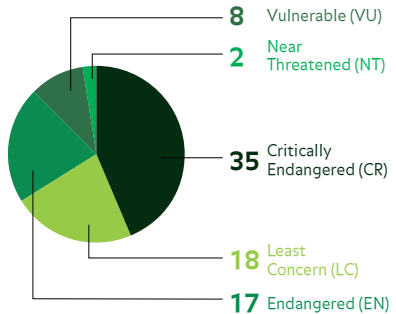
The newly planted forests will create diverse and interconnected habitats for wildlife which will eventually increase the biodiversity value of the land. The initial target was to plant 160,000 trees on the 160 ha. However, the planting team subsequently found that 24 ha

Introduction

of the land were already populated with original forest trees, leaving them around 136 ha to work on. Currently, a total of 136,036 trees made up of 126 species, 60 of which are threatened, have successfully been planted and maintained on the 136 ha area in the last five years. Out of the total number of threatened species, 35 are classified as Critically Endangered (CR), 17 categorised as Endangered (EN), and eight (8) are listed as Vulnerable (VU). We also planted two (2) Near Threatened (NT), one Rare and 18 species categorised as Least Concern (LC).

IUCN Red List of Threatened Species was used to assess the conservation status of the species. IUCN is one of the most well-known objective assessment systems to classify the status of plants, animals, and other organisms threatened with extinction. Assessing the conservation status of species is important in order to highlight the species that are threatened with extinction, thereby promoting their conservation. The information on the species' conservation status and distribution provides the foundation for making informed decisions on biodiversity conservation at local and global levels.

Besides addressing the indirect causes of species loss and genetic erosion, we must also actively focus on conserving and managing species and genetic diversity. Where a particular species and a variety of plants and animals are threatened with extinction, a targeted conservation measure must be put in place to reduce this threat and subsequently reverse the status of these species. We hope, the Jentar Plant-A-Tree project will be able to contribute significantly towards conserving our valuable biodiversity and ecosystems.



We planted
60 SPECIES
of threatened tropical forest trees!

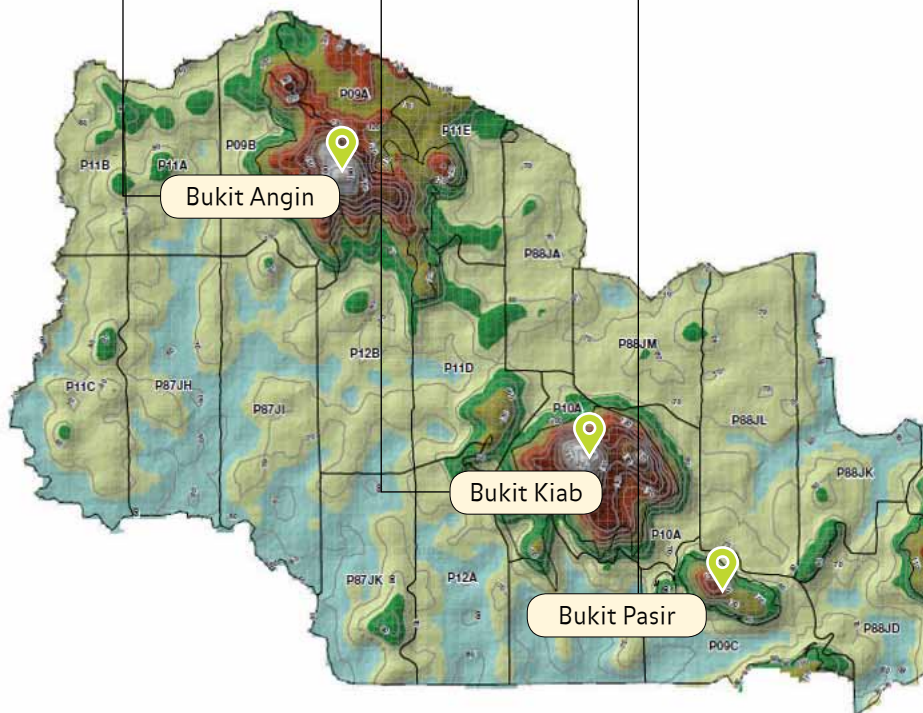


We have planted a total of 136,036 trees comprising 60 species of threatened tropical forest trees on three hills in our Jentar Estate.

In the following pages, you will be able to learn about the tree species that we have planted. These trees are grouped under Critically Endangered, Endangered, Vulnerable, Near Threatened and Least Concern categories, as per the International Union for Conservation of Nature (IUCN) list.

Turn over the pages to find out more.

About Jentar Plant-A-Tree



Field	Ha	Total Planted	CR	EN	LC	NT	VU	Not evaluated
Bukit Angin	59.0	70,358	11	3	12	0	3	27
Bukit Kiab	71.7	47,844	8	4	1	1	2	4
Bukit Pasir	22.71	17,834	16	10	5	1	3	15
Total	153.41	136,036	35	17	18	2	8	46

As at October 2018



Location

Pahang Darul Makmur

(GPS Coordinate Jentar Estate
N 3.78537 E 102.324)



Planting Area

136 ha



Tree Density

1,000 trees/ha



Species No.

126 species



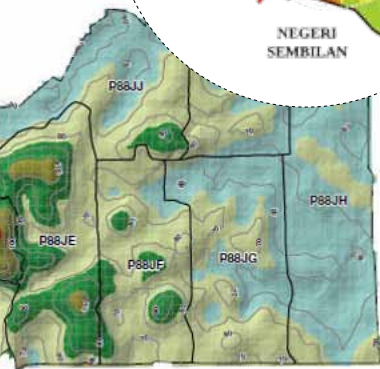
Number of Trees

136,036 trees



Period

5 years, 10 months



About Jentar Plant-A-Tree

CRITICALLY ENDANGERED (CR)

No.	Species	Local Name	Planted (No.)
1	<i>Dipterocarpus costulatus</i>	Keruing Kipas	182
2	<i>Hopea mengarawan</i>	Merawan Penak	395
3	<i>Shorea lepidota</i>	Meranti Langgong	99
4	<i>Vatica lobata</i>	Resak Paya	779
5	<i>Anisoptera scaphula</i>	Mersawa Gajah	906
6	<i>Shorea superba</i>	Selangan Batu Daun Halus	982
7	<i>Shorea johorensis</i>	Meranti Pepijat	825
8	<i>Hopea ferruginea</i>	Merawan Mata Kucing Merah	445
9	<i>Dipterocarpus kerii</i>	Keruing Gondol	481
10	<i>Shorea sumatrana</i>	Balau Singkawang Air	216
11	<i>Dipterocarpus baudii</i>	Keruing Bulu	1519
12	<i>Shorea hemsleyana</i>	Cengal Pasir Daun Besar	55
13	<i>Hopea pubescens</i>	Merawan Bunga	2951
14	<i>Shorea assamica</i>	Meranti Pipit	2000
15	<i>Hopea beccariana</i>	Merawan Batu	2000
16	<i>Shorea elliptica</i>	Balau Tembaga	2000
17	<i>Shorea macrantha</i>	Meranti Kepong Hantu	2000
18	<i>Shorea kunstleri</i>	Balau Laut Merah	2000
19	<i>Dipterocarpus grandiflorus</i>	Keruing Belimbing	2000
20	<i>Shorea longisperma</i>	Damar Hitam Bulu	2000
21	<i>Shorea materialis</i>	Balau Pasir	2000
22	<i>Parashorea stellata</i>	Gerutu-Gerutu	2000
23	<i>Vatica flavida</i>	Resak Padi	3
24	<i>Hopea subalata</i>	Merawan Kanching	15
25	<i>Vatica yeechongii</i>	Resak Daun Panjang	3
26	<i>Shorea peltata</i>	Meranti Telepok	6
27	<i>Hopea auriculata</i>	Merawan	8
28	<i>Dipterocarpus sarawakensis</i>	Keruing Layang	9
29	<i>Shorea inappendiculata</i>	Damar Angin	4
30	<i>Hopea polyalthioides</i>	Giam Rambai	5
31	<i>Shorea dealbata</i>	Meranti Bumbung	6
32	<i>Hopea glaucescens</i>	Merawan Kelabu	19
33	<i>Hopea sulcata</i>	Merawan Meranti	13
34	<i>Shorea acuminata</i>	Meranti Rambai Daun	3500
35	<i>Shorea macroptera</i>	Meranti Melantai	2000

ENDANGERED (EN)

No.	Species	Local Name	Planted (No.)
1	<i>Dryobalanops lanceolata</i>	Kapur Paji	490
2	<i>Shorea roxburghii</i>	Meranti Temak Nipis	5454
3	<i>Shorea leprosula</i>	Meranti Tembaga	9908
4	<i>Dipterocarpus crinitus</i>	Keruing Mempelas	500
5	<i>Shorea bracteolata</i>	Meranti Pa'ang	1600
6	<i>Shorea pauciflora</i>	Meranti Nemesu	1850
7	<i>Shorea ovata</i>	Meranti Sarang Punai Bukit	2000
8	<i>Shorea balanocarpoides</i>	Damar Hitam Katup	2000
9	<i>Dipterocarpus obtusifolius</i> <i>var subnudus</i>	Keruing Beludu	6
10	<i>Dryobalanops oblongifolia</i>	Keladan	5656
11	<i>Shorea ciliata</i>	Balau Gunung	8
12	<i>Vatica stapfiana</i>	Resak Mempening	6
13	<i>Hopea pierrei</i>	Merawan Palung	8
14	<i>Shorea ovalis</i>	Meranti Kepong	1884
15	<i>Vatica pauciflora</i>	Resak Laru	13
16	<i>Shorea parvifolia</i>	Meranti Sarang Punai	8100
17	<i>Vatica abdulrahmaniana</i>	-	4

VULNERABLE (VU)

No.	Species	Local Name	Planted (No.)
1	<i>Khaya ivorensis</i>	African Mahogany	465
2	<i>Khaya senegalensis</i>	African Mahogany	30
3	<i>Neobalanocarpus heimii</i>	Cengal	1816
4	<i>Hopea odorata</i>	Merawan Siput Jantan	4500
5	<i>Scaphium longiflorum</i>	Kembang Semangkuk Bulat	2000
6	<i>Hopea myrtifolia</i>	Mata Kucing Beludu	6
7	<i>Shorea macrophylla</i>	Engkabang	206
8	<i>Aquilaria malaccensis</i>	Karas	1,500

About Jentar Plant-A-Tree

NEAR THREATENED (NT), LEAST CONCERN (LC)

No.	Species	Local Name	IUCN Status	Planted (No.)
1	<i>Dipterocarpus verrucosus</i>	Keruing Merah	NT	2000
2	<i>Shorea scrobiculata</i>	Balau Singkawang Darat	NT	2000
3	<i>Aglaia korthalsii</i>	Kiat	LC	6
4	<i>Shorea laevis</i>	Balau Kumus	LC	13
5	<i>Palaquim maingayi</i>	Nyatoh Tembaga	LC	1433
6	<i>Couroupita guianensis</i>	Cannonball Tree	LC	33
7	<i>Gnetum gnemon</i>	Melinjau	LC	91
8	<i>Aglaia cucullata</i>	Bekak	LC	297
9	<i>Koompassia excelsa</i>	Tualang	LC	99
10	<i>Archidendron elliptica</i>	Kerdas	LC	869
11	<i>Dipterocarpus oblongifolius</i>	Keruing Neram	LC	2000
12	<i>Sterculia parviflora</i>	Kelumpang Burung	LC	1500
13	<i>Shorea multiflora</i>	Damar Hitam Pipit	LC	2000
14	<i>Irvingia malayana</i>	Pauh Kijang	LC	2000
15	<i>Payena maingayi</i>	Nyatoh Durian	LC	500
16	<i>Cratoxylum arborescens</i>	Geronggang	LC	120
17	<i>Vatica rassak</i>	Resak Irian	LC	10
18	<i>Shorea curtisii</i>	Meranti Bukit	LC	2000
19	<i>Cassia fistula</i>	Rajah Kayu	LC	19
20	<i>Sandoricum koetjape</i>	Sentul	LC	342

The page features a light orange background with decorative leaf patterns in the corners. The top-right corner shows a large, detailed leaf with a fine vein structure. The bottom-left corner shows a smaller, similar leaf. The bottom-right corner shows a leaf with a more prominent vein structure. The central text is framed by two horizontal red lines, one above and one below the title.

Critically Endangered (CR) Species

A **Critically Endangered** (CR) species is one that has been categorised by the International Union for Conservation of Nature (IUCN) as facing an extremely high risk of extinction in the wild.

Dipterocarpus costulatus

(Dipterocarpaceae)



Keruing Kipas
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The leaves are wavy at
the margins and ridged in
between the veins.



January 2014



GPS (DD):
3.611180,
102.262699

Hopea mengarawan

(Dipterocarpaceae)



Merawan Penak
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The leaves are leathery and
have many veins.



January 2014



GPS (DD):
3.611827,
102.262872

Shorea lepidota

(Dipterocarpaceae)



Meranti Langgong

(Local Name)



Bukit Kiab



Critically Endangered
(IUCN 2001)



- The bark is deeply fissured;
- The leaves are thin, glabrescent and oblong.



January 2015



GPS (DD):
3.591029,
102.279033

Vatica lobata

(Dipterocarpaceae)



Resak Paya
(Local Name)



Bukit Angin



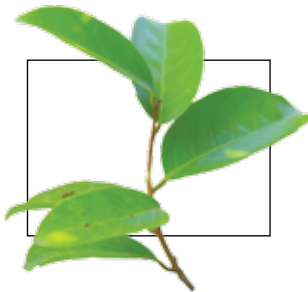
Critically Endangered
(IUCN 2001)



The fruits are covered with
thick, woody but smooth
lobes.



January 2014



GPS (DD):
3.611538,
102.261825

Anisoptera scaphula

(Dipterocarpaceae)



Mersawa Gajah
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



It has white flowers and
the leaves are papery
(chartaceous).



January 2014



GPS (DD):
3.611302,
102.262769

Shorea superba

(Dipterocarpaceae)



Selangan Batu Daun Halus
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The twigs, buds, stipules, leaf stalks, nerves and flowering twigs are densely covered with short pink-brown hairs.



May 2014



GPS (DD):
3.612667,
102.262836

Shorea johorensis

(Dipterocarpaceae)



Meranti Pepijat
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



- It produces globular dammar on its bark and twigs;
- The twigs and leaf stalks are densely covered with fine, grey or brown hairs.



January 2014



GPS (DD):
3.611180,
102.262699

Hopea ferruginea

(Dipterocarpaceae)



Merawan Mata Kucing Merah
(Local Name)



Bukit Angin



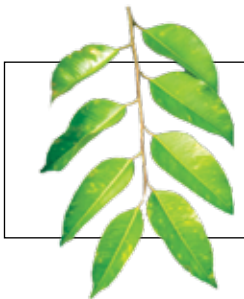
Critically Endangered
(IUCN 2001)



- The tree produces globular dammar on its bark;
- The twigs and leaf stalks are densely covered with fine, grey or brown hairs.



May 2014



GPS (DD):
3.613398,
102.261812

Dipterocarpus kerrii

(Dipterocarpaceae)



Keruing Gondol
(Local Name)



Bukit Kiab



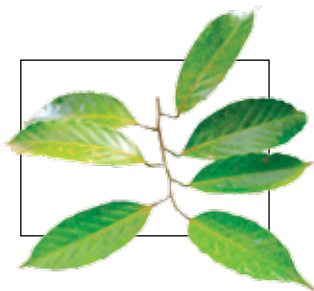
Critically Endangered
(IUCN 2001)



- The leaves are coriaceous with leathery texture;
- Also known for its oleo-resin.



December 2014



GPS (DD):
3.596209,
102.276795

Shorea sumatrana

(Dipterocarpaceae)



Balau Singkawang Air
(Local Name)



Bukit Kiab



Critically Endangered
(IUCN 2001)



The sepals of the fruits
develop into woody lobes.



December 2014



GPS (DD):
3.595821,
102.277524

Dipterocarpus baudii

(Dipterocarpaceae)



Keruing Bulu

(Local Name)



Bukit Kiab



Critically Endangered

(IUCN 2001)



Leaf buds, outside stipules,
twigs, petioles and
inflorescences are covered
with dense, persistently
tufted rufous tomentum.



November 2015



GPS (DD):

3.593787,

102.278696

Shorea hemsleyana

(Dipterocarpaceae)



Cengal Pasir Daun Besar
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The twigs, buds, stipules, petioles and nerves are covered with yellow-brown scabrid tomentum.



October 2014



GPS (DD):
3.603951,
102.252240

Hopea pubescens

(Dipterocarpaceae)



Merawan Bunga
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



A tree with fissured bark
and pubescent twigs.



February 2015



GPS (DD):
3.609442,
102.268990

Shorea assamica

(Dipterocarpaceae)



Meranti Pipit
(Local Name)



Bukit Kiab



Critically Endangered
(IUCN 2001)



- The inner bark is pink;
- The petioles, midrib above the leaves and under surface are covered with pale brownish yellow hairs.



April 2015



GPS (DD):
3.591260,
102.278322

Hopea beccariana (Dipterocarpaceae)



Merawan Batu
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The tree bark is hard
and fissured.



October 2015



GPS (DD):
3.613620,
102.2611760

Shorea elliptica

(Dipterocarpaceae)



Balau Tembaga
(Local Name)



Bukit Kiab



Critically Endangered
(IUCN 2001)



- The crown is yellowish-brown;
- The elliptic leaves are glaucous and harshly hairy along the nerves of the leaves' under surface.



November 2015



GPS (DD):
3.593589,
102.279362

Shorea macrantha

(Dipterocarpaceae)



Meranti Kepong Hantu

(Local Name)



Bukit Pasir



Critically Endangered

(IUCN 2001)



- The branches are droopy, leaves unequal-sided and tomentose;
- Fruits are large and wingless.



December 2015



GPS (DD):

3.585689,

102.286436

Shorea kunstleri

(Dipterocarpaceae)



Balau Laut Merah
(Local Name)



Bukit Kiab



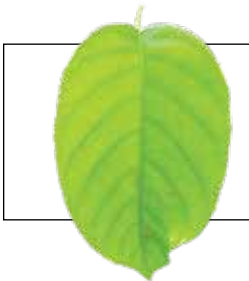
Critically Endangered
(IUCN 2001)



- It has a closed fissured bark;
- Dammar is yellow-crusteD.



December 2015



GPS (DD):
3.591377,
102.281502

Dipterocarpus grandiflorus

(Dipterocarpaceae)



Keruing Belimbing

(Local Name)



Bukit Pasir



Critically Endangered

(IUCN 2001)



- The twigs are thick with pale conical buds;
- The fruit is two-winged with a large nut.



January 2017



GPS (DD):

3.585648,

102.287549

Shorea longisperma

(Dipterocarpaceae)



Damar Hitam Bulu
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



The fallen leaves often
curled up, reddish on the
upper surface and pale hairy
on the under surface.



January 2017



GPS (DD):
3.585693,
102.287554

Shorea materialis

(Dipterocarpaceae)



Balau Pasir
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



The leaves are broadly ovate,
glaucous and leathery.



February 2017



GPS (DD):
3.585693,
102.287554

Parashorea stellata

(Dipterocarpaceae)



Gerutu-Gerutu
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



- The trunk has large star-shaped lenticels around the base and buttress;
- Veins on leaves are acutely angled.



February 2017



GPS (DD):
3.586215,
102.286541

Vatica flavida

(Dipterocarpaceae)



Resak Padi
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



The leaves are elliptic-
obovate with veins. Hairy on
the leaves' under surface.



December 2015



GPS (DD):
3.586215,
102.286541

Hopea subalata

(Dipterocarpaceae)



Merawan Kanching
(Local Name)



Bukit Pasir



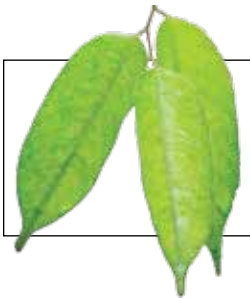
Critically Endangered
(IUCN 2001)



- The leaves have sub-dryobalanoid veins;
- The fruits are almost wingless.



December 2015



GPS (DD):
3.586041,
102.286610

Vatica yeechongii

(Dipterocarpaceae)



Resak Daun Panjang
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



The species has large, thickly coriaceous leaves and stout twigs.



January 2016



GPS (DD):
3.586041,
102.286610

Shorea peltata

(Dipterocarpaceae)



Meranti Telepok
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



The leaves are peltate.



May 2018



GPS (DD):
3.586196,
102.286584

Hopea auriculata

(Dipterocarpaceae)



Merawan
(Local Name)



Bukit Pasir



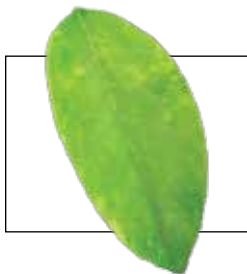
Critically Endangered
(IUCN 2001)



- Endemic to Peninsular Malaysia;
- The tree produces two-winged fruits.



May 2018



GPS (DD):
3.586041,
102.286610

Dipterocarpus sarawakensis

(Dipterocarpaceae)



Keruing Layang
(Local Name)



Bukit Pasir



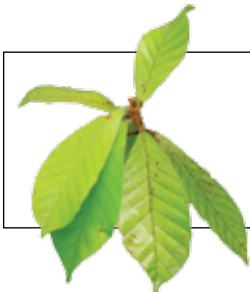
Critically Endangered
(IUCN 2001)



The leaves are broadly obovate and obtuse and covered with coarse and dense indumentum.



May 2018



GPS (DD):
3.585870,
102.286360

Shorea inappendiculata

(Dipterocarpaceae)



Damar Angin

(Local Name)



Bukit Pasir



Critically Endangered

(IUCN 2001)



The twigs are generally flattened.



December 2015



GPS (DD):

3.585818,

102.286474

Hopea polyalthioides

(Dipterocarpaceae)



Giam Rambai
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



- The leaves are large, oblong and arranged in a distichous way (in two opposite rows, one on each stem).
- Young twigs are velvety.



December 2015



GPS (DD):
3.585887,
102.286572

Shorea dealbata

(Dipterocarpaceae)



Meranti Bumbung

(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



- The tree trunk has a smooth bark;
- The leaves have many veins; leathery and glaucous on the under surface.



December 2015



GPS (DD):

3.585922,

102.286486

Hopea glaucescens

(Dipterocarpaceae)



Merawan Kelabu
(Local Name)



Bukit Pasir



Critically Endangered
(IUCN 2001)



- The tree has stilt roots;
- The leaves are glaucescent with prominent but short intermediate veins.



December 2015



GPS (DD):
3.586057,
102.286556

Hopea sulcata

(Dipterocarpaceae)



Merawan Meranti

(Local Name)



Bukit Pasir



Critically Endangered

(IUCN 2001)



The tree has a fissured bark with unequal sided leaves.



December 2015



GPS (DD):

3.586109,

102.286516

Shorea acuminata

(Dipterocarpaceae)



Meranti Rambai Daun
(Local Name)



Bukit Angin



Critically Endangered
(IUCN 2001)



The tree has droopy branches, large semi-persistent stipules, unequal-sided leaves and purple-red flowers.



January 2015



GPS (DD):
3.613644
102.261590

Shorea macroptera

(Dipterocarpaceae)



Meranti Melantai
(Local Name)



Bukit Kiab



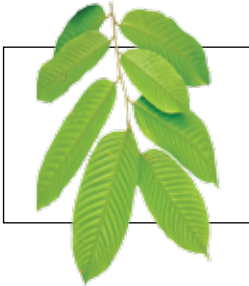
Critically Endangered
(IUCN 2001)




- The bark of the trunk is smooth;
- The leaves are leathery and oblong.



November 2015




GPS (DD):
3.593545,
102.279347



Endangered (EN) Species

An **Endangered Species** (EN) is a species which has been categorised as very likely to become extinct. Endangered as categorised by the International Union for Conservation of Nature (IUCN) RED List, is the second most severe conservation status for wild populations in the IUCN's scheme after Critically Endangered (CR).



Dryobalanops lanceolata

(Dipterocarpaceae)



Kapur Paji
(Local Name)



Bukit Angin



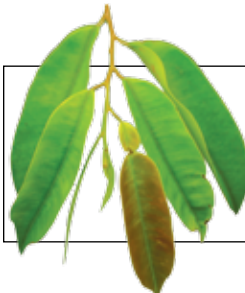
Endangered
(IUCN 2001)



The leaves' buds and stipules are sometimes densely covered with short, soft, matted hairs.



May 2014



GPS (DD):
3.609782,
102.262093

Shorea roxburghii

(Dipterocarpaceae)



Meranti Temak Nipis
(Local Name)



Bukit Angin



Endangered
(IUCN 2001)



Its fruits have winged nuts
with 3 long outer wings
and 2 short and narrow
inner wings.



May 2014



GPS (DD):
3.609782,
102.262093

Shorea leprosula

(Dipterocarpaceae)



Meranti Tembaga
(Local Name)



Bukit Kiab



Endangered
(IUCN 2001)



The crown is yellowish-brown and leaves are yellow tomentose on the under surface.



December 2014



GPS (DD):
3.593768,
102.278660

Dipterocarpus crinitus

(Dipterocarpaceae)



Keruing Mempelas
(Local Name)



Bukit Kiab



Endangered
(IUCN 2001)



The leaves are coarsely hairy
on both surfaces.



November 2015



GPS (DD):
3.591358,
102.278308

Shorea bracteolata

(Dipterocarpaceae)



Meranti Pa'ang
(Local Name)



Bukit Pasir



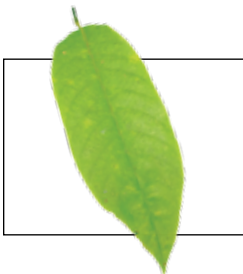
Endangered
(IUCN 2001)



The fruit consists of a narrowly ovoid nut with 3 long wings and 2 short wings.



December 2015



GPS (DD):
3.586147,
102.286470

Shorea pauciflora

(Dipterocarpaceae)



Meranti Nemesu
(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



The scaly bole has a
purplish red bark.



December 2015



GPS (DD):
3.585719,
102.286421

Shorea ovata

(Dipterocarpaceae)



Meranti Sarang Punai Bukit
(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



It is found at high altitudes,
has a deeply fissured bark
and beefy red inner bark.



October 2016



GPS (DD):
3.586156,
102.286480

Shorea balanocarpoides

(Dipterocarpaceae)



Damar Hitam Katup
(Local Name)



Bukit Kiab



Endangered
(IUCN 2001)



The fruits are wingless and
leaves are ovate or
obovate-elliptic.



May 2017



GPS (DD):
3.585669,
102.286349

Dipterocarpus obtusifolius var *subnudus*

(Dipterocarpaceae)



Keruing Beludu

(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



The leaves are broadly ovate
and thickly coriaceous.



December 2015



GPS (DD):

3.585933,

102.286431

Dryobalanops oblongifolia

(Dipterocarpaceae)



Keladan
(Local Name)



Bukit Pasir



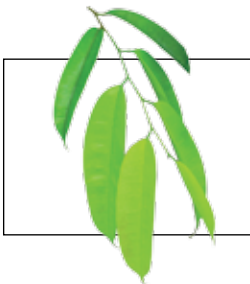
Endangered
(IUCN 2001)



The leaves are oblong in
shape.



December 2014



GPS (DD):
3.593838
102.278793

Shorea ciliata

(Dipterocarpaceae)



Balau Gunung
(Local Name)



Bukit Pasir



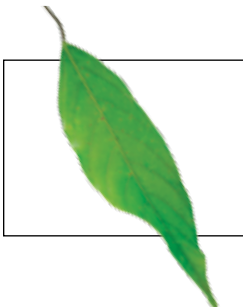
Endangered
(IUCN 2001)



- The species prefers mountain habitats of 1,100m above sea level;
- The leaves are glaucous.



December 2015



GPS (DD):
3.585839,
102.286567

Vatica stapfiana

(Dipterocarpaceae)



Resak Mempening
(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



The oblanceolate leaves have prominent veins.



December 2015



GPS (DD):
3.585854,
102.286493

Hopea pierrei

(Dipterocarpaceae)



Merawan Palung
(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



The leaves are ovate-acuminate, with many nerves and have a sunken midrib on the upper surface.



December 2015



GPS (DD):
3.585930,
102.286600

Shorea ovalis

(Dipterocarpaceae)



Meranti Kepong
(Local Name)



Bukit Angin



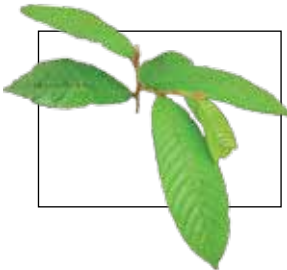
Endangered
(IUCN 2001)



- The leaves are boat-shaped and scabrid;
- Semi-persistent triangular stipules that drop to leave scars on twigs.



May 2014



GPS (DD):
3.593942
102.278755

Vatica pauciflora

(Dipterocarpaceae)



Resak Laru
(Local Name)



Bukit Pasir



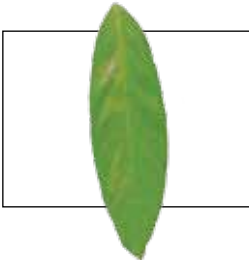
Endangered
(IUCN 2001)



- The nuts are ovoid and marked with 3 vertical grooves;
- The species prefers swamp forests.



May 2018



GPS (DD):
3.586228,
102.286495

Shorea parvifolia

(Dipterocarpaceae)



Meranti Sarang Punai
(Local Name)



Bukit Kiab



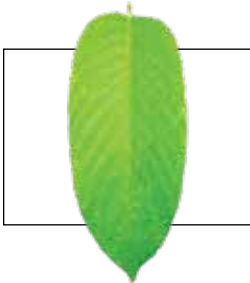
Endangered
(IUCN 2001)



The bark is closely fissured
and inner bark is deep red.



January 2015



GPS (DD):
3.591528
102.278292

Vatica abdulrahmaniana

(Dipterocarpaceae)



-
(Local Name)



Bukit Pasir



Endangered
(IUCN 2001)



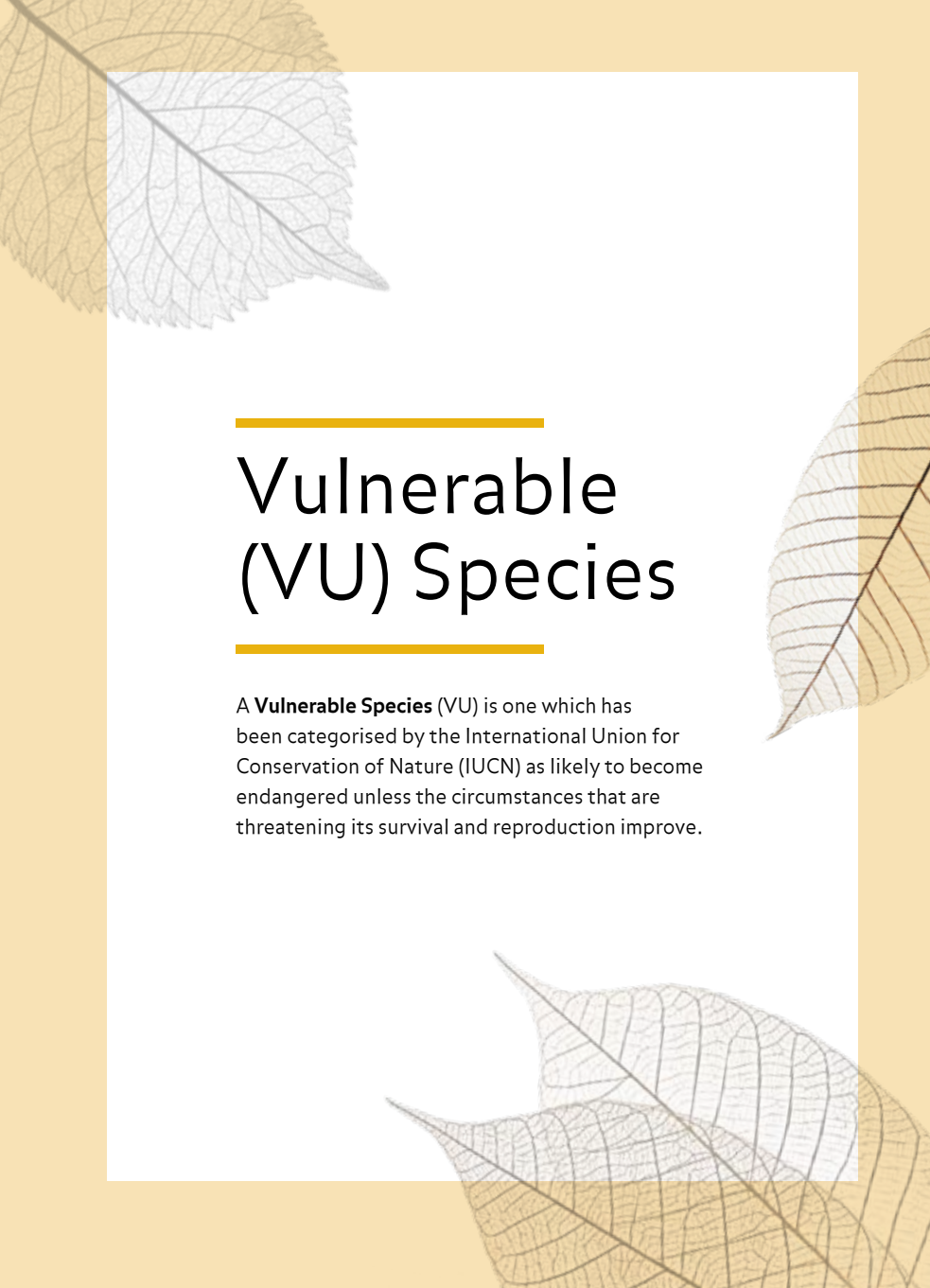
- The leaves are covered with golden brown indumentum;
- The leaf venation is prominent.



December 2015



GPS (DD):
3.585832,
102.286611

The page features a light beige background with several stylized leaf illustrations. In the top-left corner, there is a solid brown leaf partially overlapping a white leaf with a grey vein pattern. On the right side, a brown leaf is partially visible. At the bottom, there are two overlapping white leaves with grey vein patterns. Two horizontal yellow lines are positioned above and below the main title.

Vulnerable (VU) Species

A **Vulnerable Species** (VU) is one which has been categorised by the International Union for Conservation of Nature (IUCN) as likely to become endangered unless the circumstances that are threatening its survival and reproduction improve.

Khaya ivorensis

(Meliaceae)



African Mahogany

(Local Name)



Bukit Angin



Vulnerable
(IUCN 2001)



- The tree was frequently used in enrichment planting;
- Its wood is valued for its decorative veneer and plywood.



October 2014



GPS (DD):
3.611644
102.262584

Khaya senegalensis

(Meliaceae)



African Mahogany
(Local Name)



Bukit Angin



Vulnerable
(IUCN 2001)



An evergreen tree with a rounded crown, and can be deciduous in drier climates.



October 2014



GPS (DD):
3.609679
102.261489

Neobalanocarpus heimii

(Dipterocarpaceae)



Cengal
(Local Name)



Bukit Kiab



Vulnerable
(IUCN 2001)



- Has a dark coloured scaly bark, sometimes with an almost colourless dammar;
- It has large, wingless fruits.



January 2015



GPS (DD):
3.593789
102.278801

Hopea odorata

(Dipterocarpaceae)



Merawan Siput Jantan
(Local Name)



Bukit Angin



Vulnerable
(IUCN 2001)



The leaf axils have pore-like
domatia (cavities).



November 2014



GPS (DD):
3.611402
102.262704

Scaphium longiflorum

(Sterculiaceae)



Kembang Semangkuk Bulat
(Local Name)



Bukit Kiab



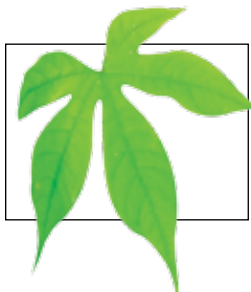
Vulnerable
(IUCN 2001)



The leaf is leathery, oblong to slightly obovate, with a rounded to broadly base.



November 2015



GPS (DD):
3.593966
102.278530

Hopea myrtifolia

(Dipterocarpaceae)



Mata Kucing Beludu
(Local Name)



Bukit Pasir



Vulnerable
(IUCN 2001)



The twigs, petioles and upper surface of the midribs are velvety.



December 2015



GPS (DD):
3.585821,
102.286513

Shorea macrophylla

(Dipterocarpaceae)



Engkabang
(Local Name)



Bukit Pasir



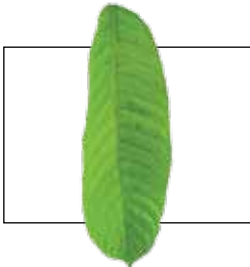
Vulnerable
(IUCN 2001)



The tree produces illipe nuts that contain a high content of cocoa butter, used to produce chocolates, lipsticks and polishes.



January 2016



GPS (DD):
3.586281,
102.287068

Aquilaria malaccensis

(Thymelaeaceae)



Karas
(Local Name)



Bukit Pasir



Vulnerable
(IUCN 2001)



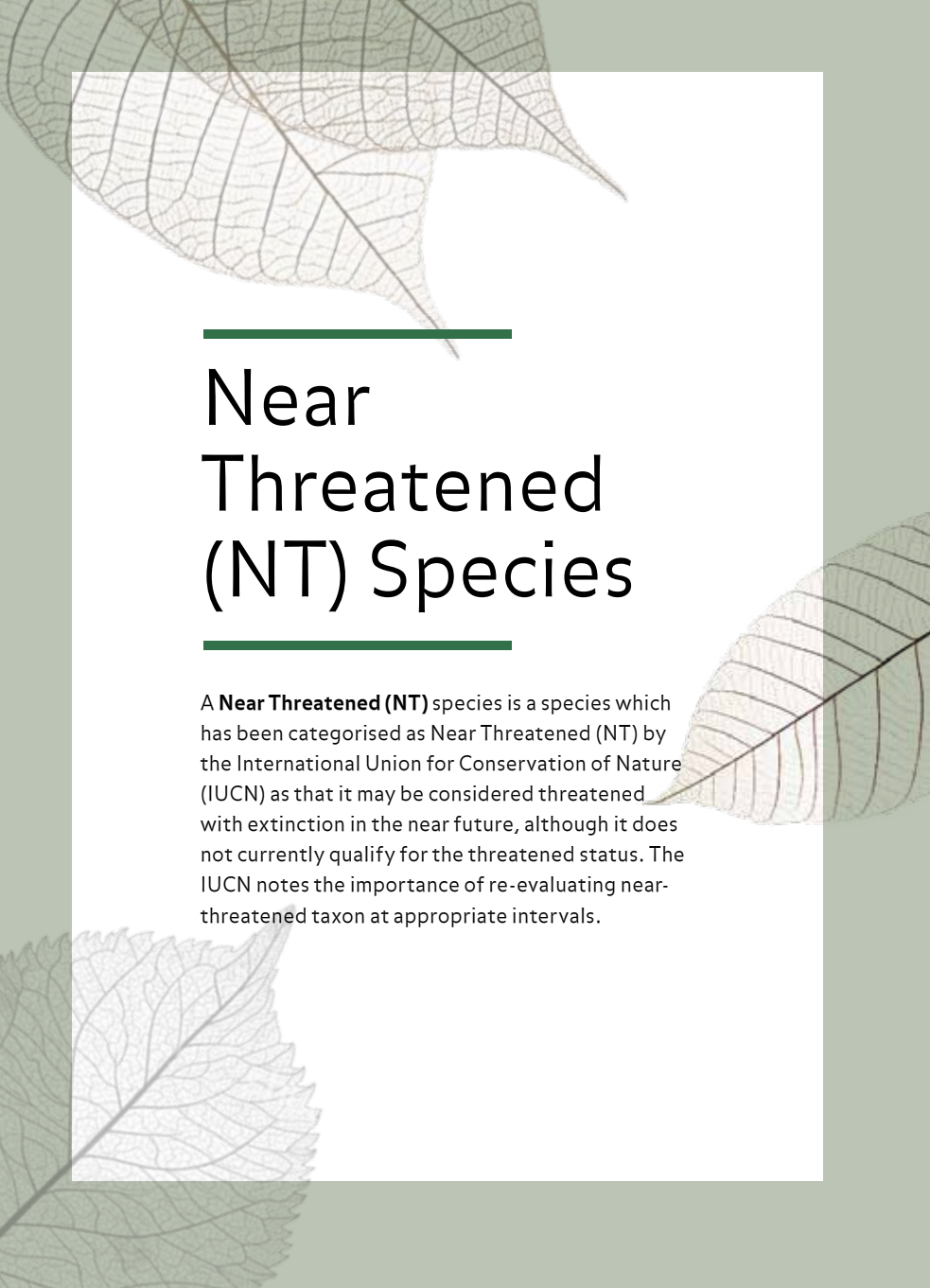
- The leaf blade is thin with faint veins;
- The fungal infected resinous heartwood is highly sought after in trade.



December 2015



GPS (DD):
3.585795,
102.285547

The background features several large, semi-transparent leaf silhouettes with detailed vein structures, positioned in the corners and along the sides of the page. Two horizontal green lines are placed above and below the main title.

Near Threatened (NT) Species

A **Near Threatened (NT)** species is a species which has been categorised as Near Threatened (NT) by the International Union for Conservation of Nature (IUCN) as that it may be considered threatened with extinction in the near future, although it does not currently qualify for the threatened status. The IUCN notes the importance of re-evaluating near-threatened taxon at appropriate intervals.

Dipterocarpus verrucosus

(Dipterocarpaceae)



Keruing Merah
(Local Name)



Bukit Kiab



Near Threatened
(IUCN 2001)



The fruits are covered with
small warts (verrucose).



November 2015



GPS (DD):
3.595356,
102.278306

Shorea scrobiculata

(Dipterocarpaceae)



Balau Singkawang Darat
(Local Name)



Bukit Pasir



Near Threatened
(IUCN 2001)



The leaves are small with closely-paired nerves that are prominent and sparsely hairy on the under surface.



December 2015



GPS (DD):
3.585787,
102.287684



Least Concern (LC) Species

A **Least Concern (LC)** species is a species which has been categorised by the International Union for Conservation of Nature (IUCN) as evaluated but not qualified for any other category. They do not qualify as threatened, near threatened, or (before 2001) conservation dependent.

Aglaia korthalsii

(Meliaceae)



Kiat
(Local Name)



Bukit Angin



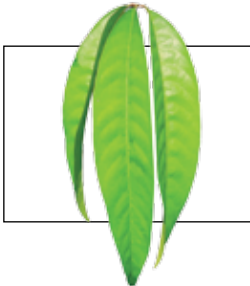
Least Concern
(IUCN 2001)



- The tree can grow up to 35m tall;
- It is harvested for its edible fruits.



October 2014



GPS (DD):
3.609596
102.261785

Shorea laevis

(Dipterocarpaceae)



Balau Kumus
(Local Name)



Bukit Angin



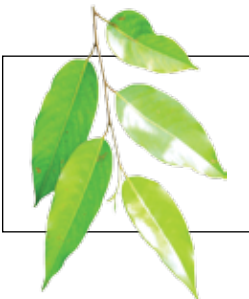
Least Concern
(IUCN 2001)



- It has a reddish-yellow bole with exudation of yellow-crust dammar;
- The leaves have very fine, almost inconspicuous veins on both surfaces, with a yellow midrib when fresh.



January 2014



GPS (DD):
3.611541
102.262753

Palaquim maingayi

(Sapotaceae)



Nyatoh Tembaga
(Local Name)



Bukit Angin



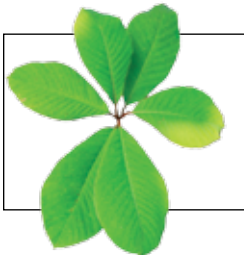
Least Concern
(IUCN 2001)



- Twigs with small semi-circular, crescent-shaped or triangular scars;
- Under surface of leaves are covered with woolly brown hairs.



October 2014



GPS (DD):
3.611262
102.262957

Couroupita guianensis

(Lecythidaceae)



Cannonball Tree
(Local Name)



Bukit Angin



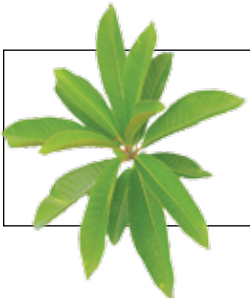
Least Concern
(IUCN 2001)



- The fruits have large nuts with hard, woody exocarp resembling rusty-brown cannonballs;
- The fruits require 18 months to mature.



October 2014



GPS (DD):
3.611262
102.262957

Gnetum gnemon

(Gnetaceae)



Melinjau
(Local Name)



Bukit Angin



Least Concern
(IUCN 2001)



This climber has nodes that are prominently raised as hoops.



October 2014



GPS (DD):
3.609456,
102.261705

Aglaia cucullata

(Meliaceae)



Bekak
(Local Name)



Bukit Angin



Least Concern
(IUCN 2001)



- The tree can grow up to 35m tall;
- Harvested for its edible fruits.



June 2014



GPS (DD):
3.612753
102.262745

Koompassia excelsa

(Fabaceae)



Tualang
(Local Name)



Bukit Angin



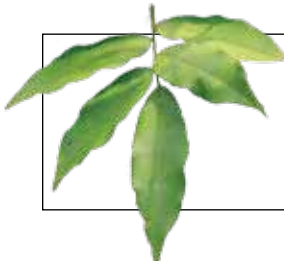
Least Concern
(IUCN 2001)



- The tree is home to honey bees;
- It is common to see these trees with many bee nests hanging from its branches.



November 2016



GPS (DD):
3.613491,
102.261712

Archidendron elliptica

(Fabaceae)



Kerdas
(Local Name)



Bukit Pasir



Least Concern
(IUCN 2001)



The young leaves are
purple in colour.



December 2015



GPS (DD):
3.586041,
102.286463

Dipterocarpus oblongifolius

(Dipterocarpaceae)



Keruing Neram
(Local Name)



Bukit Angin



Least Concern
(IUCN 2001)



Commonly found along river banks.



June 2016



GPS (DD):
3.613005,
102.260487

Sterculia parviflora

(Sterculiaceae)



Kelumpang Burung
(Local Name)



Bukit Angin



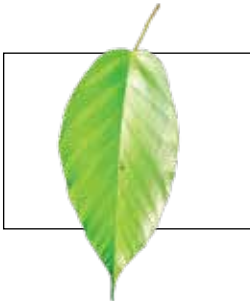
Least Concern
(IUCN 2001)



Its tiny flowers emerge from bare twigs before new shoots appear.



June 2016



GPS (DD):
3.613069,
102.260471

Shorea multiflora

(Dipterocarpaceae)



Damar Hitam Pipit
(Local Name)



Bukit Pasir



Least Concern
(IUCN 2001)



Its small leaves when dry are light golden brown on the under surface and fruits are wingless.



December 2016



GPS (DD):
3.585638,
102.286337

Irvingia malayana

(Irvingiaceae)



Pauh Kijang
(Local Name)



Bukit Pasir



Least Concern
(IUCN 2001)



The steep plank buttress may
reach 6m high.



February 2017



GPS (DD):
3.586695,
102.285799

Payena maingayi

(Sapotaceae)



Nyatoh Durian
(Local Name)



Bukit Angin



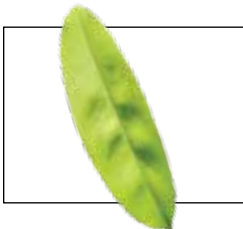
Least Concern
(IUCN 2001)



The foliage appears golden
from below.



July 2017



GPS (DD):
3.608727,
102.263893

Cratoxylum arborescens

(Hypericaceae)



Geronggang
(Local Name)



Bukit Pasir



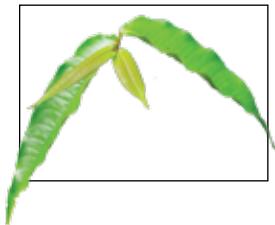
Least Concern
(IUCN 2001)



- The twigs are prominently angled to flattened;
- The stipular scars on twigs are prominent as convex or pyramidal lines.



January 2016



GPS (DD):
3.585583,
102.287251

Vatica rassak

(Dipterocarpaceae)



Resak Irian
(Local Name)



Bukit Pasir



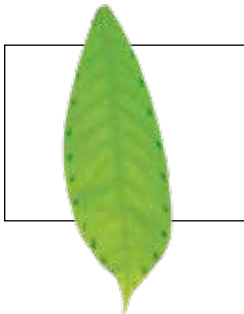
Least Concern
(IUCN 2001)



The fruit is frequently
asymmetric, verrucose with
thick corky pericarp.



May 2015



GPS (DD):
3.586281,
102.287068

Shorea curtisii

(Dipterocarpaceae)



Meranti Bukit

(Local Name)



Bukit Kiab



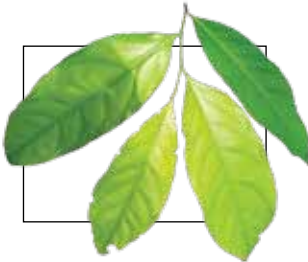
Least Concern
(IUCN 2001)



The tree inhabits hill ridges,
has a light greyish crown
and lanceolate, glaucous
leaves.



November 2015



GPS (DD):
3.593584,
102.279438

Cassia fistula

(Fabaceae)



Rajah Kayu
(Local Name)



Bukit Angin



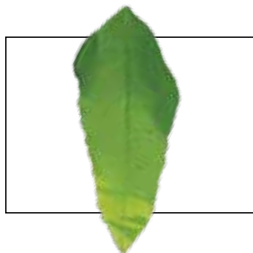
Least Concern
(IUCN 2001)



- The young twigs are glabrous;
- The tree crown has spreading branches.



January 2015



GPS (DD):
3.611402
102.262704

Sandoricum koetjape

(Meliaceae)



Sentul
(Local Name)



Bukit Angin



Least Concern
(IUCN 2001)



- The fruits are eaten fresh or processed into candy, jelly, jam or marmalade;
- It is an excellent shade tree with ornamental value.



October 2014



GPS (DD):
3.609397
102.261701

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<i>Palaquim maingayi</i>	Nyatoh Tembaga	LC	80
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<i>Scaphium longiflorum</i>	Kembang Semangkuk Bulat	VU	70
<i>Shorea acuminata</i>	Meranti Rambai Daun	CR	45
<i>Shorea assamica</i>	Meranti Pipit	CR	25
<i>Shorea balanocarpoides</i>	Damar Hitam Katup	EN	55
<i>Shorea bracteolata</i>	Meranti Pa'ang	EN	52
<i>Shorea ciliata</i>	Balau Gunung	EN	58
<i>Shorea curtisii</i>	Meranti Bukit	LC	93
<i>Shorea dealbata</i>	Meranti Bumbung	CR	42
<i>Shorea elliptica</i>	Balau Tembaga	CR	27
<i>Shorea hemsleyana</i>	Cengal Pasir Daun Besar	CR	23
<i>Shorea inappendiculata</i>	Damar Angin	CR	40
<i>Shorea johorensis</i>	Meranti Pepijat	CR	18
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<i>Shorea leprosula</i>	Meranti Tembaga	EN	50
<i>Shorea longisperma</i>	Damar Hitam Bulu	CR	31
<i>Shorea macrantha</i>	Meranti Kepong Hantu	CR	28
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Conservation Status	Species
Critically Endangered (CR)	35
Endangered (EN)	17
Vulnerable (VU)	8
Near Threatened (NT)	2
Least Concern (LC)	18
Total	80

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