







Flora and Fauna of The AIMST University

A COMPILATION OF QUOTATIONS & FLORA AND FAUNA PHOTOGRAPHS TO PROMOTE AWARENESS ABOUT THE IMPORTANCE OF BIODIVERSITY AND THE ENVIRONMENT











Dedication

This book is dedicated to all students, parents, teachers, academician, academic leaders, biologists, environmentalists, educationalists, policymakers, legislators, and nature lovers.

Flora and Fauna of The AIMST University

A COMPILATION OF QUOTATIONS & FLORA AND FAUNA PHOTOGRAPHS TO PROMOTE AWARENESS ABOUT THE IMPORTANCE OF BIODIVERSITY AND THE ENVIRONMENT

WEI SHAN TAN Subhash Bhore







Published by

The AIMST University Bedong-Semeling Road 08100, Semeling, Kedah Malaysia

Printed by

The AIMST University

Copyright

Copyright © 2014 Dr. Subhash Bhore and the AIMST University The views reported in this publication do not necessarily represent those of the AIMST University.

This publication may be reproduced for educational or non-profit purposes without special permission from the copyright holders, provided acknowledgement of the source is made. Dr. Subhash Bhore and or the AIMST University would appreciate receiving a copy of any publications that use this book as a source.

Citation: Tan W.S. and Bhore S.J., (2014), Flora and Fauna of the AIMST University: A Compilation of Quotations & Flora and Fauna Photographs to Promote Awareness about the Importance of Biodiversity and the Environment, the AIMST University, Malaysia

ISBN: 978-983-43522-3-3 (Print version) e-ISBN: 978-983-43522-4-0 (e-Book version)

For further information, please contact:

Associate Professor Dr. Subhash Bhore Department of Biotechnology, Faculty of Applied Sciences, The AIMST University, Bedong-Semeling Road, 08100 Bedong, Kedah, Malaysia

Tel: +60-4-429 8176; Fax: +60-4- 429 8009 / 8109,

 $Email: subhash@aimst.edu.my \ / \ subhashbhore@gmail.com$

Cover Page Design

By: Mr. Subramaniam

Edition

First Edition, December 2014

Flora and Fauna of The AIMST University

A COMPILATION OF QUOTATIONS & FLORA AND FAUNA PHOTOGRAPHS TO PROMOTE AWARENESS ABOUT THE IMPORTANCE OF BIODIVERSITY AND THE ENVIRONMENT

WEI SHAN TAN Subhash Bhore









I strongly believe that
Universities around
the world can play an
important role in increasing
the understanding and
awareness of biodiversity
and the environment,
and its importance in the
survival of the human race.

Foreword

o increase the understanding and awareness of biodiversity and environmental issues, the United Nations (UN) proclaimed 'May 22' and 'June 5' as the 'International Day for Biological Diversity' and 'World Environment Day', respectively. I strongly believe that Universities around the world can play an important role in increasing the understanding and awareness of biodiversity and the environment, and its importance in the survival of the human race. We all need to make sure, especially, that we are educating students about the importance of biodiversity and the environment for our survival on this planet. The AIMST University completed fourteen magnificent years on March 15, 2014. I am delighted that in such a short time, the University has made a noticeable impact on the national and international levels. I am glad that this book is being published on the juncture of University's 14th 'Birthday', the 'International Day for Biological Diversity' and 'World Environment Day'.

I wish to congratulate Associate Professor Dr. Subhash Bhore and his student Mr. Wei Shan Tan for their sincere efforts in bringing out this book, "Flora and Fauna of The AIMST University: A Compilation of Quotations and Flora and Fauna Photographs to Promote Awareness about the Importance of Biodiversity and the Environment" to contribute their bit in promoting awareness and the importance of biodiversity and the environment in line with the efforts of the international community.

This book is a wonderful attempt of not only to document the wealth of the AIMST University campus but also to highlight the importance of biodiversity and environment's conservation. I strongly believe that this book will help all readers in propagating thoughts necessary for conserving our biodiversity and environment.

On this special occasion, I would like to commemorate and join hands with my esteemed colleagues at the AIMST University and all over the world in observing this day to highlight the importance of biodiversity and the environment in our pursuit for a healthy planet with healthy people.

Happy 'International Biodiversity Day' and 'World Environment Day'

Dato' Seri Utama Dr. S. Samy Vellu Founder, Chancellor and Chairman The AIMST University



Preface



n 15 March 2014, the AIMST University (AIMST) competed fourteen glorious years. The AIMST is very special in the sense that the campus is very green and landscape appears like a designed garden. Our national and international visitors have complemented appreciatively on the aesthetics of the campus. The campus is free from pollution (water, air, and sound) with a wonderful biodiversity and environment. We are proud of it. The AIMST is spread over an area of 220 acres of land. Prior to the AIMST this land was almost barren of all vegetation due to mining.

In the last fourteen years, the AIMST campus has become a green island of trees, birds, insects and animals. My colleague, Associate Professor Dr. Subhash Bhore, has brought out an exceptionally beautiful compilation entitled "Flora and Fauna of The AIMST University: A Compilation of Quotations and Flora and Fauna Photographs to Promote Awareness about the Importance of Biodiversity and the Environment". It is in line with the 'International Day for Biological Diversity' and 'World Environment Day' which raises awareness and importance of preserving biodiversity, and the environment.

The AIMST zealously guards its green heritage and continually safeguards the flora and fauna through special initiatives. Dr. Subhash with his student identified and compiled types of macro flora and fauna from our AIMST campus, and meticulously documented as many birds and butterflies that have been sighted in our campus. Our students, academic and non-academic staff (and their families) who live in the AIMST campus are the true custodians of this natural richness. Management, students and staff are taking necessary steps to preserve the campus biodiversity, environment and the natural beauty.

I am sure that you will enjoy the content of this book, and that the content will be useful in promoting awareness about the importance of biodiversity and the environment. This book is a perfect gift to students, parents and all nature lovers.

I would like to express my sincere appreciation to Dr. Subhash and his student Tan Wei Shan for their genuine efforts in producing this book on the juncture of the 'International Day for Biodiversity', 'World Environment Day' and AIMST's 14th birthday. I applaud the initiative, devotion, and love which has gone into the making of this book.

Senior Prof. Dr. M. Ravichandran Vice-Chancellor & Chief Executive The AIMST University

A Note from MABIC



t is an honour to write a note for this fascinating book, "Flora and Fauna of the AIMST University: A compilation of quotations and flora and fauna photographs to promote awareness about the importance of biodiversity and the environment".

As a regular speaker at the AIMST University (AIMST), I have witnessed the evolution of its landscape since its inception. AIMST has not only become an anchor to economic growth to Semeling town but also transformed the old mining land to a thriving treasure throve of biodiversity.

As a science communicator, I can vouch that the format and design of this book will make it an effective tool to create awareness on Malaysian biodiversity. Sincerely, I do congratulate Associate Professor Dr. Subhash Bhore and Mr. Wei Shan Tan for their efforts. It is not an easy task to compile all this valuable information and the beautiful pictures. The efforts of AIMST management in supporting such a publication must also be applauded.

With this publication, I hope AISMT will become a fertile ground for schools in Kedah to conduct field visits to learn more about our flora and fauna and ways to conserve them. I would recommend that AIMST take their efforts a level higher by opening their campus to ecotourism with attractive activities for the locals.

I wish more educators will emulate AIMST's efforts in playing an important role in educating the society to effectively deal with the challenging work of conserving our biodiversity and the environment.

Just like any proponent of modern biotechnology, biodiversity and ecology is close to my heart. Biotechnology and biodiversity go hand in hand with one supporting the other. A number of biotechnology applications support sustainable development and in the conservation of the environment such as tissue culture, genetic engineering, synthetic biology and green technology involving production of bio-based compounds.

I would like to take this opportunity to witness and join hands with the international community in observing this year's 'International Day for Biological Diversity' and 'World Environment Day' to highlight the importance of biodiversity and the environment. And this book is a perfect tool to commemorate these special days.

Dr. Mahaletchumy ArujananExecutive Director
Malaysian Biotechnology Information Center

From the Authors





he main purpose of this book is to promote awareness about the importance of conserving biodiversity and the environment. Hence, this book should not be treated as a scientific reference. The scientific names of the species stated in this book are based on the tentative identification of the respective species of the flora and fauna. However, it doesn't preclude the importance of the book purpose.

Nurturing and conservation of plants, animals, other living organisms, and their natural habitats has become important than never before. In reality, our survival on this planet is not possible without safeguarding biodiversity for a better environment. We have already lost several species of plants, animals and other living organisms due to self-centered human activities. However, we are still committing more mistakes instead of learning from the mistakes. As a result of it, several species of plants, animals, and other living organisms are becoming vulnerable and rare. Many plant and animal species are vanishing at an alarming rate.

The AIMST University (AIMST) campus which is built on an ex-mining landscape has changed a lot and now appears like a designed modern garden. While compiling the information about flora and fauna of the AIMST campus, we came across the news of the 'Wild Boar' being sighted only during nights. In this phase, we have documented most of the macro-flora and fauna available in the AIMST. A number of typical Malaysian floras have been planted in the campus, and they are flourishing. Some exotic ornamental plant species have also been added to increase the aesthetic value of the AIMST campus.

This book is our attempt to document the wealth of the AIMST campus with respect to trees, shrubs, birds, butterflies, fungi (mushrooms), insects, and the amphibians that are visually apparent.

We would like to record our sincere thanks to the Chancellor, Vice-Chancellor, and acting Registrar (Dr. S. Kathiresan) for supporting publication of this book on the juncture of 'International Day for Biological Diversity', 'World Environment Day', and the 14th anniversary of the AIMST. We also thank Mr. L.P. Mohan and Mr. G. Prabhakaran for proof reading of this book and or their comments.

We are hoping that this book will promote awareness about the importance of biodiversity and the environment among all readers of this book. We wish you all a very happy 'International Biodiversity Day' and 'World Environment Day'.

Date: December 1, 2014 Wei Shan Tan & Subhash Bhore



Certificate of Appreciation

Thank you for your participation in

WORLD ENVIRONMENT DAY 2014

- the day to celebrate the people's power to positively change our environment and the future.

Every action counts, and when multiplied by a global chorus, becomes exponential in its impact. With your contribution, we have succeeded in making WED 2014 the biggest event yet.

Welcome to the worldwide WED community!

Raise your Voice, Not the Sea Level

Contents

Foreword	v
Preface	vi
A Note from MABIC	vii
From the Authors	viii
Contents	X
The AIMST University landscape	xiii
FLORA	1
ANGIOSPERMS	2
African Fan Palm	2
Agati	3
Aloe Vera	4
Areca Palm	5
Asian Rice	6
Avarum	7
Banana Plant	8
Basil	9
Beach Oak	10
Bellyache Bush	11
Bismarckia	12
Black Wattle	13
Blady Grass	14
Blue Egyptian Water Lily	15
Blue Pea	16
Breadfruit	17
Brinjal	18
Heart of Jesus	19
Caladium humboldtii 'Wightii'	20
Indian-kale	21
Hilo Beauty	22
Calamondin Orange	23
Cape Blue Water Lily	24
Cashew	25
Cempedak	26

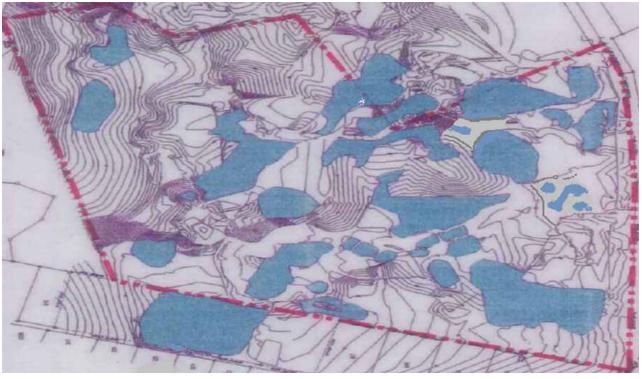
Chinese Hibiscus	27
Clitoria	28
Coat Buttons	29
Coconut	30
Coral Swirl	31
Crane Flower	32
Cypressvine Morning Glory	33
Dragon Fruit	34
Drumstick Tree	35
Earleaf Acacia	36
False Asoka	37
Ficus Tree	38
Garden Balsam	39
Garden Spurge	40
Giant Crape-myrtle	41
Goat-weed	42
Golden Bamboo	43
Jambul	44
Kaffir Lime	45
Kentina Palm	46
Lotus	47
Madagascar Periwinkle	48
Malay Variegated Bamboo	49
Mango	50
Mexican Bluebell	51
Mexican Marigold	52
Neem	53
Okra	54
Oldham's Bamboo	55
Papaya	56
Paper flower	57
Persian Silk Tree	58
Purple Coraltree	59

Pygmy Water-lily	60	UNIDENTIFIED FLORA	90
Red Ixora	61	FAUNA	97
Roselle	62	BIRDS	98
Royal Palm	63	Asian Koel	98
Royal Poinciana	64	Asian Glossy Starling	99
Rubber Tree	65	Black Drongo	100
Ruffled Fan Leaf Palm	66	Brown Shrike	101
Rumpf's Fig	67	Chestnut-headed Bee-eater	102
Sabi Star	68	Chinese Egret	103
Snake Plant	69	Chinese Pond-Heron	104
Spanish Flag	70	Common Iora	105
Spider Lily	71	Common Myna	106
Sugar Cane	72	Common Tailorbird	107
Tamarind	73	Crested Serpent Eagle	108
Teak	74	Crow Phesant	109
Temple Tree	75	Eurasian Tree Sparrow	110
Touch-me-not	76	Forest Wagtail	111
Traveller's Palm	77	Grey-capped Pygmy Woodpecker	112
Umbrella Papyrus	78	Jungle Myna	113
West Indian Lemon Grass	79	Lesser Whistling Duck	114
White Aubergines	80	Olive-backed Sunbird	115
White Gum	81	Oriental Drawf Kingfisher	116
Whitelead Tree	82	Pacific Swallow	117
Wild Peanut	83	Paddyfield Pipit	118
Windamere Palm	84	Red-wattled Lapwing	119
GYMNOSPERMS	85	Red Turtle Dove	120
Platycladus	85	Rock Pigeon	121
King Sago	86	Scaly-breasted Munia	122
PTERIDOPHYTES	87	Scarlet-backed Flowerpecker	123
Common Polypody	87	Spotted Dove	124
Uluhe Fern	88	White-bellied Sea Eagle	125
MUSHROOM (FUNGI)	89	White-breasted Waterhen	126
Common Earthball	89	White-throated Kingfisher	127

Yellow-vented Bulbul	128
Zebra Dove	129
FISH	130
African Catfish	130
Comet Goldfish	131
Koi	132
Pangas catfish	133
Snakehead Murrel	134
Zebrafish	135
REPTILES	136
Asian Forest Tortoise	136
Common Wolf Snake	137
Malayan Pit Viper	138
Water Monitor	139
MAMMALS	140
Cat	140
Dusky Leaf Monkey	141
Plantain Squirrel	142
Wild Boar	143
AMPHIBIANS	144
Common Tree Frog	144
INSECTS	145
Arhopala horsfieldi basiviridis	145
Blue Pansy	146
Common Field Grasshopper	147
Common Three Ring Butterfly	148
Dark Small-branded Swift	149
Ditch Jewel	150
Empress Cicada	151
Flesh Fly	152
Giant Honey Bee	153
Golden Ant	154
Leaf-footed bug	155

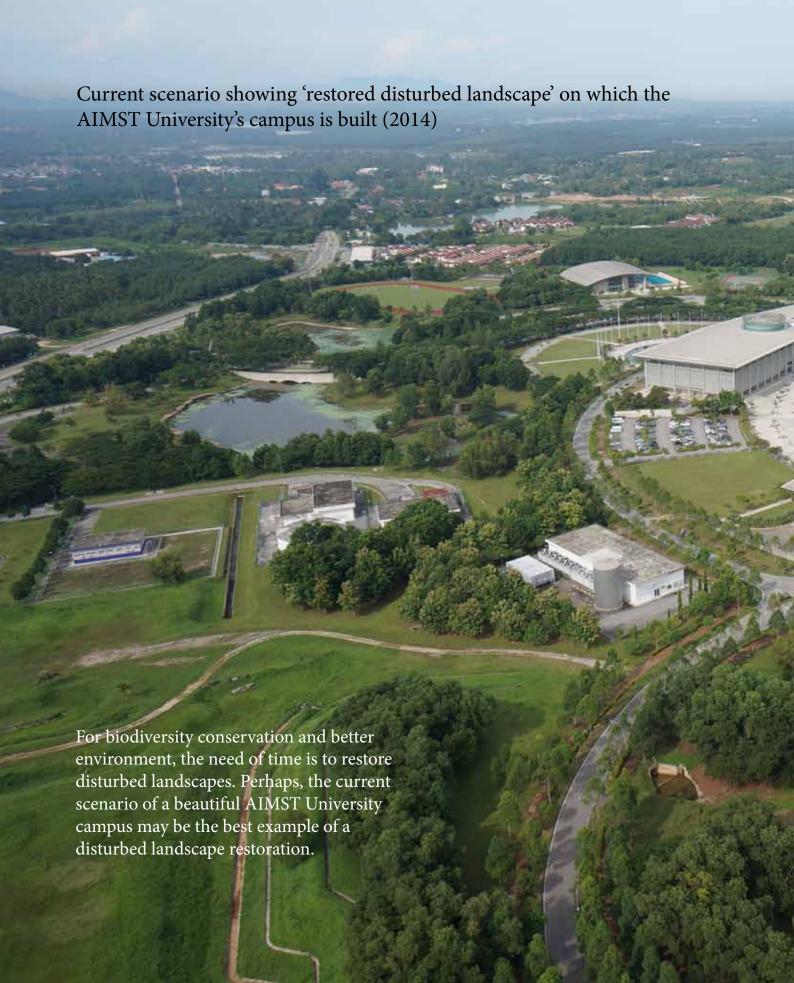
Lesser Banded Hornet	156
Neurothemis fulvia	157
Pied Paddy Skimmer	158
Red Cotton Stainer Bug	159
Red-winged Dragonfly	160
Sapphire Flutterer	161
Slender Skimmer	162
Striped Albatross	163
Tropical Carpenter Bee	164
Termite	165
Weaver Ant	166
GASTROPODA	167
East African Land Snail	167
Garden Snail	168
UNIDENTIFIED FAUNA	169
MESSAGES	172
Messages from UNEP Publications for the	
International Day for Biological Diversity 2014	173
APPENDICES	178
APPENDIX-I: Themes of the International	
Day for Biological Diversity	178
APPENDIX-II: Themes of the World	
Environment Day	179
APPENDIX-III: Eighty (80) Ways to	
Celebrate the World Environment Day	181
RIRI IOGRAPHY	184

The AIMST University landscape

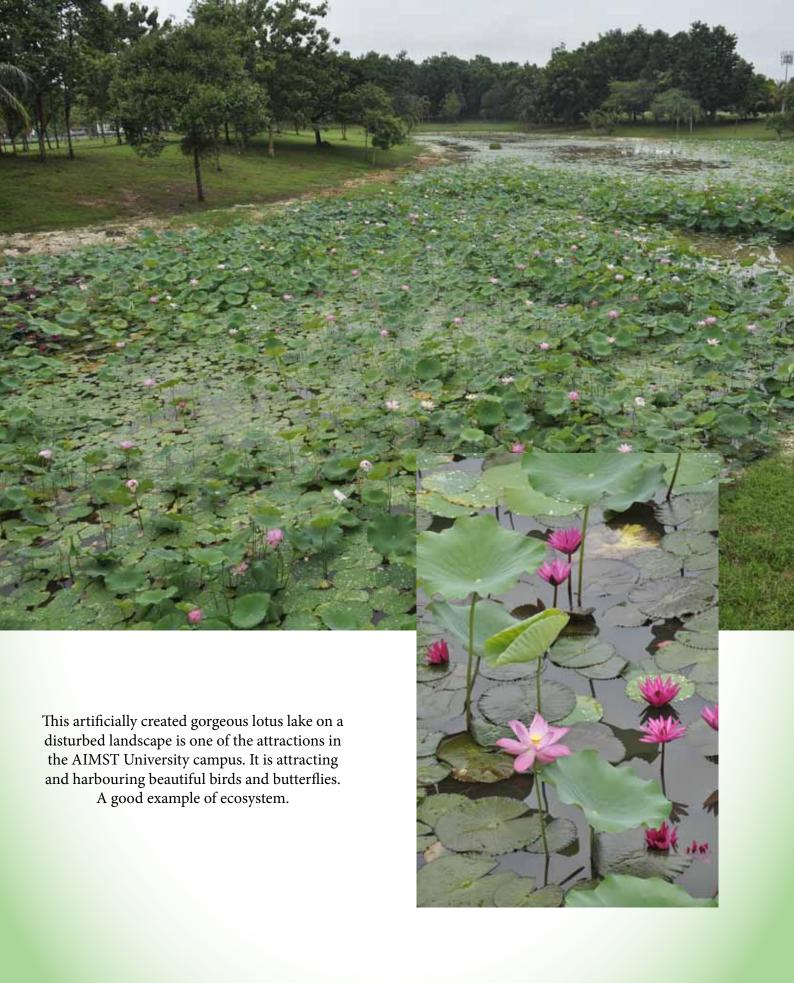


A sketch showing 'disturbed landscape' with mining lakes prior to the AIMST University's campus construction work (2001). Source: *Vice-Chancellor's office*

"Education is the most powerful weapon which you can use to change the world." Nelson Mandela







Flora



ANGIOSPERMS / African Fan Palm



Name:

English : African Fan Palm

Local:

Not Available

Scientific Name:

Borassus aethiopum (Mart.)

"If we pollute the air, water and soil that keep us alive and well, and destroy the biodiversity that allows natural systems to function, no amount of money will save us."

David Suzuki

Agati



Name:

English : Agati Plant

Local : Kacang Turi

Scientific Name : *Sesbania grandiflora*(L.) Poiret

"About two million years ago, man appeared. He has become the dominant species on the earth. All other living things, animal and plant live by his sufferance. He is the custodian of life on earth, and in the solar system. It's a big responsibility."

George Wald

Aloe Vera



Name:

English : Aloe Vera

Local:

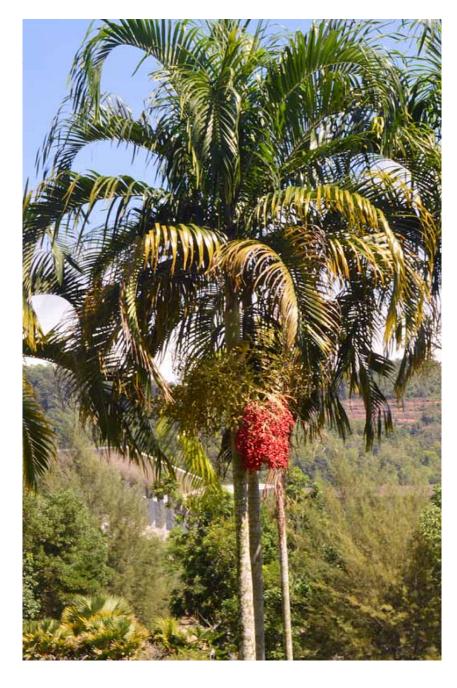
Pokok Daun Lidah Buaya

Scientific Name: Aloe vera (L.) Burm.f.

"Even if I knew that tomorrow the world would go to pieces, I would still plant my apple tree."

Martin Luther

Areca Palm



Name:

English : Areca Palm

Local:

Pokok Pinang

Scientific Name:

Areca catechu Linn.

"I don't want to protect the environment; I want to create a world where the environment doesn't need protecting."

Greenpeace Africa

Asian Rice

Name:

English: Asian Rice

Local : Padi

Scientific Name: Oryza sativa Linn.



"The more you know about a species, the more you understand about how better to help protect them."

Alan Clark

Avarum



Name:

English : Avarum

Local : Bereksa

Scientific Name:

Senna auriculata (L.) Roxb.

"Nature is beautiful; such beauty must be based on beautiful facts and beautiful laws."

Muhammad E. Osman

Banana Plant



Name:

English: Banana Plant

Local:

Pokok Pisang

Scientific Name:

Musa sp.

"No matter what we call it, poison is still poison, death is still death, and industrial civilization is still causing the greatest mass extinction in the history of the planet."

Derrick Jensen

Basil



A: Plant,

B: inflorescence

Name:

English: Basil

Local:

Pokok Selasih

Scientific Name:

Ocimum basilicum Linn.

"Nothing leads to good that is not natural."

Friedrich Schiller

Beach Oak

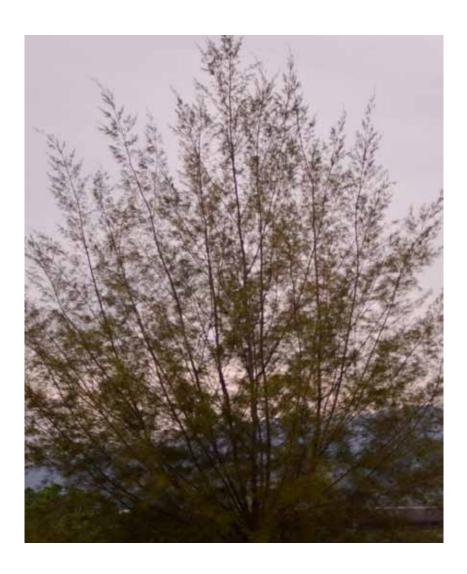
Name:

English : Common Ironwood

Local : Pokok Ru

Scientific Name:

Casuarina equisetifolia Linn.



"Let's serve as trustees, where we utilize our natural resources for the present and at the same time ensure happiness of future generations."

Narendra Modi

Bellyache Bush



A: Plant, B: fruits

Name:

English : Black Physicnut

Local:

Jarak Belanda

Scientific Name:

Jatropha gossypiifolia Linn.

"Yet, despite our many advances, our environment is still threatened by a range of problems, including global climate change, energy dependence on unsustainable fossil fuels, and loss of biodiversity."

Dan Lipinski

Bismarckia



A: Plant, B: fruits

Name:

English : Bismarckia

Local:

Not available

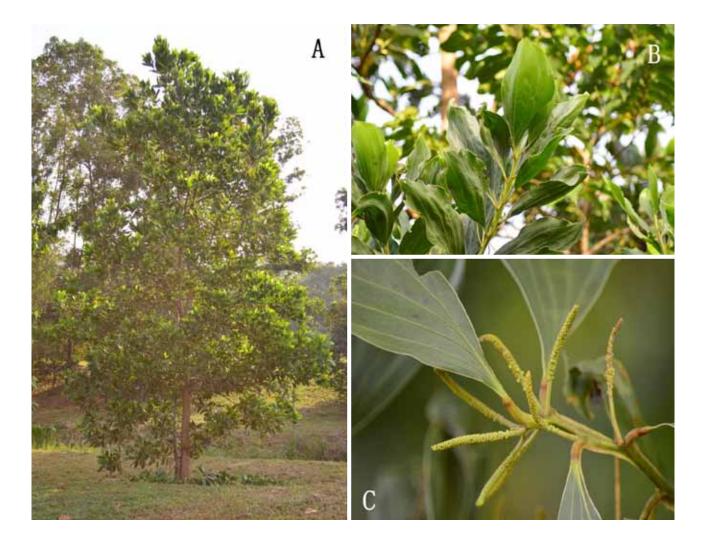
Scientific Name:

Bismarckia nobilis (Hildebrandt & H.Wendl.)

"We should preserve every scrap of biodiversity as priceless while we learn to use it and come to understand what it means to humanity."

E. O. Wilson

Black Wattle



A: Whole plant

B: leaves

C: close view of leaves and inflorescence

Name:

English: Hickory Wattle

Local:

Kayu Safoda

Scientific Name:

Acacia mangium (Willd.)

"It is not an investment if it is destroying the planet."

Vandana Shiva

Blady Grass



A: plant,

B: inflorescence

Name:

English: Blady Grass

Local : Lalang

Scientific Name :

Imperata sp.

"What is a weed? A plant whose virtues have not been discovered."

Ralph Waldo Emerson

Blue Egyptian Water Lily



A: Floating leaves of plant and flowers,

B: close-up view of a flower

Name:

English: ScaredBlue Lily

Local:

Seroja Merah

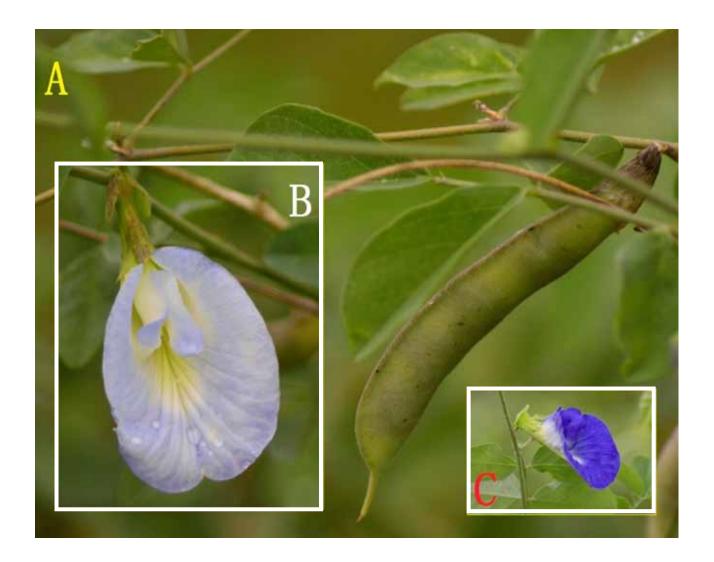
Scientific Name:

Nymphaea caerulea (Sav.)

"This is the moment when we must come together to save this planet. Let us resolve that we will not leave our children a world where the oceans rise and famine spreads and terrible storms devastate our lands."

Barack Obama

Blue Pea



A: Plant twig with a pod

B&C: flowers

Name:

English : Blue Pea

Local:

Pokok Telang

Scientific Name:

Clitoria ternatea Linn.

"The human spirit needs places where nature has not been rearranged by the hand of man."

Author Unknown

Breadfruit



A: breadfruit plant, B: leaves close-up, C: leaves and a fruit

Name:

English: Breadfruit Plant

Local : Pokok Sukun

Scientific Name : *Artocarpus altilis* Fosb.

"I love nature dearly and all creatures that contribute to make it what it is. I see the beauty in all expressions of life, and I see how blind so many of us still are. Our planet is remarkably abundant and there's more than enough for us all. It is greed and shortsightedness that create the illusion of scarcity."

Yossi Ghinsberg

Brinjal



Name:

English: Eggplant

Local : Terung

Scientific Name:

Solanum melongena Linn.

"Seeds have the power to preserve species, to enhance cultural as well as genetic diversity, to counter economic monopoly and to check the advance of conformity on all its many fronts."

Michael Pollan

Heart of Jesus



Name:

English: Heart of Jesus

Local : Keladi Merah

Scientific Name : *Caladium bicolor* (Aiton) Vent.

"Lack of accountability weakens the environmental and health rights of citizens; it damages peace-building and reconciliation initiatives; impedes the implementation of global health policies; leads to the loss of ecosystems and biodiversity; and weakens democracy, justice, human rights, and international security."

Widad Akrawi

Caladium humboldtii 'Wightii'



Name:

English : Caladium huboldtii

Local:

Not available

Scientific Name:

Caladium humboldtii (L.)Schott

"Destruction is a man's will, nevertheless prevention is also a man's will, and it's a man's choice to choose between Destruction and Prevention."

Babu Rajan

Indian-kale



Name:

English : Indian-kale

Local:
Not available

Scientific Name : *Caladium lindenii* (André) Madison

"Planet Earth is our shared island; let us join forces to protect it."

UN Secretary-General Ban Ki-moon

Hilo Beauty



Name:

English : Hilo Beauty

Local:

Not available

Scientific Name:

Caladium praetermissum (Bogner & Hett.)

"We are blessed to be a part of a culture where living in complete harmony with the environment is central to our ethos."

Narendra Modi

Calamondin Orange



Name:

English: Mush Lime

Local:

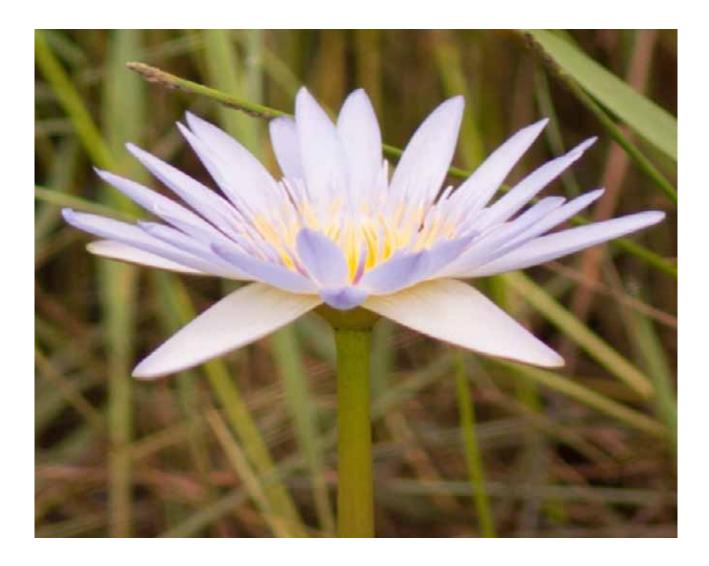
Limau Kesturi

Scientific Name:

Citrofortunella mitis (Blanco) J. Ingram & H.E. Moore "Unless we free ourselves from a dependence on these fossil fuels... we are condemning future generations to global catastrophe."

Barack Obama

Cape Blue Water Lily



Name:

English : Cape Blue Water Lily

Local:

Not available

Scientific Name:

Nymphaea capensis (Thunb.)

"No country can hide from the dangers of carbon pollution."

Barack Obama

Cashew



A: Whole tree,

B: leaves and inflorescence,

C: fruits

Name:

English: Cashew Plant

Local:

Jambu monyet

Scientific Name:

Anacardium occidentale Linn.

"Along with government efforts, people's participation can make a big difference in creating a cleaner and greener planet."

Narendra Modi

Cempedak





A: Whole tree, B: fruits

Name:

English : Cempedak

Local:

Buah Cempedak

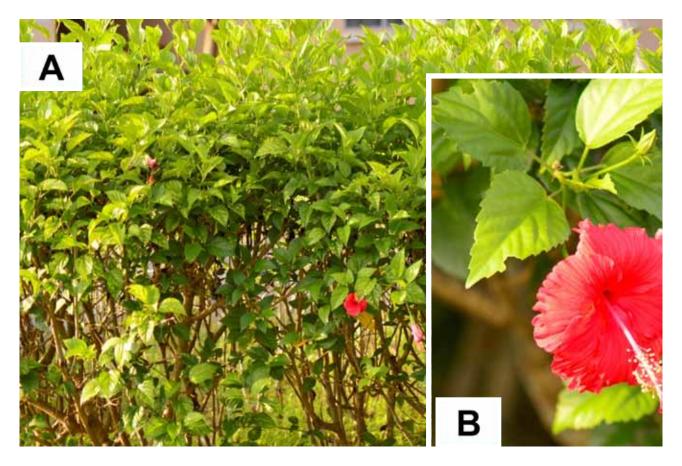
Scientific Name:

Artocarpus integer (Spreng.)

"The issue of climate change is one that we ignore at our own peril."

Barack Obama

Chinese Hibiscus



A: plants,

B: close-up view of leaves and a flower

Name:

English : Rose Mallow

Local : Bunga Raya

Scientific Name:

Hibiscus rosa-sinensis Linn.

"Plants give us oxygen for the lungs and for the soul."

Linda Solegato

Clitoria



Name:

English : Clitoria

Local:

Not available

Scientific Name:

Clitoria macrophylla (Wall.)

"I would feel more optimistic about a bright future for man if he spent less time proving that he can outwit Nature and more time tasting her sweetness and respecting her seniority."

E. B. White

Coat Buttons



A: Whole plant, B: Flower

Name:

English : Tridax Daisy

Local:

Songgo Langit

Scientific Name:

Tridax procumbens Linn.

"It is folly to think that we can destroy one species and ecosystem after another and not affect humanity. When we save species, we're actually saving ourselves."

Joel Sartore

Coconut



A: Coconut plant, B: fruits

Name:

English: Coconut Tree

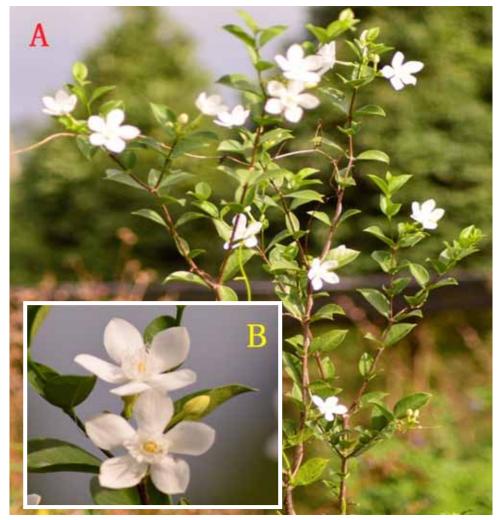
Local : Pokok Kelapa

Scientific Name: Cocos nucifera Linn.

"Only after the last tree has been cut down, only after the last river has been poisoned, only after the last fish has been caught, only then will you find that money cannot be eaten."

Cree Prophecy

Coral Swirl



A: Whole plant, B: Flower

Name:

English: Loroco

Local:

Not available

Scientific Name:

Wrightia antidysenterica (L.) Robert Brown "Earth provides enough to satisfy every man's needs, but not every man's greed."

Mahatma Gandhi

Crane Flower



Name:

English : Bird of Paradise

Local:

Not available

Scientific Name:

Strelitzia reginae (Aiton)

"If you want to save a species, simply decide to eat it. Then it will be managed – like chickens, like turkeys, like deer, like Canadian geese."

Ted Nugent

Cypressvine Morning Glory



Name:

English: Cardinal Vine

Local:

Not available

Scientific Name:

Ipomoea quamoclit Linn.

"Because normal human activity is worse for nature than the greatest nuclear accident in history."

Martin Cruz Smith

Dragon Fruit



Name:

English : Pitahaya

Local : Buah Naga

Scientific Name : *Hylocereus undatus* (Haworth) Britton & Rose

"Man has lost the capacity to foresee and to forestall. He will end by destroying the earth."

Albert Schweitzer

Drumstick Tree



Name:

English : Moringa

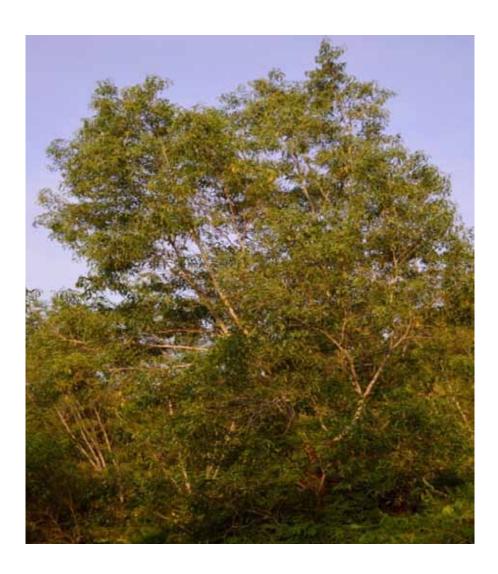
Local : Pokok Kelor

Scientific Name : *Moringa oleifera* (Lamark)

"Habitat loss, destruction and degradation of ecosystems, pollution, over-exploitation and climate change are among the powerful and persistent impacts that are running down the planet's nature-based capital, including the medical treasure trove of the world's biodiversity."

Achim Steiner

Earleaf Acacia



Name:

English: Northern

BlackWattle

Local : Pokok Akasia

Scientific Name:

Acacia auriculiformis (A.Cunn. ex Benth.)

"What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another."

Mahatma Gandhi

False Asoka



Name:

English : Indian Mast Tree

Local:
Not available

Scientific Name : *Polyalthia longifolia*(Sonnerat)

"It's not a choice between our environment and our economy; it's a choice between prosperity and decline."

Barack Obama

Ficus Tree



A: Whole plant B: Leaves and fruits

Name:

English: Weeping Fig

Local:

Pokok Ara Beringin

Scientific Name:

Ficus benjamina Linn.

"The fate of the climate, forests and agriculture are bound together. If agriculture and land use change continue to produce up to 30% of global greenhouse gases, this will mean further disaster and disruption from climate change."

Rachel Kyte

Garden Balsam



Name:

English : Garden Jewelweed

Local:

Pokok Keembong

Scientific Name:

Impatiens balsamina Linn.

"One of the most tragic things I know about human nature is that all of us tend to put off living. We are all dreaming of some magical rose garden over the horizon instead of enjoying the roses that are blooming outside our windows today."

Dale Carnegie

Garden Spurge



Name:

English : Asthma Plant

Local:

Not available

Scientific Name : *Euphorbia hirta* Linn.

"In a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace."

Wangari Maathai

Giant Crape-myrtle



Name:

English: Pride of India

Local : Bongor Biru

Scientific Name:

Lagerstroemia speciosa (L) Persoon "We need to recognize that slowing population growth is one of the most cost-effective and reliable ways of easing pressure on our environment and securing a sustainable future for us all."

Lionel Shriver

Goat-weed



A: Plant, B: flowers

Name:

English: Billygoat-weed

Local : Ketumbit

Scientific Name:

Ageratum conyzoides Linn.

"We're the only species that have crapped up the planet and the only species that can clean it up."

Dennis Weaver

Golden Bamboo





A: bunch of plants, B: leaves and seeds

Name:

English: Buddha's Belly

Bamboo

Local:

Buluh minyak

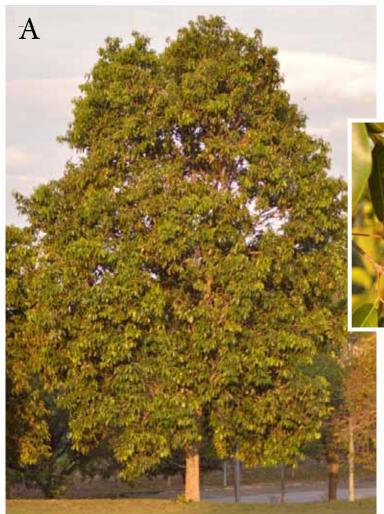
Scientific Name:

Bambusa vulgaris (Schrad. ex J.C.Wendl.)

"Overconsumption and overpopulation underlie every environmental problem we face today."

Jacques Cousteau

Jambul



B

A: Whole tree, B: leaves and fruits

Name:

English: Jambul tree

Local:

Pokok Jambu Keling

Scientific Name:

Syzygium cumini (Linn.) Skeels.

"Either we reduce the world's population voluntarily or nature will do this for us, but brutally."

Maurice Strong

Kaffir Lime



Name:

English : Kaffir Lime

Local:

Limau Purut

Scientific Name : *Citrus hystrix* DC.

"Everybody talks about population growth and its disastrous effect on climate change, food security and resource depletion, but nobody does anything about it."

Phil Harding

Kentina Palm



Name:

English: Thatch Palm

Local: Not available

Scientific Name:

Howea forsteriana (Becc.)

"The one process now going on that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us."

E. O. Wilson

Lotus



A: Leaves and flower, B: A flower

Name:

English : Scared Lotus

Local:

Bunga Seroja

Scientific Name:

Nelumbo nucifera (Gaertn.)

"Nature is so powerful, so strong. Capturing its essence is not easy - your work becomes a dance with light and the weather. It takes you to a place within yourself."

Annie Leibovitz

Madagascar Periwinkle



Name:

English : Cape Periwinkle

Local:

Bunga Tapak Dara

Scientific Name : *Catharanthus roseus*(L.) G.Don

"Climate change is a terrible problem, and it absolutely needs to be solved. It deserves to be a huge priority."

Bill Gates

Malay Variegated Bamboo



Name:

English : Malay Variegated

Bamboo

Local:

Bambu Putih

Scientific Name:

Bambusa glaucophylla

"Always do your best. What you plant now, you will harvest later."

Og Mandino

Mango



A: Whole tree,

B: inflorescence and young fruits,

C: mature fruits

Name:

English: Mango

Local : Mangga

Scientific Name:

Mangifera indica Linn.

"The conservation of agricultural biodiversity is a key option for the adaptation to climate change. For example, the conservation of wild relatives of food crops is considered an insurance policy for the future."

Think Tank, Convention on Biological Diversity

Mexican Bluebell



A: Plants, B: flower

Name:

English:

Britton's Wild Petunia

Local:

Not available

Scientific Name:

Ruellia simplex (C. Wright)

"If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people."

Chinese Proverb

Mexican Marigold



A: Plant, B: Flower

Name:

English: Aztec Marigold

Local:

Bunga Kembang Emas

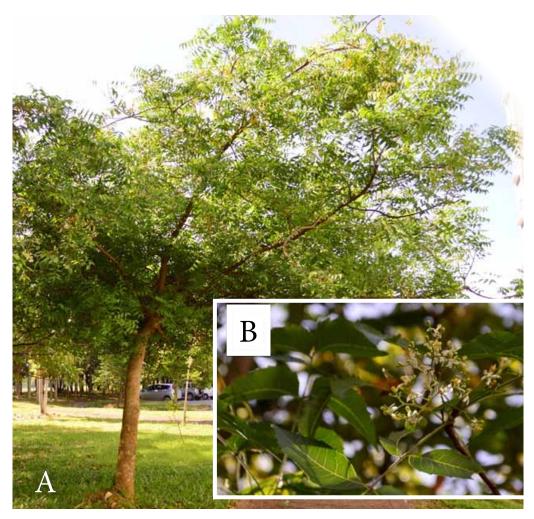
Scientific Name:

Tagetes erecta Linn.

"The good man is the friend of all living things.

Mahatma Gandhi

Neem



A: Whole plant, B: leaves and inflorescence

Name:

English : Indian Lilac

Local:

Pokok Mambu

Scientific Name:

Azadirachta indica (A.Juss.)

"Wood smoke definitely has a negative health impact."

Mark Lundberg

Okra



Name:

English: Lady's Finger

Local : Bendi

Scientific Name : *Abelmoschus esculentus*(L.) Moench

"We – human beings – are part of 'biodiversity'. We are dependent on the whole food chain down below us."

Darrell Merrell

Oldham's Bamboo



Name:

English : Giant Timber Baboo

Local : Not available

Scientific Name : *Bambusa oldhamii* (Munro.)

"To cherish what remains of the Earth and to foster its renewal is our only legitimate hope of survival."

Wendell Berry

Papaya



Name:

English: Papaya

Local : Betik

Scientific Name : *Carica papaya* Linn.

"The earth is like a beautiful bride, who needs no man-made jewels to heighten her loveliness."

Author Unknown

Paper flower



Name:

English: Lesser Bougainvillea

Local : Bunga Kertas

Scientific Name:

Bougainvillea glabra Choisy

"The wealth of the nation is its air, water, soil, forests, minerals, rivers, lakes, oceans, scenic beauty, wildlife habitats and biodiversity...that's all there is. That's the whole economy. That's where all the economic activity and jobs come from. These biological systems are the sustaining wealth of the world."

Gaylord Nelson

Persian Silk Tree



A: Whole tree, B: leaves, flower and pods

Name:

English: Pink Silk Tree

Local:

Not available

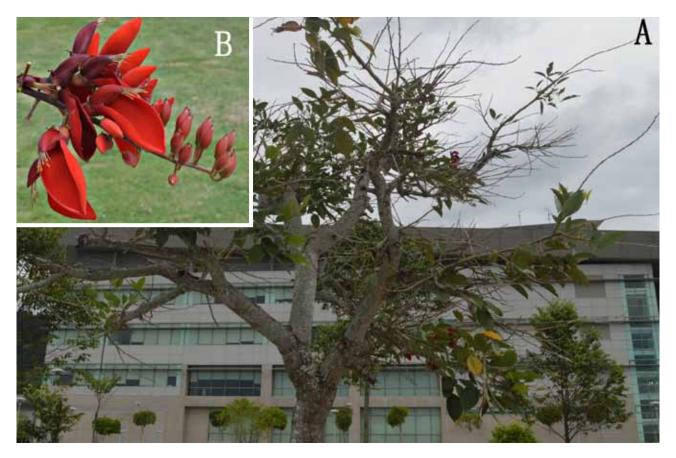
Scientific Name:

Albizia julibrissin Baker

"I used to worry that all the trees in the jungle would be cut down to make paper for their reports on how to save the rainforest!"

Nick Birch

Purple Coraltree



A: Plant, B: Inflorescence

Name:

English: Coral Bean Tree

Local:

Pokok Dedap Merah

Scientific Name:

Erythrina fusca (Lour).

"Forests are the world's air-conditioning system - the lungs of the planet - and we are on the verge of switching it off."

Prince Charles

Pygmy Water-lily



A: floating leaves with a flower,

B: a flower close-up

Name:

English : Star Lotus

Local:

Not available

Scientific Name:

Nymphaea nouchali (Burm. F.)

"Unless we practice conservation, those who come after us will have to pay the price of misery, degradation, and failure for the progress and prosperity of our day."

Gifford Pinchot

Red Ixora



A: Whole plant, B: flowers

Name:

English : Jungle Flame

Local:

Bunga Siantan

Scientific Name: *Ixora coccinea* Linn.

"My Rainforests Project ... has three main elements. Firstly, to determine how much funding the rainforest countries need to re-orientate their economies so that the trees are worth more alive than dead."

Prince Charles

Roselle



Name:

English : Roselle Fruit

Local:

Asam Belanda

Scientific Name:

Hibiscus sabdariffa Linn.

"We've got to pause and ask ourselves: How much clean air do we need?"

Lee Iacocca

Royal Palm



Name:

English : Florida Royal Palm

Local:

Not available

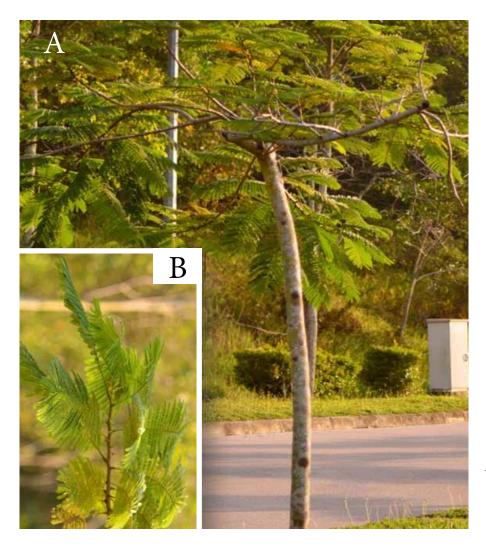
Scientific Name:

Roystonea regia (Kunth) O.F.Cook

"Plants to protect air and water, wilderness and wildlife are in fact plans to protect man."

Stewart Udall

Royal Poinciana



A: Whole plant, B: leaves

Name:

English : Flamboyant

Local:

Pokok Semarak Api

Scientific Name:

Delonix regia (Boj. ex Hook.) Raf.

"The major problems in the world are the result of the difference between how nature works and the way people think."

Gregory Bateson

Rubber Tree



Name:

English : Pará Rubber Tree

Local:

Pokok Getah

Scientific Name:

Hevea brasiliensis (Müll.Arg.)

"Not all chemicals are bad. Without chemicals such as hydrogen and oxygen, for example, there would be no way to make water, a vital ingredient in beer."

Dave Barry

Ruffled Fan Leaf Palm



Name:

English : Ruffled Fan Palm

Local:

Palas Payung

Scientific Name:

Licuala grandis (hort. ex W. Bull) H. Wendl.

"The Earth's biodiversity, much of which has yet to be discovered, provides a unique opportunity to improve not only the health of current but also that of future generations"

Ahmed Djoghlaf

Rumpf's Fig



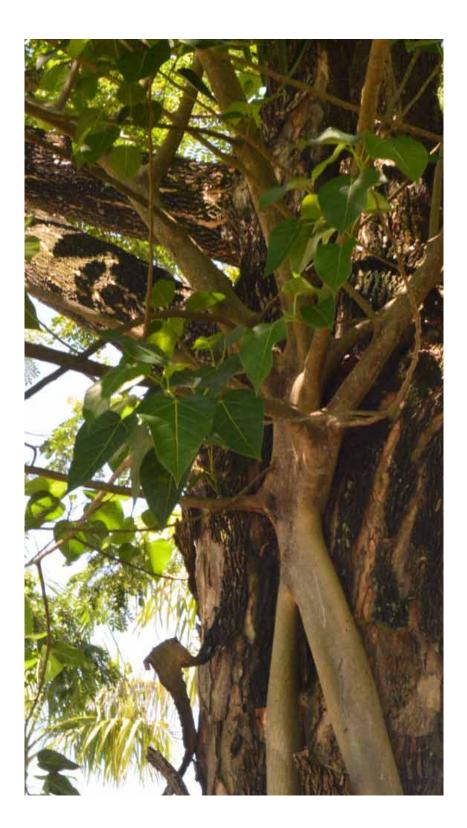
English: Mock Bodh Tree

Local : Pokok Ancak

Scientific Name: Ficus rumphii Blume

"People everywhere, and particularly the rural poor, depend on biodiversity for food, fuel, shelter, medicines and livelihoods."

Kemal Dervis



Sabi Star



Name:

English: Desert Rose

Local:

Kemboja Cina

Scientific Name:

Adenium obesum (Forssk.) Roem. & Schult.

"The fragrance of flowers spreads only in the direction of the wind. But the goodness of a person spreads in all directions."

Chanakya

"Someone's sitting in the shade today because someone planted a tree a long time ago."

Warren Buffett

Snake Plant



Name:

English: Mother-in-law's

Tongue

Local : Lidah Buaya

Scientific Name:

Sansevieria trifasciata (Prain)

"If a tree dies, plant another in its place."

Carl Linnaeus

Spanish Flag



A: Plant,

B: close-up view of leaves and flowers

Name:

English : West Indian Lantana

Local:

Pokok Bunga Tahi Ayam

Scientific Name:

Lantana camara Linn.

"Unless we can slow down the rapid extinction rate, which is currently being greatly accelerated by climate change, biodiversity loss will seriously jeopardize our prospects for achieving the Millennium Development Goals."

Kemal Dervis

Spider Lily



Name:

English : Beach Spider Lily

Local:

Krinum Bakung

Scientific Name:

Hymenocallis littoralis (L.f. ex Salisb.) Salisb.

"Mother Nature is our teacher—reconnecting us with Spirit, waking us up and liberating our hearts. When we can transcend our fear of the creatures of the forest, then we become one with all that is; we enter a unity of existence with our relatives—the animals, the plants and the land that sustains us."

Sylvia Dolson

Sugar Cane



Name:

English: Sugar Cane

Local : Tebu

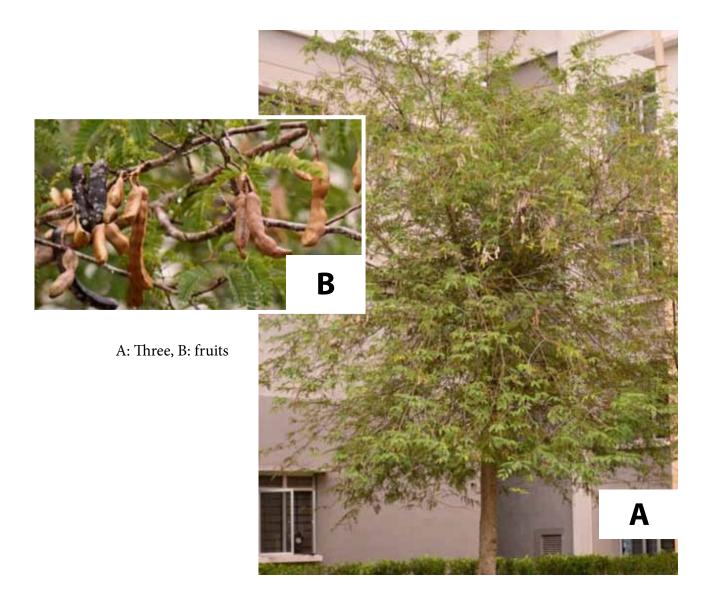
Scientific Name:

Saccharum officinarum Linn.

"I think still it is very fine not to want children. There are far too many people in the world. It is my contribution to ecology."

Helen Mirren

Tamarind



Name:

English: Tamarind

Local : Asam Jawa

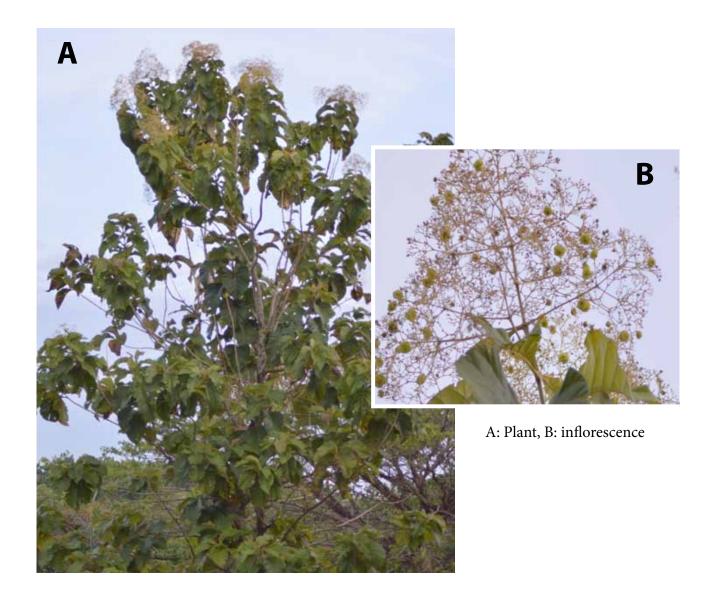
Scientific Name:

Tamarindus indica Linn.

"Unless we can ensure that the economy is kept subservient to our ecology, we will self-destruct."

Roger V Short

Teak



Name: English: Teak

Local : Pokok Jati

Scientific Name : *Tectona grandis* (L.f.)

"For in the true nature of things, if we rightly consider, every green tree is far more glorious than if it were made of gold and silver."

Martin Luther

Temple Tree



A: Plant, B: flowers

Name:

English : Common Frangipani

Local:

Kemboja Kuning

Scientific Name:

Plumeria rubra Linn.

"We are on track for a 3.5 °C rise by 2040 (i.e. 4.2 °C relative to pre-industrial)... When I look at this data, the trend is perfectly in line with a temperature increase of 6 °C, which would have devastating consequences for the planet. We have 5 years to change the energy system, or have it changed."

Fatih Birol

Touch-me-not



A: Whole plant, B: close-up of leaves and flower

Name:

English : Sensitive Plant

Local:

Pokok Semalu

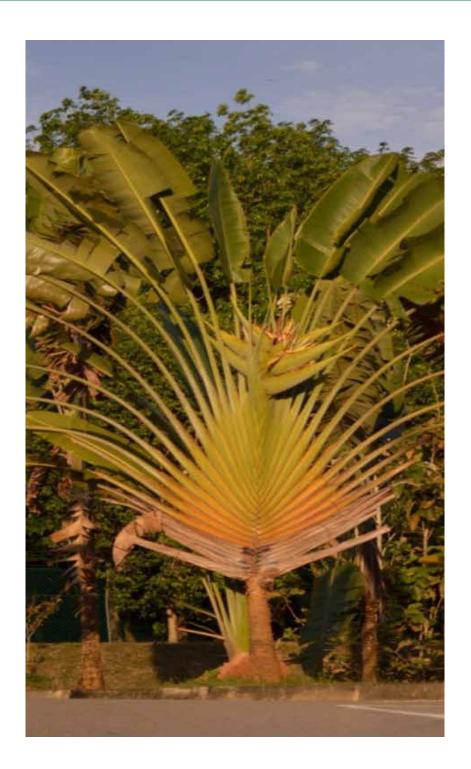
Scientific Name:

Mimosa pudica Linn.

"Burning one hectare of grassland gives off more damaging pollutants than 6000 cars. And we are burning in Africa, every single year, more than one billion hectares."

Allan Savory

Traveller's Palm



Name:

English: Traveller's Tree

Local:

Pokok Pisang Kipas

Scientific Name:

Ravenala madagascariensis (Sonn.)

"This World Environment Day, I would like to renew my pledge for a greener Malaysia, a legacy I can be proud of leaving not only to my children, but to the people's children as well."

Datuk Seri Najib Razak

Umbrella Papyrus



Name:

English : Umbrella Sedge

Local:

Not available

Scientific Name:

Cyperus alternifolius Linn.

"A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people."

Franklin D. Roosevelt

West Indian Lemon Grass



Name:

English : West Indian Lemon

Grass

Local : Serai

Scientific Name:

Cymbopogon citratus Stapf

"Everyone who considers themselves a realist will be forced to justify their behavior in light of their contribution toward the preservation of the environment."

Ernst von Weizacker

White Aubergines



Name:

English: Garden Egg

Local:

Terung Putih

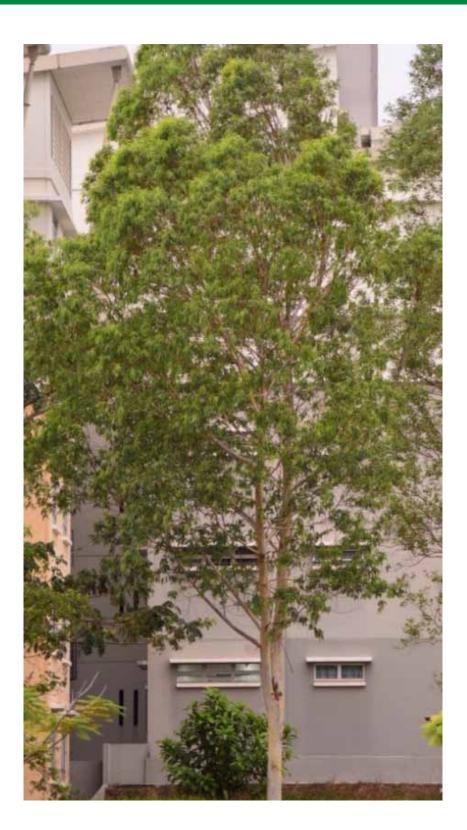
Scientific Name:

Solanum melongena Linn.

"When we realize we can make a buck cleaning up the environment, it will be done!"

Dennis Weaver

White Gum



Name:

English : Ribbon Gum

Local:

Not available

Scientific Name:

Eucalyptus viminalis Labill.

"Food waste is probably one of the worst things for global warming."

Datuk Seri Najib Razak

Whitelead Tree



Name:

English : White Popinac

Local : Petai Belalang

Scientific Name : Leucaena leucocephala (Lam.) de Wit "The climate challenge illustrates how we have to change. The developing countries need more support and opportunities to develop and use clean energy. Because if the current situation continues, then the world will not be able to handle this burden."

Gro Harlem Brundtland

Wild Peanut



Name:

English: Wild Groundnut

Local:

Kacang Tanah

Scientific Name:

Arachis hypogaea Linn.

"To me a lush carpet of pine needles or spongy grass is more welcome than the most luxurious Persian rug."

Helen Keller

Windamere Palm

Name:

English: Windamere Palm

Local:

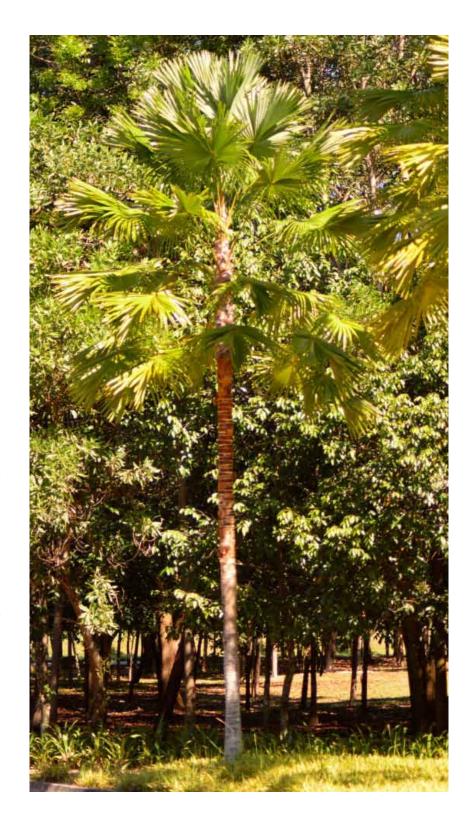
Not available

Scientific Name:

Trachycarpus latisectus (T.W.Spanner, H.J.Noltie & M.Gibbons)

"Out of all those millions and millions of planets floating around there in space, this is our planet, this is our little one, so we just got to be aware of it and take care of it."

Paul McCartney



GYMNOSPERMS / Platycladus



Name:

English : Oriental Thuja

Local:

Not available

Scientific Name:

Platycladus orientalis (L.) Franco

"The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources on the earth."

Frank Lloyd Wright

King Sago



Name:

English: Sago Cycad

Local : Not available

Scientific Name:

Cycas revolute (Thunb.)

"Global warming is a matter of national security. Will we live in a world where we must fight our neighbors for fresh water and food? Or will we take the lead now and leave to our children and grandchildren a world better off than the one we inherited from our parents?"

General Wesley Clark

PTERIDOPHYTES / Common Polypody



Name:

English: Common Polypody

Local:

Not available

Scientific Name:

Polypodium vulgare Linn.

"Climate change is not just another issue. It is the issue that, unchecked, will swamp all other issues. The only hope lies in all the countries of the world coming together around a common global project to rewire the world with clean energy. This is a path to peace --- peace among people, and peace between people and nature."

Ross Gelbspan

Uluhe Fern



Name:

English : Uluhe Fern

Local: Not avaialble

Scientific Name : *Dicranopteris linearis*(Burm.f.) Underw.

"The warnings about global warming have been extremely clear for a long time. We are facing a global climate crisis. It is deepening. We are entering a period of consequences."

Al Gore

MUSHROOM (FUNGI) / Common Earthball



Name:

English : Pigskin Poison

Puffball

Local:

Not Available

Scientific Name:

Scleroderma citrinum (Persoon)

"Let every individual and institutions now think and act as a responsible trustee of Earth, seeking choices in ecology, economics and ethics that will provide a sustainable future, eliminate pollution, poverty and violence, awaken the wonder of life and foster peaceful progress in the human adventure."

John McConnell

UNIDENTIFIED FLORA



A species from Pteridophytes group of plants

"Educating the mind without educating the heart is no education at all."

Aristotle

"Trees are the best monuments that a man can erect to his own memory. They speak his praises without flattery, and they are blessings to children yet unborn."

Lord Orrery



An unidentified plant species

"If our nation wants to reduce global warming, air pollution and energy instability, we should invest only in the best energy options. Nuclear energy isn't one of them."

Mark Z. Jacobson



An unidentified mushroom species

"Mushrooms are miniature pharmaceutical factories, and of the thousands of mushroom species in nature, our ancestors and modern scientists have identified several dozen that have a unique combination of talents that improve our health."

Paul Stamets



An unidentified mushroom species

"The cutting of primeval forest and other disasters, fueled by the demands of growing human populations, are the overriding threat to biological diversity everywhere."



An unidentified wood degrading mushroom species

"I think the environment should be put in the category of our national security. Defense of our resources is just as important as defense abroad. Otherwise what is there to defend?"

Robert Redford



An unidentified mushroom species

"Global climate change is real and we have a limited time to change our behavior or live with the consequences. We can all help by making small changes in our lives to letting our voice be heard by our governing bodies. As has always been the case in this country, if the people demand change, it will come."

Kyra Sedgwick



(**Photocredit :** Prof. M. Ravichandran)

Clavaria miniata mushroom species?

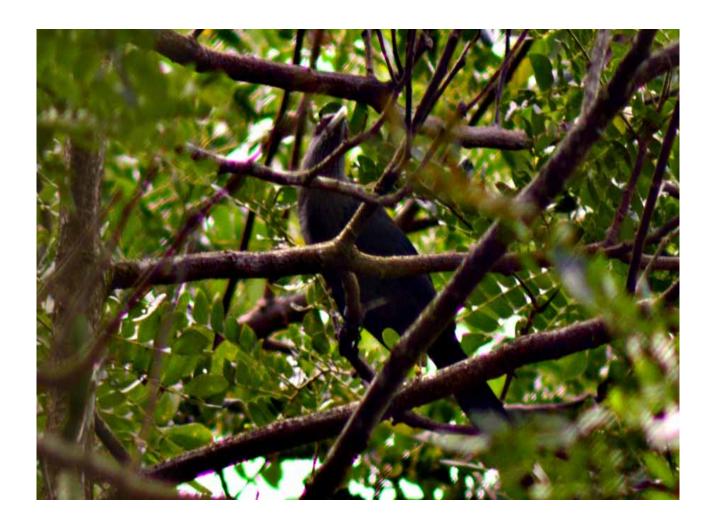
"There is no waste in functioning natural ecosystems. All organisms, dead or alive, are potential sources of food for other organisms. A caterpillar eats a leaf; a robin eats the caterpillar; a hawk eats the robin. When the plant, caterpillar, robin, and hawk die, they are in turn consumed by decomposers."

G. Tyler Miller, Jr.

Fauna



BIRDS / Asian Koel



Name:

English : Asian Koel

Local:

Tuwur Asia

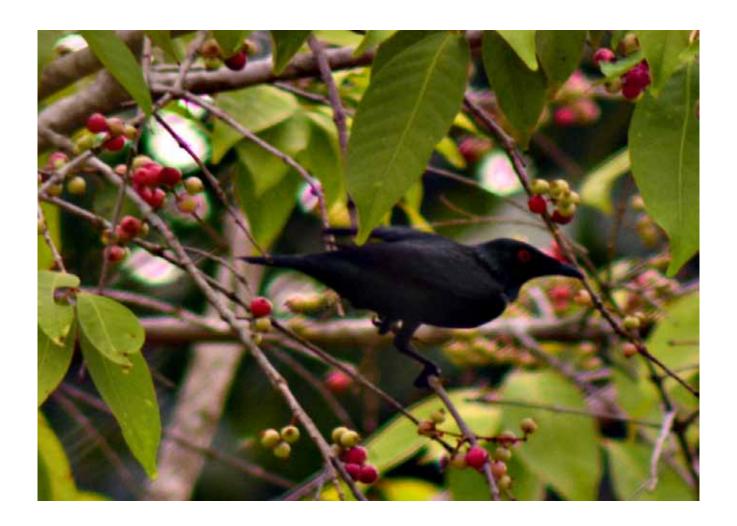
Scientific Name:

Eudynamys scolopaceus Linn.

"There is nothing in which the birds differ more from man than the way in which they can build and yet leave a landscape as it was before."

Robert Lynd

Asian Glossy Starling



Name:

English: Asian Glossy Starling

Local:

Perling Kumbang

Scientific Name:

Aplonis panayensis (Scopoli, 1783)

"All across the world, ...increasingly dangerous weather patterns and devastating storms are abruptly putting an end to the long-running debate over whether or not climate change is real. Not only is it real, it's here, and its effects are giving rise to a frighteningly new global phenomenon: the man-made natural disaster."

Barack Obama

Black Drongo



Name:

English: Black Drongo

Local:

Pasala Poligadu

Scientific Name:

Dicrurus macrocercus (Vieillot, 1817)

"Global warming threatens our health, our economy, our natural resources, and our children's future. It is clear we must act."

Eliot Spitzer

Brown Shrike



Name:

English : Brown Shrike

Local:

Burung Merbah

Scientific Name:

Lanius cristatus Linn.

"Conservation means development as much as it does protection. I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us."

Theodore Roosevelt

Chestnut-headed Bee-eater



A: Bee-eater, B: an individual going for hunting

Name:

English: Chestnut-headed Bee-eater

Local:

Berek berek Carik Dada

Scientific Name:

Merops leschenaultia (Vieillot, 1817)

"It is upsetting that many people don't seem to observe what's happening to the environment, what's happening in terms of global warming, the loss of habitats and wild things."

Joanne Woodward

Chinese Egret



Name:

English: Swinhoe's Egret

Local:

Bangau Cina

Scientific Name:

Egretta eulophotes (Swinhoe, 1860)

"We should preserve every scrap of biodiversity as priceless while we learn to use it and come to understand what it means to humanity."

E. O. Wilson

Chinese Pond-Heron



A: Individual resting under a tree, B: an individual taking off

Name:

English : Chinese Pond-Heron

Local : Not Available

Scientific Name : *Ardeola bacchus* (Bonaparte)

"Scientists themselves readily admit that they do not fully understand the consequences of our many-faceted assault upon the interwoven fabric of atmosphere, water, land and life in all its biological diversity. But things could also turn out to be worse than the current scientific best guess. In military affairs, policy has long been based on the dictum that we should be prepared for the worst case. Why should it be so different when the security is that of the planet and our long-term future?"

Prince Charles

Common Iora



Name:

English: Common Iora

Local:

Burung Kunyet Kecil

Scientific Name : Aegithina tiphia Linn.

"Natural species are the library from which genetic engineers can work. Genetic engineers don't make new genes, they rearrange existing ones."

Thomas Lovejoy

Common Myna



Name:

English : Indian Myna

Local:

Gembala Kerbau

Scientific Name:

Acridotheres tristis Linn.

"The tropical rain forests are a telling example. Once cut down, they rarely recover. Rainfall drops, deserts spread, the climate warms."

James Lovelock

Common Tailorbird



Name:

English : Common Tailorbird

Local:

Burung Perenjak Pisang

Scientific Name:

Orthotomus sutorius (Pennant)

"The nation's biological diversity has great economic, aesthetic, and spiritual value."

Ecological Society of America

Crested Serpent Eagle



Name:

English :Crested Serpent Eagle

Local:

Helang Berjambul

Scientific Name:

Spilornis cheela (Latham, 1790)

"Biodiversity is the greatest treasure we have... Its diminishment is to be prevented at all cost."

Thomas Eisner

Crow Phesant



(Photocredit: Prof. M. Ravichandran)

Name:

English: Greater coucal

Local:

Burung But-but Carik Anak

Scientific Name:

Centropus sinensis (Stephens, 1815)

"The essential role of the environment is still marginal in discussions about poverty. While we continue to debate these initiatives, environmental degradation, including the loss of biodiversity and topsoil, accelerates, causing development efforts to falter."

Wangari Maathai

Eurasian Tree Sparrow



Name:

English : Eurasian Tree

Sparrow

Local:

Burung Ciak Urasia

Scientific Name:

Passer montanus Linn.

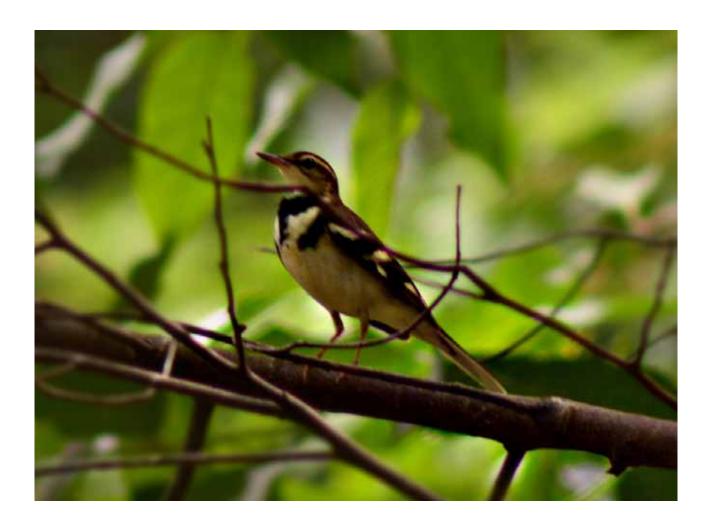
"We share this planet with many species. It is our responsibility to protect them, both for their sakes and our own."

Pamela A. Matson

"We must convince and empower people to adopt the conservation and sustainable use of biodiversity as their guiding principle."

Klaus Toepfer

Forest Wagtail



Name:

English : Forest Wagtail

Local : Kicuit Hutan

Scientific Name : *Dendronanthus indicus*(Gmelin, 1789)

"While I am a great believer in the free enterprise system and all that it entails, I am an even stronger believer in the rights of our people to live in a clean and pollution-free environment."

Barry Goldwater

Grey-capped Pygmy Woodpecker



Name:

English: Grey-capped Pygmy

Woodpecker

Local:

Burung Belatuk Belacan

Scientific Name:

Dendrocopos canicapillus (Blyth, 1845)

"He who plants a tree Plants a hope."

Lucy Larcom

"Scientists know we must protect species because they are working parts of our life-support system."

Paul Ehrlich

Jungle Myna



Name:

English : Jungle Myna

Local:

Burung Tiong Hutan

Scientific Name : *Acridotheres fuscus*(Wagler, 1827)

"Man can now fly in the air like a bird, swim under the ocean like a fish, he can burrow into the ground like a mole. Now if only he could walk the earth like a man, this would be paradise."

Tommy Douglas

Lesser Whistling Duck



Name:

 $English: Lesser\ Whistling$

Teal

Local : Itik Belibis

Scientific Name:

Dendrocygna javanica (Horsfield, 1821)

"The time has come to link ecology to economic and human development. When you have seen one ant, one bird, one tree, you have not seen them all. What is happening to the rain forests of Madagascar and Brazil will affect us all."

Olive-backed Sunbird



Name:

English: Yellow-bellied

Sunbird

Local : Burung Kelicap Bukit

Scientific Name: Cinnyris jugularis Linn.

"Now when you cut a Forest, an ancient forest in particular, you are not just removing a lot of big trees and a few birds fluttering around in the canopy. You are drastically imperiling a vast array of species within a few square miles of you. The number of these species may go to tens of thousands. ... Many of them are still unknown to science, and science has not yet discovered the key role undoubtedly played in the maintenance of that ecosystem, as in the case of fungi, microorganisms, and many of the insects."

Oriental Drawf Kingfisher



(Photocredit: Prof. M. Ravichandran)

Name:

English: Black-backed King-

fisher

Local:

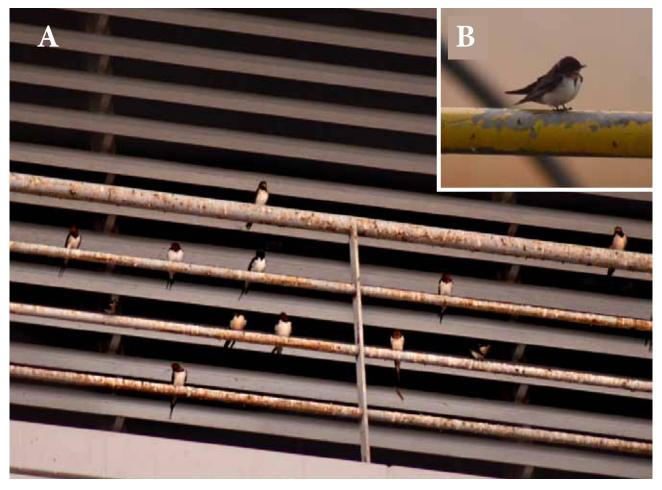
Not available

Scientific Name:

Ceyx erithaca Linn.

"[The natural world cleans water, pollinates plants and provides pharmaceuticals, among many other gifts.] Thirty trillion dollars' worth of services, scot-free to humanity, every year."

Pacific Swallow



A: Pack of swallows resting, B: close-up of an individual

Name:

English : Pacific Swallow

Local:

Burung layang-layang

Scientific Name:

Hirundo tahitica (Gmelin)

"The UNEP (United Nations Environment Programme) Green Economy report challenges the myth that there is a trade-off between the economy and the environment."

UN Secretary-General Ban Ki-moon

Paddyfield Pipit



Name:

English : Oriental Pipit

Local:

Burung Ciak Padang

Scientific Name:

Anthus rufulus (Vieillot)

"If we want to solve financial and environmental crises, we need to find a solution for both — and that solution involves green growth — sustainable growth."

Felipe Calderón

Red-wattled Lapwing



A: An alerted individual, B: an individual walking on the grass

Name:

English : Red-wattled

Lapwing

Local:

Rapang Minta Duit

Scientific Name:

Vanellus indicus (Boddaert)

"The most sustainable way is to not make things. The second most sustainable way is to make something very useful, to solve a problem that hasn't been solved."

Thomas Sigsgaard

Red Turtle Dove



Name:

English : Red Collared Dove

Local:

Burung Terkukur Merah

Scientific Name:

Streptopelia tranquebarica (Hermann)

"Sustainability is about ecology, economy and equity."

Ralph Bicknese

"Every time we lose a species we break a life chain which has evolved over 3.5 billion years."

Jeffrey McNeely

Rock Pigeon



Name:

English: Rock Dove

Local:

Burung Pergam Batu

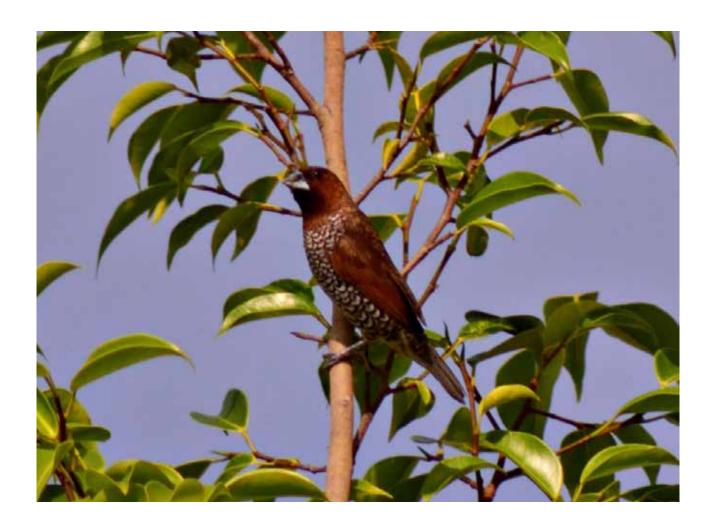
Scientific Name:

Columba livia (Gmelin)

"[Sustainability is] growth based on forms and processes of development that do not undermine the integrity of the environment on which they depend."

Jim MacNeill

Scaly-breasted Munia



Name:

English : Nutmeg Mannikin

Local:

Pipit pinang

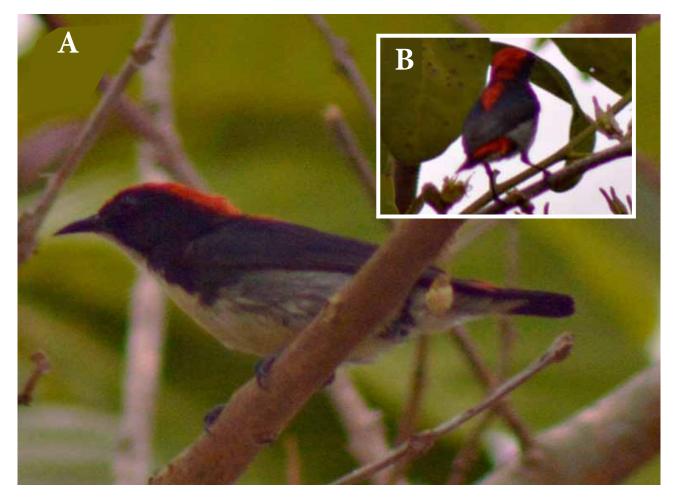
Scientific Name:

Lonchura punctulata Linn.

"People 'over-produce' pollution because they are not paying for the costs of dealing with it."

Ha-Joon Chang

Scarlet-backed Flowerpecker



A: Side view of the male bird, B: dorsal view of the male bird

Name:

English : Scarlet-backed

Flowerpecker

Local:

Sepah Puteri Merah

Scientific Name:

Dicaeum cruentatum Linn.

"Sustainability requires maintaining life-supporting natural capital in order for our socioeconomic goals to be met."

Warren Flint

Spotted Dove



Name:

English: Mountain Dove

Local : Burung Kuku

Scientific Name : *Spilopelia chinensis*(Scopoli, 1768)

"Today we're dumping 70 million tons of global-warming pollution into the environment, and tomorrow we will dump more, and there is no effective worldwide response. Until we start sharply reducing global-warming pollution, I will feel that I have failed."

Al Gore

White-bellied Sea Eagle



Name:

English : White-breasted Sea Eagle

Local:

Burung Lang Siput

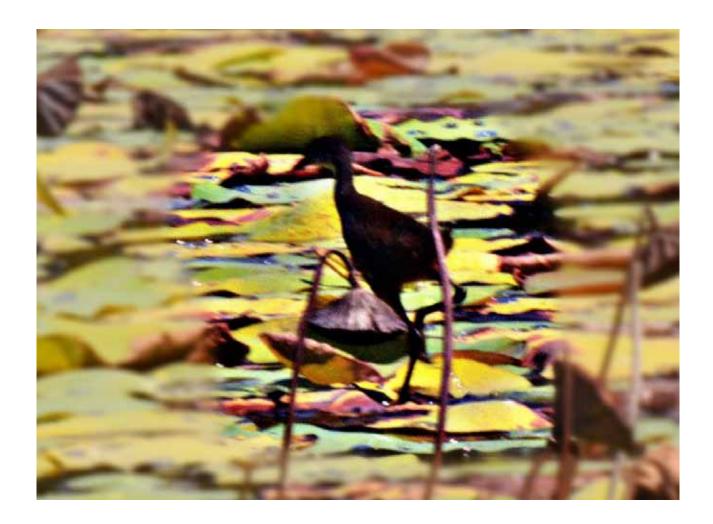
Scientific Name:

Haliaeetus leucogaster (Gmelin, 1788)

"I took the initiative in moving forward a whole range of initiatives that have proven to be important to our country's economic growth, environmental protection, improvements in our educational system."

Al Gore

White-breasted Waterhen



Name:

English : White-breasted Waterhen

.....

Local:

Burung Ruak-ruak

Scientific Name:

Amaurornis phoenicurus (Pennant)

"Consider what kind of car you get. Buy cars and other products that have the least impact environmentally."

Al Gore

White-throated Kingfisher



Name:

English : Smyrna Kingfisher

Local:

Pekaka Belukar

Scientific Name:

Halcyon smyrnensis Linn.

"As president, I will bring all the parties and stakeholders together. I am going to come up with a solution that respects the environment and does not cause an upheaval in the economy."

Al Gore

Yellow-vented Bulbul



Name:

English:

Yellow-vented Bulbul

Local:

Burung Merbah Kapur

Scientific Name:

Pycnonotus goiavier (Scopoli, 1886)

"Our goal is clear, that is to build an economy that protects the environment as well as an environment that supports the growth of the economy."

Sheikh Mohammed Bin Rashid Al Maktoum

Zebra Dove



Name:

English : Barred Ground

Dove

Local:

Burung Merbuk Balam

Scientific Name:

Geopelia striata Linn.

"The future of the world is in green and when we plan our future we must do so on the basis of green technologies."

Meles Zenawi

FISH / African Catfish



Name:

English : African Sharptooth Catfish

Local : Ikan Keli Afrika

Scientific Name: Clarias gariepinus (Burchell, 1822)

"Unless we change the way we produce and consume we will face a crisis in our natural resources. It is crucial that we make the necessary changes now rather than when we hit environmental tipping points."

Janez Potocnik

Comet Goldfish



Name:

English : Comet Goldfish

Local:

Ikan Mas Comet

Scientific Name:

Carassius auratus auratus Linn. "Our mother Earth brings us together in a universal brotherhood, but also in the duty that we all must feel to defend nature, biodiversity, the quality of water and air and the fertility of soil. Because you can't talk about food without talking about the environment."

Carlo Petrini

Koi



Name : English : Koi

Local : Ikan Koi

Scientific Name:

Cyprinus carpio haematopterus Linn.

"The current massive degradation of habitat and extinction of species is taking place on a catastrophically short timescale, and their effects will fundamentally reset the future evolution of the planet's biota."

National Academy of Sciences

Pangas catfish



Name:

English : Pangas catfish

Local : Ikan Patin

Scientific Name : *Pangasius pangasius*(F. Hamilton)

"Biodiversity is our nation's natural wealth. The Endangered Species Act safeguards these riches."

Judy L. Meyer

Snakehead Murrel



Name:

English : Striped Snakehead

Local:

Ikan Haruan

Scientific Name:

Channa striata (Bloch)

"Each species on our planet plays a role in the healthy functioning of natural ecosystems, on which humans depend."

William H. Schlesinger

Zebrafish



Name:

English: Zebrafish

Local : Ikan Zebra

Scientific Name:

Danio rerio (F. Hamilton)

"Once species become extinct, no corrective legislation can bring them back—they are gone forever."

Allen M. Solomon

REPTILES / Asian Forest Tortoise



(Photocredit: Prof. M. Ravichandran)

Name:

English : Asian Brown Tor-

toise

Local:

Not available

Scientific Name:

Manouria emys (Schlegel & Müller)

"Our moral and ethical responsibility is to protect other species in the spirit of husbandry rather than destroy them in and attitude of conquest."

Charles Southwick

Common Wolf Snake



(Photocredit: Prof. M. Ravichandran)

Name:

English : Common Wolf

Snake

Local:

Not available

Scientific Name:

Lycodon capucinus (F. Boie)

"Even if we act immediately, the world is doomed to lose many of its animal and plant species and this in turn will reduce the ability of ecosystems to deliver vital services to human populations. The Red List gives all of us a practical tool for raising awareness of the biodiversity crisis and for forging new partnerships within the international community."

Achim Steiner

Malayan Pit Viper



(Photocredit: Ms. Jannathul Firdous)

Name:

English : Malayan Pit Viper

Local:

Ular Kapak Bodoh

Scientific Name:

Calloselasma rhodostoma (Kuhl)

"As custodians of the planet it is our responsibility to deal with all species with kindness, love and compassion. That these animals suffer through human cruelty is beyond understanding. Please help to stop this madness."

Richard Gere

Water Monitor



Name:

English : Water Monitor

Local : Biawak Air

Scientific Name:

Varanus salvator (Laurenti)

"We cannot win this battle to save species and environments without forging an emotional bond between ourselves and nature as well - for we will not fight to save what we do not love."

Stephen Jay Gould

MAMMALS / Cat



Name:

English : Domestic cat

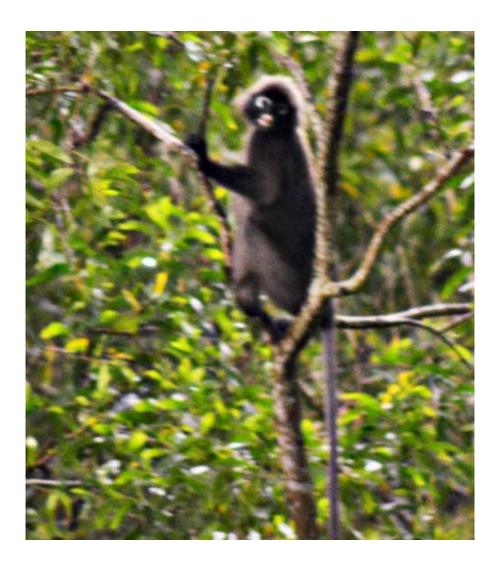
Local : Kucing

Scientific Name: Felis catus Linn.

"Nature is the foundation of business. Ecology sets the rules for economy. Thus, damaging nature is damaging business. Like cutting the branch we sit on."

Bouwe Taverne

Dusky Leaf Monkey



Name:

English: Spectacled leaf

monkey

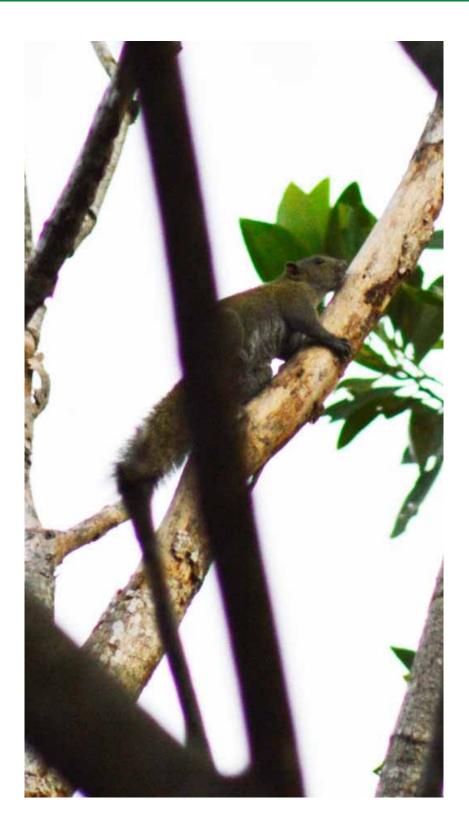
Local : Not available

Scientific Name : *Trachypithecus obscurus* (Reid)

"We've raised concerns for years about primates being in peril, but now we have solid data to show the situation is far more severe than we imagined."

Russell A. Mittermeier

Plantain Squirrel



Name:

English: Oriental Squirrel

Local:

Tupai Pinang

Scientific Name:

Callosciurus notatus (Boddaert)

"If you have forests, you can save primates."

Anthony Rylands

Wild Boar



(Photocredit: Prof. M. Ravichandran)

Name:

English: Wild Boar

Local : Babi Hutan

Scientific Name : Sus scrofa Linn.

"Destroying rainforest for economic gain is like burning a Renaissance painting to cook a meal."

Edward O. Wilson

AMPHIBIANS / Common Tree Frog



(Photocredit: Prof. M. Ravichandran)

Name:

English : Four-line Tree Frog

Local:

Katak-pohon Bergaris

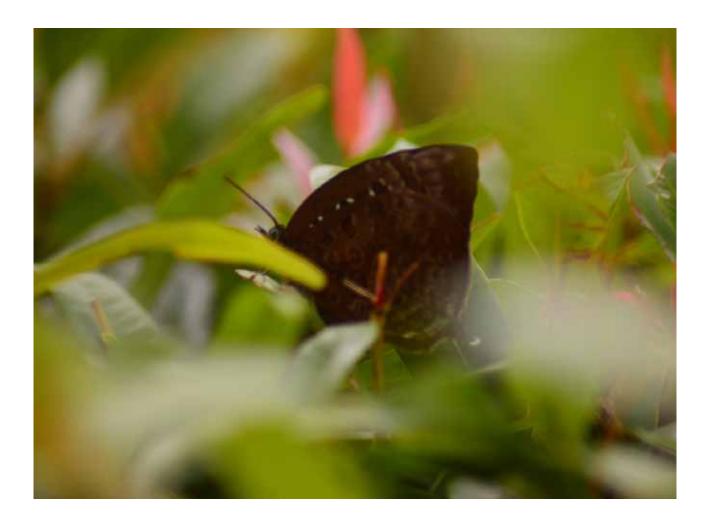
Scientific Name:

Polypedates leucomystax (Gravenhorst, 1829)

"We're losing biodiversity globally at an alarming rate, and we need a cornucopia of different plants and animals, for the planet's health and our own."

Diane Ackerman

INSECTS / Arhopala horsfieldi basiviridis



Name:

English : Not available

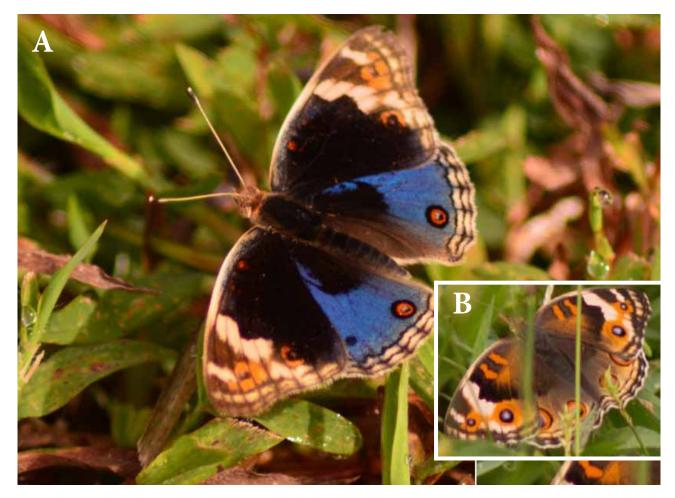
Local:

Not available

Scientific Name : Arhopala horsfieldi (Pagenstecher) "What the caterpillar calls the end of the world the master calls a butterfly."

Richard Bach

Blue Pansy



A: Male Individual, B: female individual

Name:

English: Blue Pansy

Local:

Not available

Scientific Name:

Junonia orithya Linn.

"Earth as an ecosystem stands out in the all of the universe. There's no place that we know about that can support life as we know it, not even our sister planet, Mars, where we might set up housekeeping someday, but at great effort and trouble we have to recreate the things we take for granted here."

Sylvia Earle

Common Field Grasshopper



Name:

English : Common Field Grasshopper

Local: Not available

Scientific Name : *Chorthippus brunneus*(Thunberg)

"One of the first conditions of happiness is that the link between Man and Nature shall not be broken."

Leo Tolstoy

Common Three Ring Butterfly



Name:

English : Common Three

Ring

Local:

Not available

ScientificName:

Ypthima pandocus corticaria (Butler,1879)

"Thirty-five (35) % of the world's crop production is dependent on pollinators such as bees, birds and bats. Hence, the conservation of the components of agricultural ecosystems that provide goods and services, such as natural pest control, pollination, and seed dispersal, should also be promoted."

Think Tank, Convention on Biological Diversity

Dark Small-branded Swift



Name:

English: Black Branded Swift

Local : Not available

Scientific Name:

Pelopidas mathias (Fabricius)

"The universe is so arranged that the power to destroy the climate or the ecosystem of your home planet only comes when you also have the wisdom to know that doing so is a fatal mistake. Therefore, any species that does that is suicidal, and will probably not qualify for any kind of help, from the powers of the universe, with fixing that error."

J.Z. Colby

Ditch Jewel



Name:

English : Orange Skimmer

Local:

Not available

Scientific Name:

Brachythemis contaminata (Fabricius)

"Don't cry because it's over, smile because it happened."

Dr. Seuss

Empress Cicada



(Photocredit: Prof. M. Ravichandran)

Name:

English: Empress Cicada

Local : Reriang

Scientific Name:

Megapomponia imperatorial (Westwood)

"By eating meat we share the responsibility of climate change, the destruction of our forests, and the poisoning of our air and water. The simple act of becoming a vegetarian will make a difference in the health of our planet."

Thích Nhất Hạnh

Flesh Fly



Name:

English : Flesh Fly

Local:

Not available

Scientific Name: Sarcophaga ruficornis

(Fabricius)

"In a world of seven billion people, set to grow to nine billion by 2050, wasting food makes no sense – economically, environmentally and ethically, aside from the cost implications, all the land, water, fertilizers and labour needed to grow that food is wasted – not to mention the generation of greenhouse gas emissions produced by food decomposing on landfill and the transport of food that is ultimately thrown away."

Achim Steiner

Giant Honey Bee



Name:

English : Giant Honey Bee

Local:

Lebah tualang

Scientific Name:

Apis dorsata (Fabricius, 1793)

"If the bee disappeared off the face of the earth, man would only have four years left to live."

Maurice Maeterlinck

Golden Ant



Name:

English : Golden Ant

Local:

Not available

Scientific Name:

Polyrhachis beccarii (Mayr)

"if all insects on Earth disappeared, within 50 years all life on Earth would end. If all human beings disappeared from the Earth, within 50 years all forms of life would flourish."

Biologist Jonas Salk

Leaf-footed bug



Name:

English : Squash Bug

Local:

Not available

Scientific Name:

Piezogaster indecorus (Walker)

"We have a mighty task before us. The earth needs our assistance."

Laurens van der Post

Lesser Banded Hornet



A: Browsing for food, B: nest

Name:

English: Lesser Banded

Hornet

Local : Tebuan

Scientific Name : Vespa affinis Linn.

"Float like a butterfly, sting like a bee."

Muhammad Ali

Neurothemis fulvia



Name:

English : Neurothemis fulvia

Local : Not available

Scientific Name:
Neurothemis fulvia
(Drury, 1773)

"The forests are dying, the rivers are dying, and we are called to act. To return Earth to harmony is to restore the harmonious principles within ourselves and to act as responsible caretakers - to save the forests and the waters for future generations."

Dhyani Ywahoo

Pied Paddy Skimmer



Name:

English : Pied Paddy

Skimmer

Local:

Not available

Scientific Name:

Neurothemis tullia (Drury)

"Wilderness recovery, I firmly believe, is the most important task of our generation."

Reed Noss

Red Cotton Stainer Bug



Name:

English : Red Cotton Stainer Bug

Local : Not Available

Scientific Name : *Dysdercus cingulatus*(Fabricius)

"In my view, climate change is the most severe problem that we are facing today, more serious even than the threat of terrorism."

Sir David King

Red-winged Dragonfly



Name:

English : Red-winged Dragonfly

•

Local : Not Available

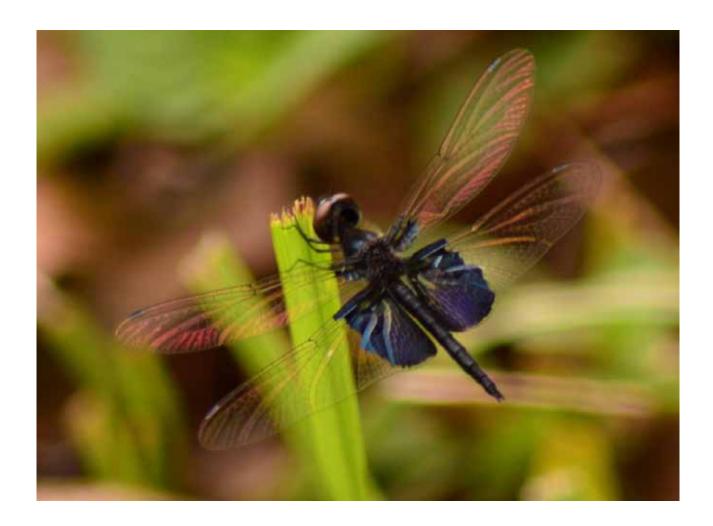
Scientific Name:

Neurothemis terminata (Ris)

"In nature there are neither rewards nor punishments; there are consequences."

Robert Green Ingersoll

Sapphire Flutterer



Name:

 $English: Sapphire\ Flutterer$

Local:

Not available

Scientific Name:

Rhyothemis triangularis (Kirby)

"One problem facing humanity is now so urgent that, unless it is resolved in the next two decades, it will destroy our global civilization: the climate crisis."

Dr. Tim Flannery

Slender Skimmer



Name:

English: Green Marsh Hawk

Local:

Not available

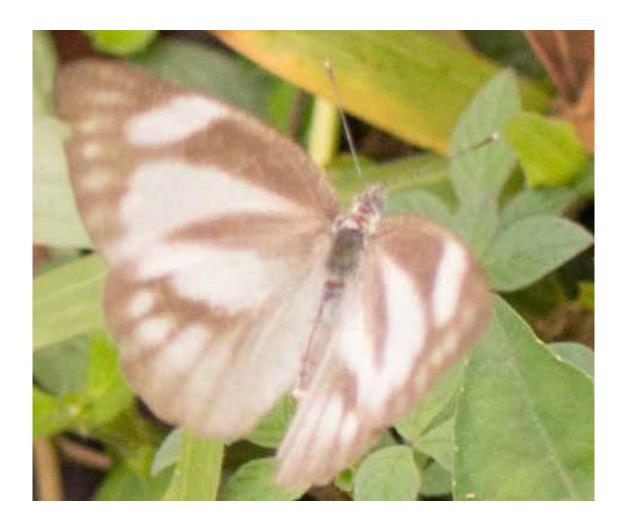
Scientific Name:

Orthetrum sabina (Drury)

"The greatest danger hanging over our children and grandchildren is initiation of changes that will be irreversible on any time scale that humans can imagine."

Dr. James Hansen ng

Striped Albatross



Name:

English : Striped Albatross

Local:

Not available

Scientific Name:

Appias libythea (Fabricius)

"There is good evidence that last year's European heat wave was influenced by global warming. It resulted in 26,000 premature deaths and cost \$13.5 billion."

Tony Blair

Tropical Carpenter Bee



A: Hovering individual, B: individual resting on a flower

Name:

English : Tropical Carpenter Bee

Local:

Kumbang Kayu

Scientific Name:

Xylocopa latipes (Drury)

"The Himalayan Glaciers on the Tibetan Plateau have been among the most affected by global warming. The Himalayas...provide more than half of the drinking water for 40% of the world's population...Within the next half-century, that 40% of the world's people may well face a very serious drinking water shortage, unless the world acts boldly and quickly to mitigate global warming."

Al Gore

Termite



Name:

English : Termite

Local : Anai-anai

Scientific Name : *Globitermes sulphureus*(Haviland)

"Climate change 'could spark more volcanoes, earthquakes, and tsunamis'."

Daily Mail

Weaver Ant



Name:

English : Orange Gaster

Local : Semut Api

Scientific Name :Oecophylla smaragdina (Fabricius)

"It is not enough to be busy. So are the ants. The question is: What are we busy about?"

Henry David Thoreau

GASTROPODA / East African Land Snail



Name:

English : Giant African Land Snail

Local : Siput Babi

Scientific Name:

Achatina fulica (Férussac)

"Coral reefs, the rain forest of the ocean, are home for onethird of the species of the sea. Coral reefs are under stress for several reasons, including warming of the ocean, but especially because of ocean acidification, a direct effect of added carbon dioxide. Ocean life dependent on carbonate shells and skeletons is threatened by dissolution as the ocean becomes more acid."

Dr. James Hansen

Garden Snail



Name:

English : Garden Snail

Local:

Not available

Scientific Name:

Helix aspersa (O. F. Müller)

"There is a deep interconnectedness of all life on earth, from the tiniest organisms, to the largest ecosystems, and absolutely between each person."

Bryant McGill

UNIDENTIFIED FAUNA





"To halt the decline of an ecosystem, it is necessary to think like an ecosystem."

Douglas P. Wheeler

Unidentified Fauna





"In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught."

Baba Dioum

Unidentified Fauna



"Living wild species are like a library of books still unread. Our heedless destruction of them is akin to burning the library without ever having read its books."

John Dingell

MESSAGES

"Biodiversity and the ecosystem services it provides are central to achieving the vision of a water secure world. [...] Where once the focus was on trade-offs between water use and biodiversity, today we are coming to understand how biodiversity and water security are mutually reinforcing."

UN Secretary-General Ban Ki-moon

"Member States have given us a mandate. The United Nations must respond by pursuing sustainability in all our operations, facilities and work practices. To do so, we will have to seek out and adopt the latest thinking and technology and be prepared to embrace – as well as advocate for – change. The journey has begun. We are working to reduce the environmental footprint of our peacekeeping missions, and our Nairobi and New York headquarters are setting new standards in energy efficiency. But, we still have a long road to travel."

UN Secretary-General Ban Ki-moon

Messages from UNEP Publications for

the International Day for Biological Diversity 2014

This year's International Day for Biological Diversity falls in the International Year of Small Island Developing States and is being observed under the theme of "Island Diversity".

For some 600 million island-dwellers -- nearly one-tenth of the world's population and representing one in three United Nations Member States -- biodiversity is integral to their subsistence, income, well-being and cultural identity.

Half the world's marine resources lie in island waters. Biodiversity-based industries such as tourism and fisheries account for more than half the gross domestic product of small island developing states. Coral reefs alone provide an estimated \$375 billion annual return in goods and services. Many island species on land and sea are found nowhere else on Earth. Legacies of a unique evolutionary heritage, they hold the promise of future discoveries -- from medicines and foods to biofuels.

Yet, reflecting a global pattern, island biodiversity is being lost at an unprecedented rate in the face of growing risks. Rising sea levels caused by climate change, ocean acidification, invasive alien species, overfishing, pollution and ill-considered development are taking a heavy toll. Many species face the prospect of extinction. People's livelihoods and national economies are suffering.

The process to define a post-2015 development agenda and the Third Conference on Small Island Developing States in Samoa in September of this year both offer opportunities to attend to the unique needs of small island developing states and reverse the global decline in biodiversity. Because of their vulnerability, small island developing states are demonstrating a growing understanding of the links between healthy ecosystems and human well-being. Many have made local, national and regional commitments to conserve and sustainably use biodiversity, including through ratifying important instruments such as the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. I call on all countries around the world to follow suit and ratify the Protocol without delay.

Around the world, many innovative partnerships are being forged to preserve marine and coastal resources, enhance resilience to climate change and develop sustainable tourism, fisheries and other industries. On this International Day, let us commit to adopting, adapting and scaling up best practices so we can protect fragile ecosystems for the benefit of all the islanders -- and indeed people everywhere -- who depend on them.

UN Secretary-General Ban Ki-moon

As we celebrate the 2014 International Day for Biological Diversity, let us celebrate the spirit of islands and work together for a sustainable future – a future of life in harmony with nature, the future we want.

Dr. Braulio Ferreira de Souza Dias, Executive Secretary of the Convention on Biological Diversity "Island biodiversity is not only about biodiversity of Small Island Developing States, it is about islands as ecosystems of global significance."

Dr. Spencer Thomas, Ambassador and Special Envoy for Multilateral Environmental Agreements, Government of Grenada

"I am not here to talk about saving islands; I am here to talk about saving the world."

The Honourable Tony A. deBRUM, Minister of Foreign Affairs, Republic of the Marshall Islands

"Islands are working together, getting results and showing the way to achieve the Aichi Biodiversity Targets but further action is urgently needed to conserve and protect the unique island ecosystems and surrounding seas"

> Dr. Braulio Ferreira de Souza Dias, Executive Secretary of the Convention on Biological Diversity

"The Global Island Partnership is an excellent example of intra-island partnership that we believe we must champion in Samoa. Connecting our islands, across our oceans, helping share ideas and also mobilise more resources for island initiatives."

H.E. James A. Michel, President of the Republic of Seychelles

"Protecting our natural resources is one of the biggest opportunities of our lifetime, and nowhere is it more evident than in the Caribbean."

Sir Richard Branson, Founder of Virgin Group

"We are charting a path for future generations, stressing the importance of conservation throughout the region."

Dr. the Right Honourable, Keith C. Mitchell, Prime Minister of Grenada

"In Palau, we like to say the environment is our economy and the economy is our environment."

H.E. Tommy E. Remengesau Jr., President of the Republic of Palau

"I believe that the related biosecurity and invasive species issues are absolutely critical to our region and should serve as a model for active and effective response by all of our governments. Aside from Climate Change, no other issue so dramatically alters our island landscapes than invasive species and the broader issues of biosecurity."

H.E. Tommy E. Remengesau, Jr., President of Palau

"The Small Islands, Big Difference campaign is a very exciting way for individuals, organizations, governments, or funding institutions to engage in conserving some of the most threatened species globally and therefore directly contribute to achieving the 2020 global targets set forth by the Convention on Biological Diversity"

Dr. Gustavo A.B. da Fonseca, Secretariat Global Environment Facility

"It is a common misconception that sea level rise is the greatest threat to small island countries, when in fact the declines of the coral reefs that help feed and protect us and contribute to our wealth and wellbeing is a more immediate threat to the economic viability and the very physical existence of many of our islands."

H.E. Ronny Jumeau, Ambassador for Climate Change and SIDS Issues Chair of the GLISPA Steering Committee, Republic of Seychelles

"If we view our Earth as an island, it becomes apparent that we must change course to ensure a healthy, sustainable world."

Nainoa Thompson, Executive Director, Polynesian Voyaging Society

"The Western Indian Ocean Coastal Challenge can become an example to the world on how to integrate climate change adaptation, ecosystem management, biodiversity conservation, clean energy for sustainable livelihoods with development."

Professor Rolph Payet, Minister for Environment and Energy, Republic of Seychelles

APPENDICES

APPENDIX-I: Themes of the International Day for Biological Diversity

No	Year	Theme
1.	2014	Island Biodiversity
2.	2013	Water and Biodiversity
3.	2012	Marine Biodiversity
4.	2011	Forest Biodiversity
5.	2010	Biodiversity, Development and Poverty Alleviation
6.	2009	Invasive Alien Species
7.	2008	Biodiversity and Agriculture
8.	2007	Biodiversity and Climate Change
9.	2006	Protect Biodiversity in Drylands
10.	2005	Biodiversity: Life Insurance for our Changing World
11.	2004	Biodiversity: Food, Water and Health for All
12.	2003	Biodiversity and poverty alleviation - challenges for sustainable development
13.	2002	Dedicated to forest biodiversity

APPENDIX-II: Themes of the World Environment Day

No	Year	Theme
1.	2014	Small Islands
2.	2013	Food Waste
3.	2012	Green Economy
4.	2011	Forests
5.	2010	Biodiversity
6.	2009	Climate Change
7.	2008	Low-Carbon Economies
8.	2007	Melting Ice
9.	2006	Deserts and Desertification
10.	2005	Green Cities
11.	2004	Seas and Oceans: Dead or Alive?
12.	2003	Water – Two Billion People are Dying for It!
13.	2002	Give Earth a Chance
14.	2001	Connect with the World Wide Web of Life
15.	2000	The Environment Millennium: Time to Act
16.	1999	Our Earth: Our Future
17.	1998	For Life on Earth: Save Our Seas
18.	1997	For Life on Earth
19.	1996	Our Earth, Our Habitat, Our Home
20.	1995	We the Peoples: United for the Global Environment
21.	1994	One Earth One Family
22.	1993	Poverty and the Environment: Breaking the Vicious Circle
23.	1992	Only One Earth, Care and Share
24.	1991	Climate Change. Need for Global Partnership

No	Year	Theme
25.	1990	Children and the Environment
26.	1989	Global Warming; Global Warning
27.	1988	When People Put the Environment First, Development Will Last
28.	1987	Environment and Shelter: More Than A Roof
29.	1986	A Tree for Peace
30.	1985	Youth: Population and the Environment
31.	1984	Desertification
32.	1983	Managing and Disposing Hazardous Waste: Acid Rain and Energy
33.	1982	Ten Years After Stockholm (Renewal of Environmental Concerns)
34.	1981	Ground Water; Toxic Chemicals in Human Food Chains
35.	1980	A New Challenge for the New Decade: Development Without Destruction
36.	1979	Only One Future for Our Children - Development Without Destruction
37.	1978	Development Without Destruction
38.	1977	Ozone Layer Environmental Concern; Lands Loss and Soil Degradation
39.	1976	Water: Vital Resource for Life
40.	1975	Human Settlements
41.	1974	Only one Earth

APPENDIX-III: Eighty (80) Ways to Celebrate the World Environment Day

No	Theme	
1.	Adopt a 'green' way of life	
2.	Art made of recycled materials	
3.	Auctions to benefit an environmental project	
4.	Award presentations for environmental competitions	
5.	Awareness campaigns	
6.	Bicycle parades/races	
7.	Broadcast of public service announcements (TV and Radio)	
8.	Buy a fuel-efficient car	
9.	Calculate your carbon footprint	
10.	Carpools	
11.	Celebrity support	
12.	Clean-up campaigns	
13.	Competitions (banner, drawing, essay, painting, poster, poetry)	
14.	Conferences on the environment	
15.	Debates on environment issues	
16.	Dedicate your blog to World Environment Day on 5 June	
17.	Distribute leaflets, brochures and posters	
18.	Donate to an environmental cause	
19.	Environmental education programmes in schools	
20.	Excursions to nature sites	
21.	Exhibitions (drawings, posters, photos, paintings)	
22.	Festivals	
23.	Film festivals on the environment	
24.	Give a gift membership of an environmental organisation	
25.	Guidelines to community-based environmental activities	
26.	Hoist banners at major road intersections	
27.	Help local environmental groups organise WED events	

No	Theme	
28.	Inform all your friends about WED	
29.	Involve various partners (NGOs, ministries, youth groups, celebrities, private sector)	
30.	Issue First Day Covers (stamps)	
31.	Join an environmental group	
32.	Join UNEP's carbon neutral network	
33.	Join the Billion Tree Campaign	
34.	Keep your neighbourhood clean	
35.	Kick-start an environmental campaign	
36.	Kick the CO2 habit!	
37.	Know your rights	
38.	Launch of government environment policies, books, reports	
39.	Lobby local authorities to adopt sound environmental policies	
40.	March for the environment	
41.	Media coverage and activities	
42.	Never litter	
43.	Offset your emissions	
44.	Organic farming/cooking	
45.	Organize a WED themed event in your neighbourhood	
46.	Parades	
47.	Performances (plays, songs, poetry)	
48.	Plant a tree	
49.	Plastic bags: avoid them!	
50.	Promotional material (t-shirts, stickers, bookmarks)	
51.	Puppet shows for children with an environmental message	
52.	Quizzes related to the theme for schools, youth groups, company staff, etc	
53.	Rainwater harvesting	
54.	Rallies	
55.	Ratify international environmental conventions	

No	Theme		
56.	Reduce, re-use, recycle		
57.	Rehabilitate natural habitats		
58.	Replace your light-bulbs with energy saving ones		
59.	Save paper		
60.	Seminars		
61.	Sort rubbish		
62.	Speeches		
63.	Sponsorship from private sector		
64.	Sports activities		
65.	Switch off stand-by TV and computer		
66.	Take action		
67.	T-shirts for WED		
68.	Use sustainable modes of transportation (walking, jogging, cycling, skating, carpool)		
69.	Vehicle emission monitoring		
70.	Vermicomposting		
71.	Visits to botanical gardens and national parks		
72.	Volunteer for organizations such as Clean Up the World		
73.	Waste less!		
74.	Workshops		
75.	Write plays, poems, songs		
76.	Write letters to civic leaders, members of parliament, government and newspapers		
77.	Xchange ideas		
78.	Xpect environmental responsibility		
79.	Youth-led activities		
80.	Zero emissions		

BIBLIOGRAPHY

- A Vision of a Sustainable UN 2020, a publication by United Nations Environment Programme (UNEP), 2012.
- Digital publications of United Nations Environment Programme (UNEP), www.unep.org (last accessed September 16, 2014).
- Flora and Fauna of National Chemical Laboratory, Edited by M. V. Deshpande and V. Ghormade, published by NCL, Pune, India, 2nd Edition, 2010.
- Natural History Museum Online Database, London, http://www.nhm.ac.uk/ (last accessed June 10, 2014).
- SCBD2014, The International Day for Biological Diversity (IDB2014) booklet, Published by the Secretariat of the Convention on Biological Diversity, 2014.
- The flora of the presidency of Bombay by Theodore Cooke, Taylor and Francis, London, 1903-08.
- United Nations Environment Programme (UNEP) Year Book 2014: Emerging Issues in Our Global Environment, 2014.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service, The PLANTS Database, http://plants.usda.gov/java/ (last accessed September 1, 2014).
- http://www.cbd.int/ (last accessed September 14, 2014).



graduated in B.Sc. (Honours) Biotechnology from the AIMST University. Currently, he is studying for his Master degree in Biotechnology at the AIMST University. He is passionate about nature and his hobbies includes bird-watching and hiking. He is always zealous photography of plants, animals and wildlife. He has a strong desire to become a scientist to serve the society.



M.Sc.-Botany degree from University of Pune (India) in 1996, and gained his PhD degree (in Genetics) from National University of Malaysia in 2005. In 2009, he was nominated for the AASIO (Association of Agricultural Scientists of Indian Origin) Young Scientist Award. Currently, he is serving as Associate Professor at the AIMST University. He has published more than 45 peer-reviewed articles. 11.850 submitted more than sequences in Gene Bank, and got more than 9 awards/fellowships. He is actively involved in research as well as teaching and advising of students. He conceived the whole idea of this book and implemented it with help of his student, a coauthor of this book, W. S. Tan. He can be reached at subhash@aimst.edu.my subhashbhore@gmail.com

To promote environmental awareness among the general public and politicians, June 5th of each year is marked as the 'World Environment Day' (WED) by the United Nations (UN) and it has been celebrated worldwide. Similarly, UN declared May 22 as the 'International Day for Biological Diversity' (IDB) to increase understanding and awareness of biodiversity issues. Publication of this book is a part of Associate Professor Dr. Subhash Bhore's efforts to highlight the macro-flora and fauna found in the AIMST University campus by taking the opportunity on the juncture of IDB2014, WED2014, and the 14th Birthday of the AIMST University. Book contains photographs of about 200 species of macro flora and fauna found within the AIMST University campus. Book highlights valuable thoughts of distinguished scientists, thinkers and lawmakers. It is expected that this book will help to promote awareness about the importance of biodiversity and the environment among students, their friends, parents, family members, teachers, and online readers of this book. E-Book version of this book is made available free of charge, so that any student and nature lover can download this book. Readers of this book's 'e-book' version are encouraged to distribute, forward, circulate and share 'e-book' copies of this book to promote awareness about the importance of biodiversity and the environment. Let us commit to conserve our biodiversity and environment to safeguard our future generations and human well-being.





ebook www.aimst.edu.my