

Annex 7A

Species Lists of Flora and Fauna

Table 7A.1 Plant Species Recorded in Secondary Woodland within Butterfly Valley.
(T=Tree, S=Shrub, H=Herb, C=Climber; A=Abundant, F=Frequent,
O=Occasional, S=Scarce)

Species	Growth form	Abundance	Conservation status
<i>Acronychia pedunculata</i>	T	A	Common
<i>Ailanthus fordii</i>	T	S	Rare & Protected
<i>Alpinia katsumadai</i>	H	O	Common
<i>Aporosa dioica</i>	T	A	Common
<i>Ardisia crenata</i>	H	O	Common
<i>Ardisia lindleyana</i> (<i>A. punctata</i>)	H	O	Common
<i>Ardisia quinquegona</i>	S	O	Common
<i>Artocarpus hypargyurus</i>	T	O	Restricted
<i>Carallia brachiata</i>	T	O	Common
<i>Carex cryostachyo</i>	H	O	Common
<i>Caesalpinia vernalis</i>	C	O	Common
<i>Celtis sinensis</i>	T	F	Common
<i>Cratoxylum cochinchinense</i>	T	O	Common
<i>Dalbergia benthamii</i>	C	F	Common
<i>Dalbergia hancei</i>	C	O	Common
<i>Dalbergia milletti</i>	C	F	Common
<i>Desmo chinensis</i> (<i>D. cochinchinensis</i>)	C	F	Common
<i>Diploclisia glaucescens</i>	C	A	Common
<i>Eurya nitida</i> (<i>E. japonica</i>)	S	O	Common
<i>Ficus fistulosa</i>	S	O	Common
<i>Ficus hispida</i>	S	F	Common
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	T	A	Common
<i>Gahmia tristis</i>	H	F	Common
<i>Garcinia oblongifolia</i>	T	F	Common
<i>Gnetum montanum</i>	C	F	Common
<i>Hemigramma decurrens</i>	H	O	Rare
<i>Hysepa nitida</i>	C	F	Common
<i>Ilex pubescens</i>	S	O	Common
<i>Ilex rotunda</i>	T	O	Common
<i>Itea chinensis</i>	T	F	Common
<i>Ixora chinensis</i>	S	S	Restricted
<i>Lasianthus trichophlebus</i>	S	O	Common
<i>Litsea glutinosa</i>	T	F	Common
<i>Litsea rotundifolia</i>	S	O	Common
<i>Microcos peniculata</i>	T	A	Common
<i>Millettia nitida</i>	C	F	Common
<i>Pandanus forceps</i>	H	O	Common
<i>Pandanus tectorius</i>	S	O	Common
<i>Persea breviflora</i> (<i>Machilus breviflora</i>)	T	O	Common
<i>Persea longipedunculata</i> (<i>Machilus thunbergii</i>)	T	O	Common
<i>Persea velutina</i> (<i>Machilus velutina</i>)	T	O	Common
<i>Phyllanthus cochinchinensis</i>	S	F	Common
<i>Psychotria rubra</i>	S	F	Common
<i>Psychotria serpens</i>	C	F	Common
<i>Pteris ensiformis</i>	H	F	Common
<i>Pteris fauriei</i>	H	O	Common
<i>Pteris semipinnata</i>	H	F	Common
<i>Schefflera octophylla</i>	T	F	Common
<i>Schizoloma heterophyllum</i>	S	F	Common
<i>Schizoloma orbiculatum</i>	S	F	Common
<i>Sterculia lanceolata</i>	T	A	Common

Species	Growth form	Abundance	Conservation status
<i>Syzygium hancei</i>	T	O	Common
<i>Syzygium jambos</i>	T	F	Common, introduces & naturalised
<i>Tarenna attenuata</i>	S	O	Common
<i>Tricalysia dubia</i>	S	O	Common
<i>Uvaria microcarpa</i>	C	O	Common
<i>Woodwardia japonica</i>	H	O	Restricted

Table 7A.2 Plant Species Recorded in Shrubland within Butterfly Valley. (T=Tree, S=Shrub, H=Herb, C=Climber; A=Abundant, F=Frequent, O=Occasional, S=Scarce)

Species	Growth form	Abundance	Conservation status
<i>Acronychia pedunculata</i>	S	F	Common
<i>Alpinia katsumadai</i>	H	O	Common
<i>Aporosa dioica</i>	S	F	Common
<i>Ardisia crenata</i>	S	O	Common
<i>Ardisia quinquegona</i>	S	O	Common
<i>Arundinaria cantori</i>	S	F	Common
<i>Carallia brachiata</i>	S	O	Common
<i>Celtis sinensis</i>	T	F	Common
<i>Cratoxylum cochinchinense</i>	T	F	Common
<i>Dalbergia benthamii</i>	C	F	Common
<i>Dalbergia hancei</i>	C	O	Common
<i>Dalbergia milletti</i>	C	F	Common
<i>Desmo chinensis</i> (<i>D. cochinchinensis</i>)	C	F	Common
<i>Dicranopteris linearis</i>	H	F	Common
<i>Diospyros vaccinioides</i>	S	F	Common
<i>Diploclisia glaucescens</i>	C	F	Common
<i>Eurya nitidum</i> (<i>E. japonica</i>)	S	O	Common
<i>Ficus hispida</i>	S	F	Common
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	T	F	Common
<i>Gahnia tristis</i>	H	F	Common
<i>Garcinia oblongifolia</i>	T	F	Common
<i>Gnetum montanum</i>	C	F	Common
<i>Gordonia axillaris</i>	S	F	Common
<i>Hysepa nitida</i>	C	F	Common
<i>Ilex pubescens</i>	S	O	Common
<i>Itea chinensis</i>	S	F	Common
<i>Lasianthus trichophlebus</i>	S	O	Common
<i>Litsea glutinosa</i>	S	F	Common
<i>Litsea rotundifolia</i>	S	O	Common
<i>Mallotus repens</i>	S	O	Common
<i>Microcos peniculata</i>	S	F	Common
<i>Millettia nitida</i>	C	F	Common
<i>Nephrolepis cordifolia</i>	H	O	Common
<i>Pandanus forceps</i>	H	O	Common
<i>Pandanus tectorius</i>	S	O	Common
<i>Phyllanthus cochinchinensis</i>	S	F	Common
<i>Psychotria rubra</i>	S	F	Common
<i>Psychotria serpens</i>	C	F	Common
<i>Pteris ensiformis</i>	H	F	Common
<i>Pteris fauriei</i>	H	O	Common
<i>Pteris semipinnata</i>	H	F	Common
<i>Schefflera octophylla</i>	T	F	Common
<i>Schizoloma heterophyllum</i>	H	F	Common
<i>Schizoloma orbiculatum</i>	H	F	Common
<i>Scleria ciliaris</i>	H	F	Common
<i>Strophanthus divaricatus</i>	C	F	Common
<i>Syzygium buxifolium</i>	S	O	Common
<i>Tinospora sinensis</i>	C	O	Common
<i>Trema orientalis</i>	S	F	Common
<i>Tricalysia dubia</i>	S	O	Common
<i>Zanthoxylum avicennae</i>	S	O	Common

Table 7A.3 Plant Species Recorded in Orchard within Butterfly Valley. (T=Tree, S=Shrub, H=Herb, C=Climber, A=Abundant, F=Frequent, O=Occasional, S=Scarce)

Species	Growth form	Abundance	Conservation status
<i>Ananas comosus</i>	S	F	Common
<i>Archontopheonix alexandrae</i>	T	O	Common
<i>Artocarpus heterophyllum</i>	T	O	Common
Bamboo	T	O	—
<i>Citrus maxima</i>	T	F	Common
<i>Citrus reticulata</i>	S	O	Common
<i>Clausena lansium</i>	T	F	Common
<i>Dimocarpus longan</i>	T	F	Common
<i>Dracaena</i> spp.	T	O	Common, exotic
<i>Eichornia crassipes</i>	H	O	Common, exotic
<i>Eriobotrya fragrans</i>	T	F	Common
<i>Hedychium coronarium</i>	H	O	Common
<i>Litchi chinensis</i>	T	F	Common
<i>Livistonia chinensis</i>	T	O	Common
<i>Mangifera indica</i>	T	F	Common
<i>Michelia alba</i>	T	F	Common
<i>Morus alba</i>	S	O	Common
<i>Musa paradisiaca</i> var. <i>sapientum</i>	T	F	Common
<i>Syngonium</i> spp.	H	F	Common, exotic
<i>Syzygium jambos</i>	T	F	Common

Table 7A.4 *Plant Species Recorded in Plantation within Butterfly Valley. (T=Tree, A=Abundant, F=Frequent, O=Occasional, S=Scarce plant)*

Species	Growth form	Abundance	Conservation status
<i>Acacia confusa</i>	T	A	Common, exotic
<i>Melaleuca leucadendron</i>	T	A	Common, exotic
<i>Eucalyptus citriodora</i>	T	F	Common, exotic
<i>Eucalyptus tereticornis</i>	T	O	Common, exotic
<i>Eucalyptus robusta</i>	T	F	Common, exotic
<i>Casuarina equisetifolia</i>	T	F	Common, exotic
<i>Bauhinia spp.</i>	T	O	Common, exotic

Table 7A.5 *Physical Parameters and Water Chemistry of the Sampled Streams in Butterfly Valley*

Parameter	Site 1	Site 2	Site 3
Physical Parameters			
Air temperature (°C)	28	28	28
Water temperature (°C)	25	25	25
Water depth (m)	0.25	0.2	0.3
Water Chemistry			
pH	6.7	6.8	6.8
Dissolved Oxygen (mg/l)	6.5	6.9	7.7
Nitrate (mg/lN)	2.7	2.2	1.8

Table 7A.6 Macroinvertebrates Sampled in Freshwater Streams within Butterfly Valley

Species	Site 1	Site 2	Site 3
Ephemeroptera			
Baetidae			
<i>Baetis</i> T3		1	
<i>Baetis</i> L7		1	2
<i>Baetis</i> L8	3	5	
Caenidae			
<i>Caenis</i> sp.	1	6	5
Heptageniidae			
<i>Electrogena</i> sp.			2
Leptophlebiidae			
<i>Choroterpes</i> sp.	2		4
Hemiptera			
Gerridae			
<i>Gerris</i> sp.		1	1
Trichoptera			
Rhyacophilidae			
<i>Rhyacophila</i> T1	2		
Philopotamidae			
<i>Chimarra</i> sp.			6
Hydropsychidae			
<i>Cheumatopsyche spinosa</i>	3	8	4
Hydroptilidae			
<i>Hydroptila</i> sp.			1
Coleoptera (larvae)			
Helodidae			
<i>Hydrocyphon</i> sp.	11	17	8
Diptera			
Tipulidae			
<i>Tipula</i> sp.		3	1
Chironomidae			
Chironominae	24	27	36
Tanypodinae	4	10	1
Orthocladiinae		3	5
Total taxa	8	11	13
Total abundance	50	82	76

Table 7A.7 List of Bird Species Recorded within Butterfly Valley.

Common Name	Scientific Name	Wet season	Dry season
Cattle Egret	<i>Bubulcus ibis</i>	✓	
Black Kite	<i>Milvus migrans</i>	✓	
Spotted Dove	<i>Streptopelia chinensis</i>	✓	✓
Grey Wagtail	<i>Motacilla alba</i>	✓	
Crested Bulbul	<i>Pycnonotus jocosus</i>	✓	✓
Chinese Bulbul	<i>Pycnonotus sinensis</i>	✓	✓
Violet Whilsting Thrush	<i>Myiophonus caeruleus</i>	✓	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	✓	✓
Long-tailed Tailor Bird	<i>Orthotomus sutorius</i>	✓	
Hwamei	<i>Garrulax canorus</i>	✓	
Grest Tit	<i>Parus major</i>	✓	✓
Japanese White Eye	<i>Zosterops japonica</i>	✓	✓
Flower Pecker spp	<i>Dicaeum spp.</i>	✓	
Large-billed Crow	<i>Corvus macrohynchus</i>	✓	
Common Tailor Bird	<i>Orthotomus sutorius</i>		✓
Tree Sparrow	<i>Passer montanus</i>		✓
Black-faced Laughing Thrush	<i>Garrulax perspicillatus</i>		✓
Blue Magpie	<i>Urocissa erythrorhynchos</i>		✓
Magpie	<i>Pica pica</i>		✓
Greater Coucal	<i>Centropus sinensis</i>		✓
Grey-backed Thrush	<i>Turdus hortulorum</i>		✓
Fork-tailed Sunbird	<i>Aethopyga christinae</i>		✓
Buzzard	<i>Buteo buteo</i>		✓
Rufous-backed Shrike	<i>Lanius schach</i>		✓

Table 7A.8 *List of Herpetofauna Species Recorded within Butterfly Valley.*

Common Name	Scientific Name
Changeable Lizard	<i>Calotes versicolor</i>
Long-tailed Skink	<i>Mabuya longicaudata</i>
Red-necked Keelback	<i>Rhabdophis subminiata</i>
Asian Common Toad	<i>Bufo melanostictus</i>
Paddy Frog	<i>Rana limnocharis</i>

Table 7A.9 *List of Butterfly Species Recorded within Butterfly Valley.*

Common Name	Scientific Name
Gaudy Baron	<i>Euthalia lubentina</i>
Paris Peacock	<i>Papilio paris</i>
Common White	<i>Pieris canidia</i>
Common Bush Brown	<i>Zizeeria maha</i>
Common Black Jezebel	<i>Zizina otis</i>
Pale Grass Blue	<i>Papilio memnon</i>
Lesser Grass Blue	<i>Mycalesis horsfieldii</i>
Citrus Swallowtail Butterflies	<i>Delias aglaja</i>