

## **Preliminary List of Larger Vertebrates in the Pantı Forest Reserve, South Johore (2002-2006)**

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### **Introduction**

The 275 km<sup>2</sup> Pantı Forest Reserve of South-Eastern Johore, though not subjected to any long-term form of large-scale protection yet, is home to a remarkably rich diversity of terrestrial vertebrates. This is due largely to its rich assemblage of habitats, a combination of freshwater swamp forest, lowland and hill dipterocarp forest as well as smaller remnants of submontane and heath forests which are slightly more impoverished as far as biodiversity is concerned. Totally cleared area contain some scrub (ferns and alang-alang) and *belukar* cover, which attract many widespread open-country species.

Currently, very little primary forest formations remain and large proportions of the biodiversity-rich plains level forest are only secondary in nature, obvious as seen from the forest's reduced stature and absence of large dipterocarp trees. It is thus very surprising that many of the stenotopic forest birds and some large mammals are still able to survive despite the degraded nature of the forests, though this may not exactly last and numerous extinction events will predictably materialize in the foreseeable future. Forest Phasianids, for example have apparently been less tolerant to habitat disturbance, with only a meager 2 species definitely noted (*Argusianus argus* & *Rollulus roulroul*) within the survey period of 5 years, from 2002 – 2006, and furthermore at low frequencies. Nevertheless, from a biological perspective, Pantı remains very important. Pantı Forest Reserve, located in the southern Malay Peninsula falls near the heart of the 'Sundaland Biodiversity Hotspot' which is widely recognized as among the richest regions on Earth for biodiversity, and ranked only second in the world after the Tropical Andes for combined species diversity and endemism (*Mittermeier et al*, 1999). Surveys and observations made in the past and present have revealed that the reserve continue to support entire communities of Sundaic plants and animals, especially the larger flagship vertebrates like Malayan Tapir, Tiger, Great Argus and Hornbills.

### **Methods**

A total of 52 visits were made to various lowland sectors of the Pantı Forest Reserve within the 5 year period from 2002 April to 2006 August. Areas visited included the Kampung Lukut trails situated along the road to the Kota Tinggi Waterfalls, the Hutan Lipur Pantı (Pantı Recreational Forest trail), the 270 km and the 267 km milestones logging trails. Habitats that are found along these trails are predominantly logged and encompass mostly regenerating secondary lowland evergreen forest, although small patches of primary lowland evergreen forest can be found along the hill slopes and less accessible ridges. There are also remnant patches of waterlogged freshwater swamp forests, heath forest and acacia scrub. On all visits, birds were counted on a transect basis and day censuses of all species' numbers were made. Counts were made by slowly walking along transects and noting all species and their corresponding numbers by either calls or sightings.

## Larger Vertebrates of Panti Forest Reserve

### Format

The sequence used here follows (*Jeyarajasingam & Pearson, 1999*). This list includes every species recorded by the author, compiled from some 52 odd trips made throughout Panti Forest Reserve from mid-2002 to mid-2006 and details a total of 247 bird (including some 109 Sunda endemics), 26 mammal and 22 reptile species. Statuses given here indicate whether a species is a resident species, a wintering/passage migrant species or merely a vagrant species. Additional remarks in the context of this list, either describes abundance levels, breeding as well as habitat types normally associated with that corresponding species. Breeding (particularly for birds) here is meant by observations of immature/juvenile birds or recorded active nesting. Mammal breeding data is detailed from observations of juveniles or babies. Species noted as locally rare/rare are recorded less than 5 times in 50 trips, indicating an average encounter rate of 10% and below. Uncommon species are recorded with 50% chance and below. The remaining species are more or less regular being fairly common or even abundant (e.g. Green Iora).

### The List. Part I: Birds

S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
1	Purple Heron	<i>Ardea purpurea</i>	R	Locally rare	M/OC	Unrecorded
2	Chinese Pond Heron	<i>Ardeola bacchus</i>	WV	Locally rare	M/OC	Unrecorded
3	Little Heron	<i>Butorides striatus</i>	R/WV	Locally rare	M/OC	Unrecorded
4	White-bellied Fish-Eagle	<i>Haliaeetus leucogaster</i>	R/V	Locally rare	M/OC/F	Unrecorded
5	<b>Grey-headed Fish-Eagle</b>	<b><i>Ichthyophaga ichhyaetus</i></b>	R	Locally rare	LF	Bred?
6	Changeable Hawk-Eagle	<i>Spizaetus cirrhatus</i>	R	Common	LF/OC	Bred?
7	Blyth's Hawk-Eagle	<i>Spizaetus alboniger*</i>	R	Uncommon	LF/HF	Has Bred
8	Rufous-bellied Eagle	<i>Hariaeetus kienerii</i>	R/WV	Locally rare	LF	Unrecorded
9	Japanese Sparrowhawk	<i>Accipiter gularis</i>	WV/PM	Rare	LF/OC	Unrecorded
10	Crested Goshawk	<i>Accipiter trivirgatus</i>	R	Locally rare	LF	Unrecorded
11	Crested Serpent-Eagle	<i>Spilornis cheela</i>	R	Common	LF/HF	Unrecorded
12	Oriental Honey-Buzzard	<i>Pernis ptilorhyncha</i>	WV/PM	Uncommon	LF/OC	Unrecorded
13	Bat Hawk	<i>Macheirhamphus alcinus</i>	R	Locally rare	LF/HF	Bred?
14	Black-thighed Falconet	<i>Microhierax fringillarius*</i>	R	Uncommon	LF/OC	Unrecorded
15	<b>Great Argus Pheasant</b>	<b><i>Argusianus argus*</i></b>	R	Uncommon	LF/HF	Unrecorded
16	<b>Crestless Fireback*</b>	<b><i>Lophura erythrophthalma*</i></b>	R	Locally rare	LF	Unrecorded
17	Red Junglefowl	<i>Gallus gallus</i>	R	Uncommon	LF/OC	Unrecorded
18	<b>Crested Wood-Partridge</b>	<b><i>Rollulus roulroul*</i></b>	R	Locally rare	LF	Unrecorded
19	Red-wattled Lapwing	<i>Vanellus indicus</i>	R/V	Locally rare	OC	Unrecorded
20	Pink-necked Green-Pigeon	<i>Treron vernans</i>	R	Common	OC/M	Unrecorded
21	Little Green-Pigeon	<i>Treron olax*</i>	R	Common	LF	Unrecorded
22	Thick-billed Green-Pigeon	<i>Treron curvirostris</i>	R	Uncommon	LF	Unrecorded
23	<b>Cinnamon-headed Green-Pigeon</b>	<b><i>Treron fulvicollis*</i></b>	R	Uncommon	LF/M	Unrecorded
24	Emerald Dove	<i>Chalcophaps indica</i>	R	Common	LF/OC	Has Bred
25	<b>Jambu Fruit-Dove</b>	<b><i>Ptilinopus jambu*</i></b>	R/RM	Locally rare	LF/HF	Unrecorded
26	Spotted Dove	<i>Streptopelia chinensis</i>	R	Locally rare	OC	Unrecorded
27	Green Imperial Pigeon	<i>Ducula aenea</i>	R	Locally rare	LF	Unrecorded
28	<b>Long-tailed Parakeet</b>	<b><i>Psittacula longicauda</i></b>	R	Uncommon	LF/OC	Has Bred
29	Blue-crowned Hanging-Parrot	<i>Loriculus galgulus*</i>	R	Common	LF/HF	Unrecorded
30	<b>Blue-rumped Parrot</b>	<b><i>Psittinus cyanurus*</i></b>	R	Common	LF/HF	Unrecorded
31	Malaysian Hawk Cuckoo	<i>Hierococcyx fugax*</i>	R	Uncommon	LF	Unrecorded

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S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
32	Hodgson's Hawk Cuckoo	Hierococcyx nicolor	WV	Rare	LF/OC	Unrecorded
33	Indian Cuckoo	Cuculus micropterus	R/WV	Uncommon	LF/HF	Unrecorded
34	Drongo Cuckoo	Surniculus lugubris	R/WV	Common	LF/HF	Unrecorded
35	Violet Cuckoo	Chrysococcyx xanthorhynchus	R	Common	LF/HF	Has Bred
36	Asian Emerald Cuckoo	Chrysococcyx maculatus	WV/R?	Rare	LF/OC	Unrecorded
37	Little Bronze Cuckoo	Chrysococcyx malayanus	R	Locally rare	OC/M	Unrecorded
38	Banded Bay Cuckoo	Cacomantis sonnerati	R	Common	LF/OC	Unrecorded
39	Rusty-breasted Cuckoo	Cacomantis sepulchralis	R	Uncommon	LF/OC	Unrecorded
40	Plaintive Cuckoo	Cacomantis merulinus	R	Locally rare	OC	Unrecorded
41	<b>Chestnut-bellied Malkoha</b>	<b>Phaenicophaeus sumatranus*</b>	R	Common	LF/M	Has Bred
42	Chestnut-breasted Malkoha	Phaenicophaeus curvirostris*	R	Common	LF/HF	Unrecorded
43	Red-billed Malkoha	Phaenicophaeus rubrirostris*	R	Uncommon	LF/HF	Unrecorded
44	Raffle's Malkoha	Phaenicophaeus chlorophaeus*	R	Common	LF/HF	Has Bred
45	<b>Black-bellied Malkoha</b>	<b>Phaenicophaeus diardi*</b>	R	Uncommon	LF/HF	Unrecorded
46	<b>Short-toed Coucal</b>	<b>Centropus rectunguis*</b>	R	Locally rare	LF	Unrecorded
47	Greater Coucal	Centropus sinensis	R	Uncommon	LF/OC	Unrecorded
48	Oriental Bay Owl	Phodilus badius	R	Locally rare	LF/HF	Unrecorded
49	Sunda Scops-Owl	Otus lempiji*	R	Uncommon	LF/OC	Unrecorded
50	Brown Hawk Owl	Ninox scutulata	R/WV	Uncommon	LF	Unrecorded
51	Brown Wood Owl	Strix leptogrammica	R	Locally rare	LF/HF	Unrecorded
52	Buffy Fish-Owl	Ketupa ketupu	R	Locally rare	LF/M	Unrecorded
53	Barred Eagle-Owl	Bubo sumatranus*	R	Locally rare	LF/HF	Unrecorded
54	Javan Frogmouth	Batrachostomus javensis	R	Uncommon	LF	Unrecorded
55	<b>Gould's Frogmouth</b>	<b>Batrachostomus stellatus*</b>	R	Locally rare	LF	Unrecorded
56	Malaysian Eared-Nightjar	Eurostopodus temminckii*	R	Common	LF/HF	Unrecorded
57	Large-tailed Nightjar	Caprimulgus macrurus	R	Uncommon	LF/OC	Has Bred
58	Grey Nightjar	Caprimulgus indicus	WV	Uncommon	LF/HF	Unrecorded
59	Whiskered Treeswift	Hemiprocne comata	R	Common	LF/HF	Has Bred
60	Grey-rumped Treeswift	Hemiprocne longipennis	R	Uncommon	LF/OC	Bred?
61	Silver-rumped Spinetail	Rhaphidura leucopygialis*	R	Common	LF/HF	Unrecorded
62	Asian House Swift	Apus nipalensis	R/WV	Uncommon	All	Unrecorded
63	Fork-tailed Swift	Apus pacificus	WV/PM	Rare?	LF/HF	Unrecorded
64	Asian Palm-Swift	Cypsiurus balasiensis	R	Uncommon?	OC	Unrecorded
65	Edible-nest Swiftlet?	Collocalia fulciphaga?	R	Common	All	Unrecorded
66	Himalayan Swiftlet	Collocalia brevirostris	WV/PM	Uncommon?	All	Unrecorded
67	Glossy Swiftlet	Collocalia esculenta	R	Common	All	Unrecorded
68	<b>Waterfall Swift</b>	<b>Hydrochous gigas*</b>	R?	Locally rare	LF/HF	Unrecorded
69	White-vented Needletail	Hirundapus cochinchinensis	WV	Locally rare	LF/HF	Unrecorded
70	Brown Needletail	Hirundapus giganteus	WV	Uncommon	LF/HF	Unrecorded
71	<b>Cinnamon-rumped Trogon</b>	<b>Harpactes orrhophaeus*</b>	R	Locally rare	LF	Unrecorded
72	<b>Scarlet-rumped Trogon</b>	<b>Harpactes duvauceli*</b>	R	Common	LF/HF	Has Bred
73	<b>Red-naped Trogon</b>	<b>Harpactes kasumba*</b>	R	Uncommon	LF	Unrecorded
74	<b>Diard's Trogon</b>	<b>Harpactes diardii*</b>	R	Common	LF	Unrecorded
75	White-throated Kingfisher	Halcyon smyrnensis	R	Locally rare	OC	Unrecorded
76	Collared Kingfisher	Halcyon chloris	R/V	Locally rare	M/OC	Unrecorded
77	Stork-billed Kingfisher	Halcyon capensis	R	Locally rare	M	Unrecorded
78	Banded Kingfisher	Lacedo pulchella	R	Uncommon	LF/HF	Has Bred
79	<b>Rufous-collared Kingfisher</b>	<b>Actenoides concretus*</b>	R	Uncommon	LF/HF	Has Bred
80	Blue-eared Kingfisher	Alcedo meninting	R	Common	LF	Unrecorded
81	River Kingfisher	Alcedo atthis	WV	Locally rare?	OC/M	Unrecorded
82	Rufous-backed Kingfisher	Ceyx rufidorsus	R	Common	LF/HF	Has Bred
83	Black-backed Kingfisher	Ceyx erithacus	WV	Locally rare	LF	Unrecorded

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84	Blue-tailed Bee-eater	<i>Merops philippensis</i>	R/WV	Common	OC	Unrecorded
85	Blue-throated Bee-eater	<i>Merops viridis</i>	R/RM	Common	OC/LF	Unrecorded
86	Red-bearded Bee-eater	<i>Nyctornis amictus*</i>	R	Common	LF/HF	Has Bred
87	Common Dollarbird	<i>Eurystomus orientalis</i>	WV/R	Locally rare	OC	Unrecorded
88	<b>Great Hornbill</b>	<b><i>Buceros bicornis</i></b>	R/V?	Locally rare	HF	Unrecorded
89	<b>Rhinoceros Hornbill</b>	<b><i>Buceros rhinoceros*</i></b>	R	Uncommon	LF/HF	Unrecorded
90	<b>Helmeted Hornbill</b>	<b><i>Rhinoplax vigil*</i></b>	R	Uncommon	LF/HF	Unrecorded
91	<b>White-crowned Hornbill</b>	<b><i>Berenicornis comatus*</i></b>	R	Locally rare	LF/HF	Unrecorded
92	Bushy-crested Hornbill	<i>Anorrhinus galeritus*</i>	R	Uncommon	LF/HF	Unrecorded
93	<b>Black Hornbill</b>	<b><i>Anthracoceros malayanus*</i></b>	R	Common	LF	Unrecorded
94	Oriental Pied Hornbill	<i>Anthracoceros albirostris</i>	R	Uncommon	LF/OC	Unrecorded
95	<b>Wrinkled Hornbill</b>	<b><i>Aceros corrugatus*</i></b>	R	Uncommon	LF	Bred?
96	Wreathed Hornbill	<i>Rhyticeros undulatus</i>	R	Uncommon	LF/HF	Unrecorded
97	Brown Barbet	<i>Calorhampus fuliginosus*</i>	R	Common	LF/HF	Unrecorded
98	<b>Red-crowned Barbet</b>	<b><i>Megalaima rafflesii*</i></b>	R	Common	LF	Has Bred
99	<b>Yellow-crowned Barbet</b>	<b><i>Megalaima henricii*</i></b>	R	Uncommon	LF/HF	Unrecorded
100	Blue-eared Barbet	<i>Megalaima australis</i>	R	Common	LF/HF	Bred?
101	Rufous Piculet	<i>Sasia abnormis*</i>	R	Locally rare	LF/HF	Unrecorded
102	Grey-capped Pygmy Woodpecker	<i>Dendrocopos canicapillus</i>	R/V?	Locally rare	LF/HF	Unrecorded
103	Grey-and-Buff Woodpecker	<i>Hemicircus concretus*</i>	R	Uncommon	LF	Unrecorded
104	Buff-rumped Woodpecker	<i>Meiglyptes tristis*</i>	R	Common	LF/HF	Unrecorded
105	<b>Buff-necked Woodpecker</b>	<b><i>Meiglyptes tukki*</i></b>	R	Uncommon	LF	Unrecorded
106	Banded Woodpecker	<i>Picus miniaceus*</i>	R	Common	LF/HF	Unrecorded
107	Crimson-winged Woodpecker	<i>Picus puniceus*</i>	R	Common	LF/HF	Unrecorded
108	Checker-throated Woodpecker	<i>Picus mentalis*</i>	R	Common	LF/HF	Has Bred
109	<b>Olive-backed Woodpecker</b>	<b><i>Dinopium rafflesii*</i></b>	R	Locally rare	LF/HF	Unrecorded
110	Rufous Woodpecker	<i>Ceelus brachyurus</i>	R	Common	LF/OC	Unrecorded
111	Maroon Woodpecker	<i>Blythipicus rubiginosus*</i>	R	Common	LF/HF	Unrecorded
112	Orange-backed Woodpecker	<i>Reinwardtipicus validus*</i>	R	Uncommon	LF/HF	Unrecorded
113	Great Slaty Woodpecker	<i>Mulleripicus pulverulentus</i>	R	Locally rare	LF	Unrecorded
114	White-bellied Woodpecker	<i>Dryocopus javensis</i>	R	Common	LF	Unrecorded
115	<b>Malaysian Honeyguide</b>	<b><i>Indicator archipelagicus*</i></b>	R	Locally rare	LF	Unrecorded
116	<b>Giant Pitta</b>	<b><i>Pitta caerulea*</i></b>	R	Locally rare	LF	Unrecorded
117	<b>Garnet Pitta</b>	<b><i>Pitta granatina*</i></b>	R	Uncommon	LF	Unrecorded
118	Banded Pitta	<i>Pitta guajana*</i>	R	Locally rare	LF/HF	Unrecorded
119	Banded Broadbill	<i>Eurylaimus javanicus</i>	R	Common	LF/HF	Has Bred
120	<b>Black-and-yellow Broadbill</b>	<b><i>Eurylaimus ochromalus*</i></b>	R	Common	LF/HF	Has Bred
121	Black-and-red Broadbill	<i>Cymbirhynchus macrorhynchus</i>	R	Locally rare	LF/M	Has Bred
122	Dusky Broadbill	<i>Corydon sumatranus</i>	R	Uncommon	LF	Has Bred
123	<b>Green Broadbill</b>	<b><i>Calyptomena viridis*</i></b>	R	Uncommon	LF/HF	Bred?
124	Barn Swallow	<i>Hirundo rustica</i>	WV	Common	All	Unrecorded
125	Pacific Swallow	<i>Hirundo tahitica</i>	R	Common	All	Unrecorded
126	Red-rumped Swallow	<i>Hirundo daurica</i>	WV	Locally rare	OC	Unrecorded
127	Black-winged Flycatcher-Shrike	<i>Hemipus arundinaceus*</i>	R	Common	LF/HF	Unrecorded
128	Bar-winged Flycatcher-Shrike	<i>Hemipus picatus</i>	R	Locally rare	HF	Unrecorded
129	Large Woodshrike	<i>Tephrodornis gularis</i>	R	Common	LF/HF	Bred?
130	<b>Lesser Cuckoo-Shrike</b>	<b><i>Coracina fimbriata*</i></b>	R	Uncommon	LF/HF	Unrecorded
131	Scarlet Minivet	<i>Pericrocotus flammeus</i>	R	Common	LF/HF	Unrecorded
132	<b>Fiery Minivet</b>	<b><i>Pericrocotus igneus*</i></b>	R	Uncommon	LF/HF	Unrecorded
133	Ashy Minivet	<i>Pericrocotus divaricatus</i>	WV	Common	LF/OC	Unrecorded
134	<b>Green Iora</b>	<b><i>Aegithinia viridissima*</i></b>	R	Common	LF	Has Bred
135	Blue-winged Leafbird	<i>Chloropsis cochinchinensis</i>	R	Common	LF/HF	Has Bred

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136	Greater Green Leafbird	<i>Chloropsis sonnerati</i> *	R	Common	LF/HF	Unrecorded
137	<b>Lesser Green Leafbird</b>	<b><i>Chloropsis cyanopogon</i>*</b>	R	Common	LF/HF	Has Bred
138	Red-eyed Bulbul	<i>Pycnonoctus brunneata</i> *	R	Common	LF/HF	Unrecorded
139	Olive-winged Bulbul	<i>Pycnonoctus plumosus</i> *	R	Uncommon	LF/OC	Has Bred
140	Cream-vented Bulbul	<i>Pycnonoctus simplex</i> *	R	Common	LF/HF	Has Bred
141	Spectacled Bulbul	<i>Pycnonoctus erythroptalma</i> *	R	Common	LF/HF	Has Bred
142	Yellow-vented Bulbul	<i>Pycnonoctus goaiver</i>	R	Uncommon	OC	Has Bred
143	<b>Grey-bellied Bulbul</b>	<b><i>Pycnonoctus cyaniventris</i>*</b>	R	Uncommon	LF/HF	Unrecorded
144	<b>Puff-backed Bulbul</b>	<b><i>Pycnonoctus eutilotus</i>*</b>	R	Uncommon	LF	Unrecorded
145	<b>Black-and-white Bulbul</b>	<b><i>Pycnonoctus melanoleuca</i>*</b>	R	Locally rare	LF	Unrecorded
146	Black-headed Bulbul	<i>Pycnoncotus atriceps</i>	R	Uncommon	LF/OC	Has Bred
147	Hairy-backed Bulbul	<i>Hypsipetes criniger</i> *	R	Common	LF/HF	Has Bred
148	Ashy Bulbul	<i>Hypipetes flavala</i>	R	Uncommon	LF/HF	Unrecorded
149	<b>Buff-vented Bulbul</b>	<b><i>Hypsipetes charlottae</i>*</b>	R	Common	LF/HF	Has Bred
150	<b>Streaked Bulbul</b>	<b><i>Ixos malaccensis</i>*</b>	R	Uncommon	LF/HF	Unrecorded
151	<b>Finsch's Bulbul</b>	<b><i>Criniger finschi</i>*</b>	R	Uncommon	LF/HF	Unrecorded
152	Grey-cheeked Bulbul	<i>Criniger bres</i> *	R	Uncommon	LF/HF	Unrecorded
153	Yellow-bellied Bulbul	<i>Criniger phaeocephalus</i> *	R	Common	LF	Has Bred
154	Bronzed Drongo	<i>Dicrurus aeneus</i>	R	Uncommon	LF/HF	Unrecorded
155	Ashy Drongo	<i>Dicrurus leucophaeus</i>	WV	Rare	OC/LF	Unrecorded
156	Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	R	Common	LF/HF	Has Bred
157	Crow-billed Drongo	<i>Dicrurus annectans</i>	WV	Rare	LF/HF	Unrecorded
158	<b>Dark-throated Oriole</b>	<b><i>Oriolus xanthornotus</i>*</b>	R	Common	LF/HF	Has Bred
159	Asian Fairy Bluebird	<i>Irena puella</i>	R	Common	LF/HF	Bred?
160	<b>Crested Jay</b>	<b><i>Platylophus galericulatus</i>*</b>	R	Uncommon	LF/HF	Has Bred
161	<b>Black Magpie</b>	<b><i>Platysmurus leucopterus</i>*</b>	R	Uncommon	LF	Unrecorded
162	Large-billed Crow	<i>Corvus macrorhynchos</i>	R	Uncommon	LF/OC	Unrecorded
163	Slender-billed Crow	<i>Corvus enca</i>	R	Uncommon	LF/HF	Unrecorded
164	<b>Malaysian Rail-Babbler</b>	<b><i>Eupetes macrocerus</i>*</b>	R	Uncommon	LF/HF	Unrecorded
165	Velvet-fronted Nuthatch	<i>Sitta frontalis</i>	R	Uncommon	LF/HF	Unrecorded
166	Siberian Blue Robin	<i>Luscinia cyane</i>	WV/PM	Common	LF/HF	Unrecorded
167	Black-capped Babbler	<i>Pellorneum capistratum</i> *	R	Common	LF/HF	Has Bred
168	<b>Short-tailed Babbler</b>	<b><i>Malacocincla malaccensis</i>*</b>	R	Common	LF/HF	Unrecorded
169	Horsfield's Babbler	<i>Malacocincla sepiarum</i> *	R	Locally rare	LF/HF	Unrecorded
170	Abbott's Babbler	<i>Malacocincla abbotti</i>	R	Locally rare	LF/OC	Unrecorded
171	<b>Ferruginous Babbler</b>	<b><i>Trichastoma bicolor</i>*</b>	R	Common	LF	Unrecorded
172	<b>White-chested Babbler</b>	<b><i>Trichastoma rostratum</i>*</b>	R	Common	LF/M	Has Bred
173	<b>Rufous-crowned Babbler</b>	<b><i>Malacopteron magnum</i>*</b>	R	Common	LF/HF	Has Bred
174	Scaly-crowned Babbler	<i>Malacopteron cinereum</i>	R	Uncommon	LF	Unrecorded
175	<b>Sooty-capped Babbler</b>	<b><i>Malacopteron affine</i>*</b>	R	Uncommon	LF	Has Bred
176	Moustached Babbler	<i>Malacopteron magnirostre</i> *	R	Common	LF	Has Bred
177	<b>Large Wren-Babbler</b>	<b><i>Napothera macrodactyla</i>*</b>	R	Locally rare	LF	Unrecorded
178	<b>Striped Wren-Babbler</b>	<b><i>Kenopia striata</i>*</b>	R	Locally rare	LF	Unrecorded
179	<b>Black-throated Babbler</b>	<b><i>Stachyris nigricollis</i>*</b>	R	Uncommon	LF	Unrecorded
180	<b>White-necked Babbler</b>	<b><i>Stachyris leucotis</i>*</b>	R	Locally rare	LF	Unrecorded
181	Grey-headed Babbler	<i>Stachyris poliocephala</i> *	R	Common	LF/HF	Unrecorded
182	<b>Chestnut-rumped Babbler</b>	<b><i>Stachyris maculata</i>*</b>	R	Common	LF/HF	Unrecorded
183	Chestnut-winged Babbler	<i>Stachyris erythroptera</i> *	R	Common	LF	Has Bred
184	Rufous-fronted Babbler	<i>Stachyris rufifrons</i>	R	Uncommon	LF/HF	Unrecorded
185	Striped Tit-Babbler	<i>Macronous gularis</i>	R	Common	LF/OC	Has Bred
186	<b>Fluffy-backed Tit-Babbler</b>	<b><i>Macronous ptilosus</i>*</b>	R	Common	LF	Has Bred
187	Chestnut-backed Scimitar-Babbler	<i>Pomatorhinus montanus</i> *	R	Locally rare	LF/HF	Unrecorded

Larger Vertebrates of Panti Forest Reserve

S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
188	<b>Brown Fulvetta</b>	<b>Fulvetta brunneicauda*</b>	R	Locally rare	LF/HF	Unrecorded
189	White-bellied Erpornis	Erpornis zantholeuca	R	Common	LF/HF	Has Bred
190	Oriental Magpie Robin	Copsychus saularis	R	Locally rare	OC	Unrecorded
191	White-rumped Shama	Copsychus malabaricus	R	Common	LF/HF	Has Bred
192	<b>Rufous-tailed Shama</b>	<b>Trichixos pyrropygia*</b>	R	Uncommon	LF	Bred?
193	White-crowned Forktail	Enicurus leschenaulti	R	Locally rare	LF/HF	Unrecorded
194	Eye-browed Thrush	Turdus obscurus	WV/PM	Rare	LF/HF	Unrecorded
195	Arctic Warbler	Phylloscopus borealis	WV	Common	All	Unrecorded
196	Eastern-crowned Warbler	Phylloscopus coronatus	WV	Uncommon	LF/OC	Unrecorded
197	Dark-necked Tailorbird	Orthotomus atrigularis	R	Common	LF/OC	Has Bred
198	Rufous-tailed Tailorbird	Orthotomus sericeus	R	Common	LF/OC	Unrecorded
199	Ashy Tailorbird	Orthotomus ruficeps	R/V?	Locally rare	M	Unrecorded
200	Common Tailorbird	Orthotomus sutorius	R	Locally rare	OC	Unrecorded
201	Yellow-bellied Prinia	Prinia flaviventris	R	Locally rare	OC	Unrecorded
202	Zitting Cisticola	Cisticola juncidis	R	Locally rare	OC	Unrecorded
203	Flyeater	Gerygone sulphurea	R	Common	All	Unrecorded
204	<b>Grey-chested Jungle-Flycatcher</b>	<b>Rhinomyias umbratilis*</b>	R	Common	LF/HF	Has Bred
205	Asian Brown Flycatcher	Muscicapa dauurica	WV	Common	All	Unrecorded
206	Brown-streaked Flycatcher	Muscicapa williamsoni	WV	Rare	All	Unrecorded
207	Dark-sided Flycatcher	Muscicapa sibirica	WV	Uncommon	LF/OC	Unrecorded
208	<b>Rufous-chested Flycatcher</b>	<b>Ficedula dumetoria</b>	R	Locally rare	LF/HF	Unrecorded
209	Yellow-rumped Flycatcher	Ficedula zanthopygia	WV/PM	Rare	All	Unrecorded
210	Mugimaki Flycatcher	Ficedula mugimaki	WV/PM	Uncommon	LF/HF	Unrecorded
211	Narcissus Flycatcher	Ficedula narcissina	WV	Rare	LF/HF	Unrecorded
212	Pale Blue-Flycatcher	Cyornis unicolor	R/V?	Locally rare	LF/HF	Unrecorded
213	White-tailed Blue-Flycatcher	Cyornis concreta	R	Locally rare	LF/HF	Unrecorded
214	Grey-headed Canary-Flycatcher	Culicapa ceylonensis	R	Uncommon	LF/HF	Unrecorded
215	<b>Spotted Fantail</b>	<b>Rhipidura perlata*</b>	R	Locally rare	LF/HF	Unrecorded
216	Pied Fantail	Rhipidura javanica	R	Locally rare	M/OC	Unrecorded
217	Black-naped Monarch	Hypothymis azurea	R	Common	LF/HF	Has Bred
218	Rufous-winged Philentoma	Philentoma pyropterum*	R	Common	LF	Has Bred
219	Asian Paradise-Flycatcher	Terpsiphone paradisi	R/WV	Uncommon	LF/HF	Unrecorded
220	Grey Wagtail	Motacilla cinerea	WV	Uncommon	LF/HF	Unrecorded
221	Forest Wagtail	Dendronanthus indicus	WV	Uncommon	LF/OC	Unrecorded
222	Tiger Shrike	Lanius tigrinus	WV/PM	Common	LF/OC	Unrecorded
223	Asian Glossy Starling	Aplonis panayensis	R	Uncommon	OC	Unrecorded
224	Hill Myna	Gracula religiosa	R	Common	LF	Unrecorded
225	Javan Myna	Acridotheres javanica	R	Uncommon	OC	Unrecorded
226	Jungle Myna	Acridotheres fuscus	R	Locally rare	OC	Unrecorded
227	Ruby-cheeked Sunbird	Anthreptes singalensis	R	Common	LF/HF	Has Bred
228	<b>Red-throated Sunbird</b>	<b>Anthreptes rhodolaema*</b>	R	Uncommon	LF	Unrecorded
229	Purple-naped Sunbird	Hypogramma hypogrammicum	R	Common	LF/HF	Unrecorded
230	<b>Plain Sunbird</b>	<b>Nectarinia simplex*</b>	R	Uncommon	LF	Has Bred
231	Purple-throated Sunbird	Nectarinia sperata	R	Common	LF/OC	Has Bred
232	Crimson Sunbird	Aethopyga siparaja	R	Locally rare	LF/OC	Unrecorded
233	Temminck's Sunbird	Aethopyga temminckii*	R	Uncommon	LF	Unrecorded
234	Little Spiderhunter	Arachnothera longirostris	R	Common	LF/HF	Unrecorded
235	<b>Thick-billed Spiderhunter</b>	<b>Arachnothera crassirostris*</b>	R	Common	LF	Unrecorded
236	Grey-breasted Spiderhunter	Arachnothera affinis*	R	Common	LF/HF	Unrecorded
237	Spectacled Spiderhunter	Arachnothera flavigaster*	R	Locally rare	LF/HF	Unrecorded
238	Yellow-eared Spiderhunter	Arachnothera chrysogenys*	R	Common	LF	Unrecorded
239	Plain Flowerpecker	Dicaeum unicolor	R	Locally rare	LF/HF	Unrecorded

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S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
240	Thick-billed Flowerpecker	<i>Dicaeum agile</i>	R	Locally rare	LF/HF	Unrecorded
241	Orange-bellied Flowerpecker	<i>Dicaeum trigonostigma</i>	R	Common	LF/OC	Has Bred
242	Yellow-breasted Flowerpecker	<i>Dicaeum maculatus*</i>	R	Common	LF/HF	Has Bred
243	Yellow-vented Flowerpecker	<i>Dicaeum chrysorrheum</i>	R	Locally rare	LF/HF	Unrecorded
244	<b>Scarlet-breasted Flowerpecker</b>	<b><i>Prionichilus thoracicus*</i></b>	R	Uncommon	LF	Unrecorded
245	Crimson-breasted Flowerpecker	<i>Prionichilus percussus*</i>	R	Common	LF/HF	Has Bred
246	Everett's White-eye	<i>Zosterops everetti</i>	R	Common	LF/HF	Unrecorded
247	White-rumped Munia	<i>Lonchura striata</i>	R	Locally rare	LF/OC	Unrecorded

### Part II: Native Mammals

S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
1	Lesser Sheath-tailed Bat	<i>Emballonura monticola</i>	R	Common	LF	Unrecorded
2	Common Treeshrew	<i>Tupaia glis*</i>	R	Common	LF/HF	Unrecorded
3	Lesser Treeshrew	<i>Tupaia minor*</i>	R	Rare?	LF/HF	Unrecorded
4	<b>Pig-tailed Macaque</b>	<b><i>Macaca nemestrina</i></b>	R	Common	LF/HF	Unrecorded
5	<b>Long-tailed Macaque</b>	<b><i>Macaca fascicularis</i></b>	R	Common	LF/M	Has Bred
6	<b>Banded Langur</b>	<b><i>Presbytis femoralis*</i></b>	R	Common	LF/HF	Has Bred
7	Dusky Langur	<i>Trachypithecus obscurus*</i>	R	Common?	LF/HF	Unrecorded
8	<b>White-handed Gibbon</b>	<b><i>Hylobates lar</i></b>	R	Common	LF/HF	Has Bred
9	Cream-coloured Giant Squirrel	<i>Ratufa affinis*</i>	R	Uncommon	LF/HF	Unrecorded
10	Plaintain Squirrel	<i>Callosciurus notatus</i>	R	Common	LF/OC	Unrecorded
11	Grey-bellied Squirrel	<i>Callosciurus caniceps</i>	R	Rare?	LF/HF	Unrecorded
12	Horse-tailed Squirrel	<i>Sundasciurus hippurus*</i>	R	Uncommon	LF/HF	Unrecorded
13	Slender Squirrel	<i>Sundasciurus tenuis*</i>	R	Common	LF/HF	Unrecorded
14	Three-striped Ground Squirrel	<i>Lariscus insignis*</i>	R	Rare?	LF/HF	Unrecorded
15	Shrew-faced Ground Squirrel	<i>Rhinosciurus laticaudatus*</i>	R	Rare?	LF	Unrecorded
16	<b>Smooth-coated Otter</b>	<b><i>Lutra perspicillata</i></b>	R	Rare	LF/M	Unrecorded
17	Malay Civet	<i>Viverra zangalunga</i>	R	Uncommon	LF/HF	Unrecorded
18	Short-tailed Mongoose	<i>Herpestes brachyurus*</i>	R	Rare?	LF/HF	Unrecorded
19	Leopard Cat	<i>Prionailurus benghalensis</i>	R	Rare?	LF/HF	Unrecorded
20	<b>Flat-headed Cat</b>	<b><i>Prionailurus planiceps*</i></b>	R	Rare?	LF	Unrecorded
21	<b>Malayan Tiger*</b>	<b><i>Panthera tigris</i></b>	R	Rare	LF/HF	Unrecorded
22	<b>Asian Elephant*</b>	<b><i>Elephas maximus</i></b>	R	Uncommon	LF	Unrecorded
23	<b>Asian Tapir*</b>	<b><i>Tapirus indicus*</i></b>	R	Rare	LF/HF	Unrecorded
24	Eurasian Wild Pig	<i>Sus scrofa</i>	R	Common	LF/OC	Unrecorded
25	Common Barking Deer	<i>Muntiacus muntjak</i>	R	Uncommon	LF/HF	Unrecorded
26	Sambhar Deer	<i>Cervus unicolor</i>	R	Uncommon	LF/HF	Unrecorded

### Part III: Native Reptiles

S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
1	Reticulated Python	<i>Python reticulatus</i>	R	Uncommon	LF/OC	Unrecorded
2	Banded Malayan Coral Snake	<i>Maticora intestinalis</i>	R	Rare?	LF/OC	Unrecorded
3	Lovi's Reed Snake	<i>Calamaria lovi*</i>	R	Rare?	LF	Unrecorded
4	Triangle Keelback	<i>Natrix trianguligera*</i>	R	Uncommon	LF/OC	Unrecorded
5	Blue-necked Keelback	<i>Macropisthodon rhodomelas*</i>	R	Uncommon	LF/OC	Unrecorded
6	Rat Snake sp	<i>Ptyas sp</i>	R	Uncommon?	LF	Unrecorded
7	Banded Kukri Snake	<i>Oligodon signatus*</i>	R	Rare?	LF/HF	Unrecorded

## Larger Vertebrates of Panti Forest Reserve

S/N.	Common Name	Latin Name	Status	Abundance	Habitat	Breeding
8	Elegant Bronzeback	Dendrelaphis formosus*	R	Uncommon?	LF/HF	Unrecorded
9	Mangrove Cat Snake	Boiga dendrophila	R	Uncommon?	LF/M	Unrecorded
10	Large Forest Gecko	Gekko smithi	R	Uncommon	LF/HF	Unrecorded
11	Great Anglehead Lizard	Gonocephalus grandis*	R	Rare?	LF	Unrecorded
12	Green Crested Lizard	Bronchocoella cristatella*	R	Uncommon	LF/HF	Unrecorded
13	Earless Lizard	Aphaniotis fuscus*	R	Rare	LF/HF	Unrecorded
14	Common Gliding-Lizard	Draco volans	R	Rare	LF/OC	Unrecorded
15	Black-bearded Gliding-Lizard	Draco melanopogon*	R	Common	LF/HF	Unrecorded
16	Malayan Gliding-Lizard	Draco obscurus*	R	Rare?	LF/HF	Unrecorded
17	Five-banded Gliding-Lizard	Draco quinquefasciatus*	R	Uncommon	LF/HF	Unrecorded
18	Common Water Monitor	Varanus salvator	R	Rare	LF/M	Unrecorded
19	Clouded Monitor	Varanus nebulosus*	R	Common	LF/HF	Unrecorded
20	Common Sun Skink	Mabuya multifasciata	R	Common	LF/HF	Unrecorded
21	Rough-sided Skink	Mabuya rugifera	R	Rare?	LF/HF	Unrecorded
22	Olive Tree Skink	Dasia olivacea*	R	Uncommon?	LF/HF	Unrecorded

### General Footnotes – Taxonomy, Threat Categories and Tentative Range Extensions

1. Birds denoted in **bold** are ‘Lower risk/ globally near-threatened’ based on Birdlife International’s “*Threatened birds of the world*” and its accompanying online database at [www.rdb.or.id](http://www.rdb.or.id) (66 near-threatened species were recorded within the period of survey)
2. Birds denoted in **red** are ‘Globally threatened’ based on Birdlife International’s “*Threatened birds of the world*”. Absence of asterisk in the common name field denotes ‘Globally vulnerable’ while an additional asterisk\* denotes ‘Globally endangered’
3. Mammals denoted in **bold** at ‘Lower risk/ globally near-threatened’ while mammals denoted in **red** are ‘Globally threatened’. These are based on the ‘*IUCN Redlist of Threatened Species*’ available online at [www.iucnredlist.org](http://www.iucnredlist.org) or the national biodiversity databases available at [www.arcbc.org](http://www.arcbc.org). More specifically, absence of asterisk in the common name field denotes ‘Globally vulnerable’ while an additional asterisk\* denotes ‘Globally endangered’
4. Statuses given for the reptiles only indicates how often it is seen and should only be used as an approximate gauge of encounter rates, not its actual abundance.
5. ‘*R*’ under status indicates resident species while ‘*WV*’ indicates winter visitors. ‘*PM*’ refers to passage migrants ‘*V*’ indicates a vagrant and lastly ‘*RM*’ indicates regional migrant (e.g. Blue-throated Bee-eater). An asterisk \* in the Latin name field denotes a Sunda endemic.
6. Abbreviations are given for the key habitat types. ‘*LF*’ denotes lowland forests, ‘*HF*’ denotes hill forests, ‘*M*’ denotes mangroves-mudflats and lastly ‘*OC*’



denotes open country, here it is used a collective term to encompass scrub, alang-alang, *belukar* and groves of *Acacia mangium*. Habitats listed here are based on the author's observations throughout the Greater Sundas and Palawan.

7. Bird species recorded by other observers during the period includes **Long-billed Partridge** (unconfirmed), Lesser Whistling-Duck, Besra Sparrowhawk, **Lesser Adjutant**, **Storm's Stork\***, Savannah Nightjar, Red-legged Crake, Little Grebe, Mountain Imperial Pigeon, **Nicobar Pigeon**, Black Bittern, Hooded Pitta, **Scaly-breasted Bulbul**, **Maroon-breasted Philentoma**, Siberian Thrush, Sultan Tit, **Brown-backed Flowerpecker** (unconfirmed), Long-billed Spiderhunter (Pers com). (If these species are added, the recorded total bird diversity swells to 265 species)
8. Range extensions occur for 2 Malaysian resident bird species, the Malaysian Honeyguide *Indicator archipelagicus* (recorded twice in July 2004 and June 2005 respectively) and the Pale Blue Flycatcher *Cyornis unicolor* (recorded once in August 2002). The most recent literatures on Malaysian birds (*Wells, 1999*) and (*Jeyarajasingham & Pearson, 1999*) asserted the southern range limit of the Malaysian Honeyguide to be Negri Sembilan state which apparently is now invalid. There have been at least 6 other known recent records in Johore state and these suggest that the species probably survive in lowland forests here in extremely low densities. Likewise, the same would apply for Pale Blue Flycatcher whereby (*Jeyarajasingham & Pearson, 1999*) limited its natural range in the Peninsula to Negri Sembilan state.
9. Some recent taxonomic revisions have yielded splits and lumps. The migratory race of the Brown Hawk Owl formerly *Ninox scutulata japonicus* is now sometimes split and elevated to a good species under *Ninox japonicus* (*King, 2002*) based on morphology and distinct vocalizations. This newly recognized taxa should occur in Panti and is likely overlooked. Collared Scops-Owl, formerly *Otus bakkamoena* is now split and reclassified by some authors as Sunda Scops-Owl *Otus lempiji*. (*del Hoyo et al, 1999*) (See Vol.5) which is endemic to the Greater Sundas. The most startling reclassification is that of White-bellied Yuhina *Yuhina zantholeuca* where DNA studies has shown it to be allied to the New World Vireos and Greenlets, rather than being an aberrant babbler and has been provisionally renamed as White-bellied Erpornis *Erpornis zantholeuca* (*Cibois et al, 2002*). Lastly, the resident race of Hodgson's Hawk Cuckoo is now split by some authors as Malaysian Hawk-Cuckoo *Hieroccyx fugax*, distinct from the migratory Hodgson's hawk Cuckoo *Hieroccyx nicolor* (*King, 2002*)
10. The general consensus for sequence of species follow (*Jeyarajasingham & Pearson, 1999*) for easy reference. Note that reclassifications after DNA-DNA hybridization studies by (*Sibley & Ahlquist 1990*) are well recognized nowadays and many passerines have been absorbed into the expanded *Corvidae* family, which originally included the most distinctive crows and magpies. Examples of these 'new corvids' include the minivets, cuckooshrikes, rail-babbler etc. Based

on these reclassifications, the taxonomic sequence and order of families has been altered, from the formerly 'Seabirds first – buntings last', to the 'Scrubfowls, Phasianids first – buntings last' sequence. This is summarized in the 'Sibley & Monroe World List' and is adopted by a number of new field guides.

### **Some Conservation Issues**

The recent announcement to gazette part of Pantí Forest Reserve, approximately 4000 hectares as National Park, was long due good news for Pantí's biodiversity, but definitely not the end of the story for conservation there. A few issues to be addressed as far as conservation is concerned are that of continued forest lost and poaching. Legal commercial logging, sand mining and perhaps some illegal logging continue to destroy and fragmentate lowland and hill forest within the reserve. The effects of these threats are clear enough.

Over the last 5 years, frequencies of encounter with hornbills and other larger wildlife have evidently declined. Many streams such as the Sungei Mupur and Sungei Pak Kenik, that flow from Pantí has become constantly silted while the logging trails at km 267 and 270 have shown considerable gully and rill erosion. Satellite images revealed that the forest is being hacked into fragments by the logging trails and oil palm cultivations, and whilst the impacts of these degradation events are still hitherto unapparent, these isolated forest fragments or 'islands' are clearly not large enough to sustain viable breeding populations of birds and other animals in the long run (or suffering from the 'island effect' per se). Already, research on forest fragmentation in the Amazon in the 'Biological Dynamics of Forest Fragments Project' has shown that forest patches below a certain threshold areas are incapable of holding on to its original species diversity with many species doomed to local extinction, only to be replaced ecologically by more adaptable species.

Studies in tropical Latin America and Malaysia have shown that lowland forests are the richest forests in terms of overall biodiversity, wildlife densities and should carry the highest priorities for long-term preservation. Throughout the Malay Peninsula, conspicuous is the paucity of reserves containing large areas of plains level lowland forests (Only in Taman Negara, Endau Rompin, Kerau, Pasoh and a few others), whereas highland forests which support less biodiversity (but more endemism) are the most intact, thanks to difficulty of access for logging and other forms of exploitation. This disproportionate coverage of forest protection also reflects on select commercial interests (logging, monoculture) and biased government land-use policies and likewise applies for Pantí. Thus far, the vast proportions of zones protected in the proposed Gunung Pantí National Park are confined to the hill slopes above the steepland boundary, and very little of the lowlands, rendering the rich lowland flora and fauna vulnerable to destruction. It is therefore imperative, that in order to effect a more secure, more complete level of biodiversity protection in Pantí, that the key lowland forests, and not merely the hills be afforded a 'National Park' level of protection.

Secondarily, it is also noted that hunting as well as some poaching activities continue unabated within the reserve. Snare traps, pit traps, butterfly traps and other forms of

trapping mechanisms have been found and are evidence of active poaching. While these may deplete populations of a few species and is overshadowed by the damages brought about by habitat destruction, the long-term impacts on populations of vertebrates are undeniably significant. Good examples can be seen in Indonesia and Philippines where human consumption of wildlife, whether in the form of food, medicine or pet has depleted certain species to non-sustainable levels (e.g. Trapping of once common Straw-headed Bulbul *Pycnonoctus zeylanicus* and Java Sparrow *Padda oryzivora* for pet trade has brought these species to the brink of extinction in Indonesia).

All in all, the conservation of Panti Forest Reserve's biological resources is not a simple affair. The authorities, need to realize the importance of its plains level forests, enforce adequate laws to protect its biodiversity and act rapidly otherwise all its conservation efforts will come to nil.

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(Above). Clearance of Swamp Forest in Panti Forest Reserve (Photo by Robert Zhao)