

## Short Notes on the Vertebrate Fauna of Ayer Hitam Forest Reserve, Puchong, Selangor

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### ABSTRAK

*Rekod dari Muzium Zoologi, Jabatan Biologi, Universiti Putra Malaysia mengandungi senarai vertebrata dari kawasan Hutan Simpan Ayer Hitam yang dikutip dari 1975 hingga 1985. Koleksi dalam muzium ini terdiri dari 14 burung, 10 anura, 5 lacertalia, 3 ophidia dan 8 mamalia. Kutipan lapangan baru-baru ini yang dilakukan oleh pelajar-pelajar biologi, sebagai sebahagian tugas kursus kepelbagaian vertebrata mendapati 3 spesies kelawar, 2 reptilia, 13 anura dan 10 ikan. Ikan merupakan tambahan kepada senarai vertebrata yang belum pernah dilakukan sebelum ini. Senarai vertebrata dalam laporan ini bukanlah yang lengkap. Beberapa koleksi perlu dilakukan untuk inventori vertebrata di Hutan Simpan Ayer Hitam.*

### ABSTRACT

*Record from the Museum of Zoology, Department of Biology, Universiti Putra Malaysia contains list of vertebrates of Ayer Hitam Forest Reserve area collected from 1975 until 1985. The collection in the museum consists of 14 birds, 10 anurans, 5 lacertalians, 3 ophidians and 8 mammals. Recent field collections by students of biology, as part of their assignment of vertebrates diversity revealed 3 species of bats, 2 reptiles, 13 anurans and 10 fishes. Fish is the new addition of the vertebrate lists that was not collected before. The list of vertebrate in this report is by no means exhaustive. More collections are needed to inventorise the vertebrates of Ayer Hitam Forest Reserve.*

### INTRODUCTION

Ayer Hitam Forest Reserve is a lowland dipterocarp forest situated in the middle of a rapidly developing area, about 20 km south of Kuala Lumpur. Covering an area of about 1248 ha the forest is bordered in the north by Bukit Jalil sport complex and to its south by new Putra Jaya administrative township. The eastern part of the forest is bordered by the proposed new satellite town of Lestari Perdana and to the west by the massive housing and business centres of Puchong. A small stream of about 2.5 km with many tributaries cut across the length of the forest. The stream becomes the riverhead of the Rasau River. Most of the tributaries dried up during drought season.

The forest was formally under the management of the Selangor State Forest Department and was leased to Universiti Putra Malaysia in

1996 for 80 years for the purpose of teaching and research. Prior to its lease to Universiti Putra Malaysia, the forest was already became part of the field training site for students from the Faculty of Forestry and students from the Department of Biology, Faculty of Science and Environmental Science.

During the early years of UPM, several animal collection trips to the forest were conducted to provide materials for classes. The specimens collected were recorded and deposited at the Museum of Zoology, Department of Biology. There was a gap in field activities by the Department of Biology between 1985 and 1998 and only in April 1998 until January 1999 there was a study on the anurans along the Rasau River conducted as part of the students' final year project. At about the same time several field trips were conducted to study the vertebrate diversity of the forest.

This communication reports some of the vertebrates recorded in the museum of the Department of Biology from the collection in the earlier periods of UPM and those collected during the recent field studies by the students.

**MATERIALS AND METHODS**

The information on the existence of the vertebrates was obtained from a search of the record of the Museum of Zoology, Universiti Putra Malaysia. The record on the vertebrate collection from the forest dated back since 1975. In addition, the current list also contained species collected during the three brief field studies in Ayer Hitam Forest Reserve recently carried out by the biology students as part of their assignments in the Vertebrate Biodiversity course.

Mist nets were mounted about 2 meters above the ground under the forest canopy to trap birds and bats. Rat-traps were set on the ground, using banana as baits to collect small ground mammals. The sites of collection covered only to the eastern part of the forest, along the old logging track that run almost parallel to the river as shown in Fig. 1.

Scoop nets were used to collect fishes and tadpoles in the Rasau River. Adult frogs and toads were caught by hand and mostly carried out at night. Some reptiles such as skinks and agamids were observed directly. Identification of the collected vertebrates were based on the references available and also by comparing the specimens with those deposited at the Museum of Zoology, UPM. For conservation purposes, trapped animals, except for taxidermy exercises, were released back to its original collection sites.

**RESULTS AND DISCUSSION**

Some of the information on the site of collection in the early years of UPM stated only Puchong that included at that time the present UPM Puchong farm and that of proposed Lestari Perdana townships area. Nevertheless the collection are included in the present list.

The vertebrates collected and recorded in the Museum of Zoology between 1975 until 1985 are listed in Table 1.

The three brief field collections by students revealed some of the species collected in the previous collections. Vertebrates collected from these exercises are listed in Table 2.

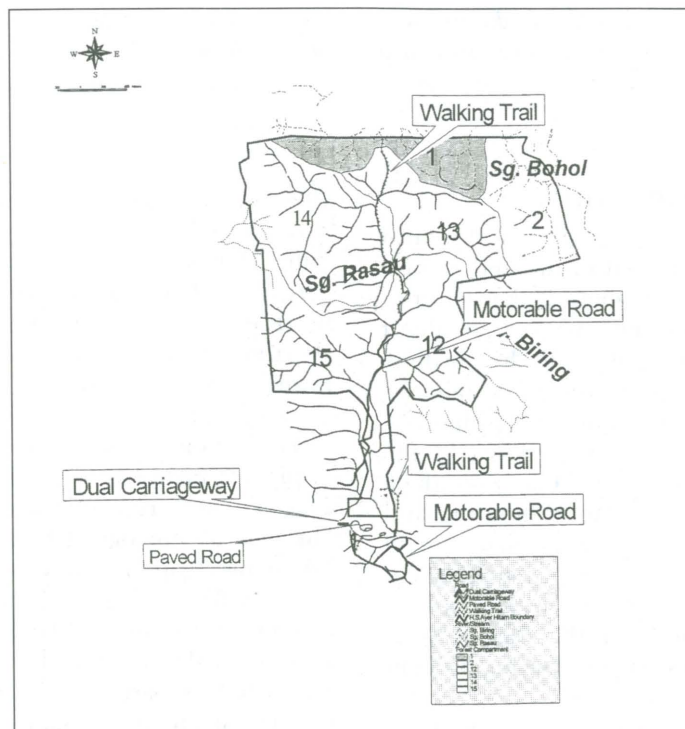


Fig. 1. Map of Natural and Physical Resource in Ayer Hitam Forest Reserve, Puchong

TABLE 1  
List of vertebrates collected during the early years of Universiti Putra Malaysia

| Species                          | Common name                              | Family        | Date of collection              |
|----------------------------------|--|---------------|---------------------------------|
| <b>Birds:</b>                    |  |               |                                 |
| <i>Criniger phaeocephalus</i>    | White throated bulbul                    | Pycnonotidae  | 10 Apr. 1981                    |
| <i>Arachnothera longirostris</i> | Little spider hunter                     | Nectariniidae | 10 & 15 Apr. 1981               |
| <i>Orthotomus sutorius</i>       | Long-tailed tailor bird<br>Laki padi     | Sylviidae     | Kelicap jantung<br>15 Apr. 1981 |
| <i>Hypogramma hypogrammicum</i>  | Purple naped sunbird                     | Nectarinidae  | 14 Apr. 1981                    |
| <i>Trichostomma rostratum</i>    |  | Timallidae    | 9 Apr. 1981                     |
| <i>T. malaccanes</i>             |  |               | 8 Apr. 1981                     |
| <i>Copsychus malabaricus</i>     | White rumped shama<br>Murai batu         | Turdidae      | 14 Apr. 1981                    |
| <i>Trichastoma malabaricus</i>   |  | Timallidae    | 14 Apr. 1981                    |
| <i>T. saularius</i>              |  | ..            | 16 Apr. 1981                    |
| <i>Pycnonotus simplex</i>        | Cream vented bulbul<br>Murai rimba       | Pycnonotidae  | 14 Apr. 1981                    |
| <i>Chalcophaps indica</i>        | Emerald dove                             | Columbidae    | 16 Apr. 1981                    |
| <i>Pycnonotus goiavier</i>       | Yellow-vented bulbul                     | Pycnonotidae  | 15 Apr. 1981                    |
| <i>Merbah kapur</i>              |  |               |                                 |
| <i>Stachyris erythroptera</i>    | Red-winged tree babbler<br>Merbah sampah | Timaliidae    | 10 Apr. 1981                    |
| <i>Macronus ptilosus</i>         | Fluffy-backed babbler                    | Timaliidae    | 15 April 1981                   |
| <b>Anuran:</b>                   |  |               |                                 |
| <i>Rana limnocharis</i>          | Padifield frog                           | Ranidae       | 12 Nov. 1975                    |
| <i>Polypedates leucomystax</i>   | Malayan house frog                       | Rhacophoridae | 21 Nov. 1975                    |
| <i>Bufo quadriporcatus</i>       | Four-ringed toad                         | Bufoidea      | 27 Nov. 1979                    |
| <i>Leptobranchium hasseltii</i>  | Ground toad                              | Pelobatidae   | 26 Feb. 1981                    |
| <i>Rana chalconota</i>           | Copper cheek frog                        | Ranidae       | 13 Aug. 1981                    |
| <i>Rana blythi</i>               | Malaysian giant frog                     | Ranidae       | 13 Aug. 1981                    |
| <i>Rana signata</i>              | Yellow spotted frog                      | Ranidae       | 13 Aug. 1981                    |
| <i>Rana malesiana</i>            | Malaysian frog                           | Ranidae       | 13 Aug. 1984                    |
| <i>Rana erythraea</i>            | Malayan pond frog                        | Ranidae       | 22 Feb. 1984                    |
| <i>Occidozyga laevis</i>         | Paddyfield puddle frog                   | Ranidae       | 22 Feb. 1984                    |
| <b>Reptiles:</b>                 |  |               |                                 |
| <b>Lacertilia:</b>               |  |               |                                 |
| <i>Draco volans</i>              | Sumpah-sumpah                            | Agamidae      | 14 April 1981                   |
| <i>Draco quinquefasciatus</i>    |  | ..            | 8 April 1981                    |
| <i>Draco fimbriatus</i>          |  | ..            | 10 April 1981                   |
| <i>Draco melanopogon</i>         |  | ..            | 10 Apr. 1981                    |
| <i>Aphanotis fuscus</i>          |  |               | 27 Nov. 1979                    |
| <b>Ophidia</b>                   |  |               |                                 |
| <i>Liopeltis baliodeirus</i>     |  | Colubridae    | 13 Jan. 1975                    |
| <i>Achaetulla straiata</i>       |  | ..            | 16 Mar. 1975                    |
| <i>Sibynophis melanocephalus</i> |  | ..            | 15 Oct. 1979                    |
| <b>Mammals:</b>                  |  |               |                                 |
| <b>Ground squirrels:</b>         |  |               |                                 |
| <i>Rhinosciurus laticaudatus</i> | Schrew faced ground squirell             | Sciuridae     | 27 Jul. 1978                    |

|                                   |                       |           |              |
|-----------------------------------|-----------------------|-----------|--------------|
| <i>Callosciurus nigrovittatus</i> | Black banded squirrel | Sciuridae | 28 Jul.1978  |
| <i>Callosciurus notatus</i>       | Plantain squirrel     | Sciuridae | Aug. 1985    |
| <b>Rats:</b>                      |                       |           |              |
| <i>Rattus muelleri</i>            | Mullerís rat          | Muridae   | 4 Jul. 1978  |
| <i>Rattus sabanus</i>             | Long tailed giant rat | ..        | 4 Jul.1978   |
| <i>Rattus surifer</i>             | Red spiny rat         | ..        | 4 Jul.1978   |
| <i>Rattus tiomanicus</i>          | Wood rat              | ..        | 18 Aug. 1985 |
| <i>Rattus rajah</i>               | Brown spiny rat       | ..        | 14 Jul.1978  |

TABLE 2  
Vertebrates collected by students during their field trips

| Species                            | Common name             | Date of collection |              |
|------------------------------------|-------------------------|--------------------|--------------|
| <b>Mammals:</b>                    |                         |                    |              |
| <b>Bats</b>                        |                         |                    |              |
| <i>Rhinolopus trifoliatus</i>      | Treefoil horse shoe bat | Pteropodidae       | 8 Sept. 1997 |
| <i>Cynopterus brachyotis</i>       | Malaysian fruit bat     | ..                 | 8 Sept. 1997 |
| <i>Penthetor lucasii</i>           | dusky fruit bat         | ..                 | 8 Sept. 1997 |
| <b>Reptiles:</b>                   |                         |                    |              |
| <i>Calotes versicolor</i>          | Sumpah sumpah           | Agamidae           | 8 Sept. 1997 |
| <i>Geomyda spinosa</i>             | Spiny tortoise          | Testudinidae       | 9 Sept. 1997 |
| <b>Amphibia:</b>                   |                         |                    |              |
| <i>Rana doriae</i>                 | Siamese frog            | Ranidae            | 8 Sept. 1997 |
| <i>Polypedates leucomystax</i>     | Malayan house frog      | Rhacophoridae      | 8 Sept. 1997 |
| <i>Rana chalconota</i>             | Copper cheek frog       | Ranidae            | 8 Sept. 1997 |
| <b>Fishes:</b>                     |                         |                    |              |
| <i>Channa striatus</i>             | Snake head              | Ophiocephalidae    | 8 Sept. 1997 |
| <i>Hemirhampodon pogonognathus</i> | Jolong, Sember          | Hemirhampidae      | 8 Sept. 1997 |
| <i>Rasbora einthoveni</i>          | Seluang/susur batang    | Cyprinidae         | 8 Sept. 1997 |
| <i>Puntius binotatus</i>           |                         | ..                 | 8 Sept. 1997 |
| <b>Anuran:</b>                     |                         |                    |              |
| <i>Rana doriae</i>                 | Siamese frog            | Ranidae            | 6 Feb. 1999  |
| <i>Bufo melanostitus</i>           | Common toad             | Bufoidea           | 6 Feb. 1999  |
| <i>Bufo asper</i>                  | Malayan giant toad      | ..                 | 6 Feb. 1999  |
| <i>Rana malesiana</i>              | Malaysian frog          | Ranidae.           | 6 Feb. 1999  |
| <i>Kalophrynus palmatissimus</i>   | Rain skicky toad        | Microhylidae       | 6 Feb. 1999  |
| <b>Fish:</b>                       |                         |                    |              |
| <i>Rasbora heteromorpha</i>        | Bada seluang            | Cyprinidae         | 6 Feb. 1999  |
| <i>Rasbora sumatrana</i>           | Ikan seluang            | ..                 | 6 Feb. 1999  |
| <i>Betta pugnax</i>                | Belaga, Sepilai         | Anabantidae        | 6 Feb. 1999  |
| <i>Hemirhampodon pogonognathus</i> | Julung-julung           | Hemirhampidae      | 6 Feb. 1999  |
| <i>Channa striatus</i>             | Haruan                  | Ophiocephalidae    | 6 Feb. 1999  |
| <i>Clarias sp.</i>                 | Keli                    | Clariidae          | 6 Feb. 1999  |
| <i>Channa lucius</i>               | Bujuk, Ubi              | Ophiocephalidae    | 13 Mar. 1999 |

| Anuran                   |                     |         |                              |
|--------------------------|---------------------|---------|------------------------------|
| <i>Rana blythi</i>       | Malayan giant frog  | Ranidae | April 1998 till<br>Feb. 1999 |
| <i>Rana chalconota</i>   | Copper cheek frog   |         | ..                           |
| <i>Rana doirae</i>       | Siamese frog        |         | ..                           |
| <i>Rana hosei</i>        | Green tree frog     |         | ..                           |
| <i>Rana paramacrodon</i> | Coarse frog         |         | ..                           |
| <i>Rana plicatella</i>   | Rhinoceros frog     |         | ..                           |
| <i>Rana signata</i>      | Yellow spotted frog |         | ..                           |

The list of vertebrates in this report may not be exhaustive especially the avian fauna which has been studied more thoroughly by other workers recently. Among the vertebrates, fishes gave a more complete list. Some fishes that are quite rare such as 'bujuk' that prefer to live in streams, lakes and pond is also found in the Rasau River. Among the fishes, *Hamirhampodon pogognathus* is available in large number and normally remain near the surface. *Rasbora* are small fishes that are also commonly found in the river. They are small fish and the largest caught in Rasau River was about 8.5 cm in length. Even though *Rasbora* form the food for predatory fish, their existence in large number is because there are very few predator fishes found in Rasau River. Some *Rasbora* such as *R. einthoveni* prefers slightly acidic water in swamp. Some how the fish is also found in Sg. Rasau that was not acidic. From a total of 8 species of *Rasbora* recorded in Malaysia, 4 are found in Rasau River.

More collections are needed to inventorize the vertebrates of Ayer Hitam Forest Reserve especially in the interior part of the forest.

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#### REFERENCES

- BERRY, P.Y. 1975. *The Amphibian Fauna of Peninsular Malaysia*. Kuala Lumpur: Tropical Press. 129p.
- GLENISTER, A. G. 1974. *The birds of the Malaysian Peninsula, Singapore and Penang*. London, Melbourne: Oxford University Press. 291 p.
- INGER, R.F. 1966. *The systematic and zoogeography of the Amphibia of Borneo*. Field Museum of Natural History. 402 p.
- MEDWAY, L. 1977. *Mammals of Borneo*. Malaysian Branch of the Royal Asiatic Society. 172p.