

## Pteridophyte Flora of Ayer Hitam Forest Reserve, Selangor, Peninsular Malaysia

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### ABSTRAK

Sebanyak 39 spesies tumbuhan pteridofit yang tergolong dalam 22 genus dan 15 famili telah direkodkan di Hutan Simpan Ayer Hitam, Puchong, Selangor. Senarai spesies yang disediakan ini berasaskan koleksi di kawasan kajian dan data yang tersedia sebelumnya. Kepelbagaian spesies yang rendah ini adalah bersesuaian dengan kedudukan hutan ini sebagai hutan sekunder.

### ABSTRACT

A total of 39 species of pteridophyte in 22 genera and 15 families has been recorded in Ayer Hitam Forest Reserve, Puchong, Selangor. The list of species prepared was based on collections in study area and previous available data. The diversity of species is low and consistent with the nature of the forest as a secondary forest.

### INTRODUCTION

Ayer Hitam Forest Reserve is a lowland dipterocarp forest situated at about 3° 0' N to 3° 02. 20' N and 101°37.90' E to 101°40.00' E, approximately 20 kilometers southwest of Kuala Lumpur. The forest is about 1248 hectares in size and is divided into six compartments (Compartment 1, 2, 12, 13, 14 and 15). Each compartment was logged at different times in the past. To date a small number of pteridophytes was collected and reported (Faridah Hanum 1999). This expedition aims to complement the previous data and provide a checklist of pteridophytes for Ayer Hitam Forest Reserve.

### METHODS

Specimens were collected along the vicinity of the base camp and both sides along the major streams. All voucher specimens were prepared as herbarium specimens and are deposited at UKMB and UPM.

### RESULTS

Checklist of ferns and fern-allies collected in Ayer Hitam Forest Reserve (AHFR).

### Ferns Allies

#### Lycopodiaceae

*Lycopodium cernuum* (L.) Pic Sem  
AHFR: 1999, Nurulhuda & Faridah Hanum UDA 80 [UPM]; 1999, Faridah Hanum & Nurulhuda UDA 62 [UPM].

#### Selaginellaceae

*Selaginella ascendens* Alderw.  
AHFR: 15/9/98, Nasir Abdul Rachman NAR 26 [UPM].

*S. ciliaris* (Retz.) Spring

AHFR: 3/5/00, Ahmed Zainudin *et al.* AZ 6696 [UKMB].

*S. intermedia* (Blume) Spring

AHFR: 15/8/98, Nasir Abdul Rachman NAR 8 [UPM]; 3/5/00, Ahmed Zainudin *et al.* AZ 6722 [UKMB].

*S. stipulata* (Blume) Spring

AHFR: 30/9/98, Nasir Abdul Rachman NAR 39 [UPM].

*S. wallichii* (Hook & Grev.) Spring  
 AHFR: 15/8/98, Nasir Abdul Rachman NAR 5  
 [UPM]; 4/5/00, Ahmed Zainudin *et al.* AZ 6736  
 [UKMB].

*S. willdenowii* (Desv.) Baker  
 AHFR: 4/5/00, Ahmed Zainudin *et al.* AZ 6688  
 [UKMB].

**Ferns**

**Adiantaceae**

*Cheilanthes tenuifolia* (Burm.f.) Sw. subsp.  
*tenuifolia*  
 AHFR: 19/10/99, Nurulhuda UDA 82[UPM].

*Syngamma wallichii* (Hook.) Bedd.  
 AHFR: 4/5/00 Ahmed Zainudin *et al.* AZ 6738  
 [UKMB].

*Taenitis blechnoides* (Willd.) Sw,  
 AHFR: 14/9/98, Nurulhuda UDA 41[UPM]; 3/  
 5/00, Ahmed Zainudin *et al.* AZ 6688[UKMB].

**Aspleniaceae**

*Asplenium nidus* L.  
 AHFR: 13/10/98, Nasir Abdul Rachman NAR  
 50 [UPM]; 15/8/99, Nurulhuda UDA 5[UPM].

**Blechnaceae**

*Blechnum orientale* L.  
 AHFR: 30/8/98, Nasir Abdul Rachman NAR  
 20 [UPM]; 14/9/98, Nurulhuda UDA 42[UPM];  
 3/5/00, Ahmed Zainudin *et al.* AZ 6689[UKMB].

**Cyatheaceae**

*Cyathea latebrosa* (Wall. ex Hook.) Copel.  
 AHFR: 15/8/98, Nasir Abdul Rachman NAR 1,  
 NAR 4, NAR 13; 30/8/98, NAR 23, NAR 38; 5/  
 10/98, NAR 43; 13/10/98, NAR 49 [UPM].

*C. moluccana* R. Br.  
 AHFR: 30/8/98, Nasir Abdul Rachman NAR 21;  
 15/9/98, NAR 28; 13/10/98, NAR 59 [UPM];  
 3/5/00, Ahmed Zainudin *et al.* AZ 6718 [UKMB].

**Dennstaedtiaceae**

*Lindsaea ensifolia* Sw.  
 AHFR: 3/5/00, Ahmed Zainudin *et al.* AZ 6707  
 [UKMB].

**Dryopteridaceae**

*Tectaria barberi* (Hook.) Copel  
 AHFR: 2001, Rusea *et al.*

*T. crenata* Cav.  
 AHFR: 3/5/00, Ahmed Zainudin *et al.* AZ 6715  
 [UKMB].

*T. singaporeana* (Wall. ex Hook & Grev.) Copel.  
 AHFR: 30/8/98, Nasir Abdul Rachman NAR 11  
 [UPM].

*T. vasta* (Blume) Copel.  
 AHFR: 2001, Rusea *et al.*

**Gleicheniaceae**

*Dicranopteris linearis* (Burm.f.) Underw.  
 AHFR: 30/8/98, Nasir Abdul Rachman NAR 19  
 [UPM].

**Nephrolepidaceae**

*Nephrolepis auriculata* (L.) Trimen  
 AHFR: 30/8/98, Nasir Abdul Rachman NAR 10  
 [UPM]

**Ophioglossaceae**

*Helmintostachys zeylanica* (L.) Hook.  
 AHFR: 17/9/99, Nurulhuda UDA 61[UPM]

*Ophioglossum pendulum* L.  
 AHFR: 1999, Nurulhuda & Faridah Hanum UDA  
 75 [UPM]; 1999, Nurulhuda & Faridah Hanum  
 UDA 39 [UPM].

**Polypodiaceae**

*Lecanopteris sinuosa* (Wall. ex Hook.) Copel.  
 AHFR: 4/5/00, Ahmed Zainudin *et al.* AZ 6745  
 [UKMB].

*Platyserium coronarium* (J.King) Desv.  
 AHFR: 1999, Nurulhuda & Faridah Hanum UDA  
 43 [UPM].

*Pyrosia nummulariifolia* (Sw.) Ching  
 AHFR: 1999, Nurulhuda & Faridah Hanum UDA  
 10 [UPM]; 1999, Nurulhuda & Faridah Hanum  
 UDA 70 [UPM]; 4/5/00, Ahmed Zainudin *et al.*  
 AZ 6688 [UKMB].

*P. piloselloides* (L.) M.G. Price  
 AHFR: 1999, Nurulhuda & Faridah Hanum UDA  
 53 [UPM]; 1999, Nurulhuda & Faridah Hanum  
 UDA 60 [UPM].

**Schizaeaceae**

*Lygodium circinnatum* (Burm.f.) Sw.  
 AHFR: 18/9/98, Nurulhuda UDA 73 [UPM].

*L. flexuosum* (L.) Sw.

AHFR: 1999, Nurulhuda & Faridah Hanum UDA 65[UPM]

*L. longifolium* (Willd.) Sw.

AHFR: 1999, Nurulhuda & Faridah Hanum UDA 35[UPM]

*L. microphyllum* (Cav.) R. Br.

AHFR: 1999, Nurulhuda & Faridah Hanum UDA 59[UPM]

*Schizaea dichotoma* (L.) Sw.

AHFR: 17/9/98, Nurulhuda UDA 69[UPM].

*S. digitata* (L.) Sw.

AHFR: 1999, Nurulhuda & Faridah Hanum UDA 76[UPM]

#### Thelypteridaceae

*Mesophlebium chlamydophorum* (C. Chr.) Holttum

AHFR: 5/10/98, Nasir Abdul Rachman NAR 42[UPM].

*Pronephrium triphyllum* (Sw.) Holttum

AHFR: 4/5/00, Ahmed Zainudin *et al.* AZ 6735 [UKMB].

#### Woodsiaceae

*Diplazium allantoideum* M.G. Price

AHFR: 15/9/98, Nasir Abdul Rachman NAR 25 [UPM].

*D. crenatoserratum* (Blume) T. Moore

AHFR: 15/9/98, Nasir Abdul Rachman NAR 22, NAR 27 [UPM].

*D. riparium* Holttum

AHFR: 30/9/98, Nasir Abdul Rachman NAR 40; 5/10/98, Nasir Abdul Rachman NAR 45 [UPM].

*D. tomentosum* Blume

AHFR: 15/8/98, Nasir Abdul Rachman NAR 6 [UPM].

#### CONCLUSION

The pteridophyte flora of Ayer Hitam Forest Reserve comprises one species of lycopod, six species of sellaginellas and 32 species of ferns. This represents about 6.02% of the 647 species, 42.8% families and 15.5% of genera reported for Peninsular Malaysia (Parris and Latiff 1997). Of these 39 taxa, 6 species were identified as new additions to the previous list (Faridah Hanum 1999). Most of the taxa are lowland elements and easily found on the forest floor or as epiphytes on rocks and trees by the trails. Despite the larger land area of Ayer Hitam Forest (1248 ha) in comparison to the Bangi Forest Reserve (Bidin and Jaman 1990), the number of pteridophyte taxa is less. This is most probably due to past deforestation and disturbances in this area.

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