A Phytosociological Study on the Community of *Palaquium gutta* (Hook.f.) Baill. (Sapotaceae) at Ayer Hitam Forest Reserve, Selangor, Malaysia  
(Suatu Kajian Fitososiologi ke atas Komuni *Palaquium gutta* (Hook.f.) Baill di Simpan Ayer Hitam, Selangor)

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**ABSTRACT**

A phytosociological study on the flora and vegetation community of *Palaquium gutta* (Hook.f.) Baill. was carried out in Compartment 13 of Ayer Hitam Forest Reserve, Selangor. The main objectives of this study were to identify, characterize and classify the *P. gutta* community which is naturally distributed in Ayer Hitam Forest Reserve. A total of 10 plots (30 x 30 m in size) were constructed according to the line transect method. The vegetation sampling and data analysis were done according to the Braun-Blanquet approach. The results showed that there were 59 species belonging to 54 genera and 34 families in the form of herbs, shrubs, understorey trees and also canopy tree layers. The most common species in the study area were *P. gutta* and Endospermum diadenum (Miq.) Airy Shaw. The phytosociological study identified a community of *Palaquium gutta*-Endospermum, diadenum along with two sub-communities known as Dracaena sp. sub-community and Streblus elongatus sub-community. The results also showed that most of the species belong to the Euphorbiaceae. This indicates that the forest is a secondary forest.

**Keywords:** Braun-Blanquet; Endospermum diadenum; *Palaquium gutta*; phytosociology; vegetation community

**INTRODUCTION**

Phytosociology involves plant communities within the same environment, their floristic composition and development and the social relationships between them. A phytosociological study gives information on the distribution of species as well as affinities between species or groups of species, resulting in a valuable evaluation of the vegetation within the study area (Frenedozo-Soave 2003). A phytosociological system is a system for classifying these communities. Phytosociology provides useful basic data for ecology, geography, landscape science, conservation and environmental science because the data represent integrated units in vegetation systems (Fuijwara 1987).

According to Enright and Nufiez (2013), Braun-Blanquet pioneered the classification of vegetation into units (associations) based on floristic composition and the identification of characteristics species. The advantages and problems, associated with the phytosociological approach to vegetation analysis pioneered by Braun-Blanquet have been reviewed many times, and inevitably will continue to do so as the vegetation science community increasingly becomes a globalised one.

*Palaquium gutta* is known locally as ‘Nyatoh Taban Merah’ and is from the Sapotaceae family. *Palaquium* species can be found in primary lowland forest about 300 m below and also on hill forest in Peninsular Malaysia. *Palaquium* species have been recorded in all states of Malaysia except Perlis, Kedah and north of Terengganu (Roche & Duorrejanni 1984). According to Prakash et al. (2005), *Palaquium* species are natural inhabitants of Southeast Asia, particularly in Malaysian and Indonesian archipelago. Guetta-percha is a dried coagulated extract from several *Palaquium* species including *P. gutta*. The guetta-percha yielding tree is a medium to tall trees, in which a series of cuts (concentric or v-shaped cuts) is