



# Knowing our local bamboo resources

By Dr. Goh Wei Lim  
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Bamboos are found in great diversity in Southeast Asia and they have been widely used by local communities since ancient times for handicrafts, chopsticks, basketry, edible shoots and many more. Recently there is a growing recognition of the commercial potential of bamboos as they are very fast-growing (compared to trees), more resistant to insects and fungal infection, considerably durable and rigid. Engineered or processed bamboo materials can be used in construction, fuel wood and charcoal, fiber, furniture and paper/pulp industries as wood alternative. Demand for the raw bamboo materials remains strong in both traditional and emerging markets.

Home to about 70 bamboo species, Malaysia has a great potential to develop its bamboo industry. Recently the Primary Industry Ministry has urged for modernisation and transformation of the bamboo industry and has introduced soft loans, amounting to RM10,000/ hectares, for bamboo planters in the country ([www.mpi.gov.my](http://www.mpi.gov.my)). Being able to recognise the identities of some bamboos around us will certainly be useful if you are thinking of venturing into bamboo industry. Here I provide a brief introduction of the bamboo resources in Peninsular Malaysia.

## ***“Clumping bamboos (sympodial)” vs. “Running bamboos (monopodial)”***

Most bamboos in the tropics established themselves in clumps (hence “clumping”) as the culms are closely packed. This is attributable to the short-necked rhizome (root) system. Some species have neatly erect, tufted clumps (Figure 1), but many have rather drooping culms or even behave clambering, making them look quite untidy (Figure 2).



Figure 1 - Erect, tufted clumps of *Schizostachyum brachycladum*



Figure 2 - *Maclurochloa montana* in Fraser Hill, with culms and branches entangling the adjacent tree

“Running bamboos” have long and slender rhizomes that make their culms widely-spaced (if you can recall the famous fight scene in a bamboo forest in the movie *Crouching Tiger Hidden Dragon*). Majority of them are found in temperate zones. In Peninsular Malaysia, a few species of *Chimonobambusa* and *Phyllostachys* were introduced and established in Genting Highlands, Fraser Hill and Cameron Highlands. (The only native running bamboo species in Malaysia, *Yushania tessellata*, is found in Mt. Kinabalu.)

### **“Montane bamboos” vs. “lowland bamboos”**

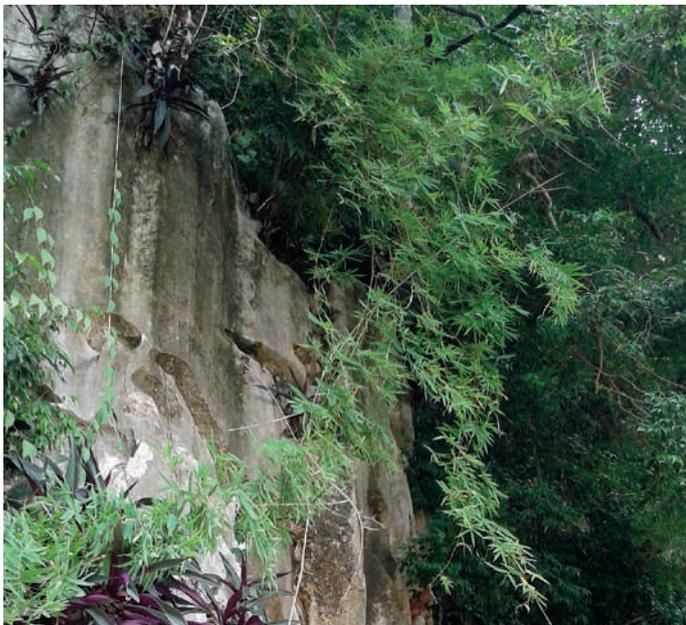
Montane bamboos are distributed at the lower (altitude of ca. 700 – 1500 m) or higher (ca. 1500 m) montane forest zones. They usually have relatively small culm diameters (<3 cm). While they can be locally abundant, their natural distributions do not expand beyond the montane areas. This means the populations of discontinuous mountains are genetically isolated from each other, and therefore each should have equally high conservation values. *Buluh Padi* (*Maclurochloa montana*; Figure 2) is endemic to Peninsular Malaysia, recorded only in Fraser Hill, Penang Hill and Gunung Jerai. *Buluh Perindu* (*Holttumochloa magica*) is found in Cameron Highlands and was used in indigenous mysticism.

Other bamboo species in Peninsular Malaysia are found in lowland. Commonly seen genera are *Dendrocalamus*, *Gigantochloa* (Figure 3) and *Schizostachyum*.



Figure 3  
*Gigantochloa scortechinii*, commonly found at foothills of Main Range, is characterised by its distinctive culm sheath

### **“Forest bamboos” vs. “village bamboos”**



Bamboos in the wild are generally well-established in open areas such as hill slopes, river banks, forest gaps, forest fringe and secondary forests. Interestingly, two *Dendrocalamus* species (*D. dumosus* and *D. elegans*) are restricted to the limestone habitat (Figure 4).

Figure 4  
*Dendrocalamus elegans* the limestone outcrop

The term “village bamboos” refers to the bamboos that are commonly grown for their desirable characteristics. Bamboos with large and straight culms, such as the green form of *Buluh Aur* (*Bambusa vulgaris*), can make good building materials. Young culm shoots of species such as *Buluh Betung* (*Dendrocalamus asper*; Figure 5) are edible.

The culm of Buluh Lemang (*Schizostachyum brachycladum*) are used as containers for cooking a glutinous rice cake (lemang). Variegated leaves, yellow-streaked / yellow culms and slender culms, are often regarded as aesthetic characteristics in the bamboo ornamentals. Examples of these bamboos are Buluh Minyak (*B. vulgaris* cv. *vittata*), Buluh Pagar (*B. multiplex*) and Buluh Madu (or Phai Liang in Thai language, recently confirmed as a hybrid between *Dendrocalamus* and *Thyrsostachys*; Figure 6). A number of village bamboos are never found in the forest and can therefore be considered as domesticated. This group of bamboos remained, at least to me, as highly mysterious and more studies are definitely needed to shed lights on their domestication history!



Figure 5 - *Dendrocalamus asper*, of which the young culm shoots are often harvested for food



Figure 6 - Phai Liang (*Thyrsocalamus liang*) in UTAR Kampar campus

### Recommendations for further readings:

Chua KS, Soong BC, Tan HTW (1996) The bamboos of Singapore. International Plant Genetic Resources Institute (IPGRI)

Wong KM (1995) The morphology, anatomy, biology and classification of Peninsular Malaysian bamboos. University of Malaya botanical monographs No. 1. University of Malaya, Kuala Lumpur

Wong KM (2004) Bamboo: the amazing grass - a guide to the diversity and study of bamboos in Southeast Asia. International Plant Genetic Resources Institute (IPGRI)

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