Sweet and Sour, the Lovely *Gelugor*

Three young trees (one hidden) at the Economic Garden showing their characteristic form

Gelugor or *Asam Gelugor* (*Garcinia atroviridis*), is a distinctive conical to columnar tree with a characteristic architecture. Many closely-spaced branches, drooping at their ends, emerge almost horizontally from the main trunk. Old trees have a more rounded crown. The fleshy and shiny green leaves are fairly large, from 13 to 30 cm long. Periodically, flushes of red young leaves are produced making this tree rather attractive. These gradually fade becoming pale and then dark green. This medium-sized tree can reach 25 m tall.

The male flowers - borne in terminal clusters - are small and nondescript. However, these are uncommon as most trees are female. If found, they are borne on the same tree with the female flowers which are larger, 3 to 4 cm across, with four small greenish sepals and four larger bright red petals. The sepals and petals are persistent and found on young fruits, the latter turning green as the fruit develops. When the fruits mature, the petals are shed. The large and prominent disc-like stigma is 1 to 1.5 cm across.

Fruits dangle from the end of small branches and are strongly fluted with 10 to 15 rounded segments. They are a rich, shiny green when young but ripen to a distinctive and attractive bright yellow. They reach 10 to 12 cm across. The bulk of the fruit is made up of a very thick rind that is yellow throughout when ripe. Inside, the core is orange with each segment represented by a seed cavity and surrounded by a tangy, sweet-sour pulp.

Asam Gelugor (*asam* meaning sour or a sour relish and *gelugor*, the

Immature fruits dangle from the end of small branches

Fruits shown in section, the larger one is not fully ripe. Segmentation is obvious, seeds are absent. *(Note: The ruler is 20 cm long)*

Dried fruit slices, a commercial product locally found in virtually all grocery stores. Seeds are evident. *(Note: The ruler is 20 cm long)*

name of the tree) is found wild from the Malay Peninsula to Thailand and Myanmar. Matured fruits are harvested before they are fully ripe and sliced longitudinally. If sliced transversely, the pieces tend to break up along the lines of the segments. The slices when are widely used as a souring agent in spicy dishes. It is an important village tree providing a small industry based on its culinary use. Another souring agent in food is the tamarind or *Asam Jawa* (*Tamarindus indica*), whose fruit pulp is widely used to flavour many Asian dishes. *Gelugor* slices have a sharper flavour than tamarind and are often slightly resinous, although if ripe fruits are used, the product has a softer and smoother flavour. Besides the fruits, the delicate young leaves – though sour and slightly resinous - may also be used in food.

Extracts from fruits of *Gelugor* as well as from *Garcinia gummi-gutta* (see *Gardenwise* **24**(2005):24) and *Garcinia indica*, contain antioxidants as well as hydroxycitric acid. The latter is an ingredient in health products reputed to assist in weight loss and possibly lowering cholesterol.

This lovely tree, with its well-behaved columnar form and attractive flushes of red young leaves, makes it a good candidate for parks and large gardens. However, one will have to bear with fallen fruits. In Singapore's rather uniform climate, it is unlikely that fruiting would be profuse. The growth rate is moderate. The three young trees at the Economic Garden (in Bukit Timah Core) featured here were planted eight years ago from small saplings. They are now nearing six metres tall and fruited - though seedless - for the first time this year.

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Fruit slices dried in the sun in a village in Perak, Malaysia