

X. THE SIMILARITY OF LOPHOPYXIS AND GOUANIA

The affinity of the Malesian genus Lophopyxis has a checked history, a survey of which was given by L.B.Holthuis & H.J.Lam, in Blumea 5 (1942) 205-208, fig.7. It has been referred to Flacourtiaceae, Icacinaceae, Euphorbiaceae, Olacaceae, and Saxifragaceae.

Hitherto no attention was paid to the similarity with Gouania in the Rhamnaceae, which it resembles in toothed leaves, presence of stipules, paniced spike-like inflorescences, and the occurrence of tendrils in these.

The characters in common are:

Climbers; leaves alternate, with small stipules; leaf margin crenulate or dentate; leaf base 3-nerved; character of indument (simple hairs) very similar; habit of flowering twigs; inflorescences spikes with flowers in small clusters; base of inflorescence provided with similar tendrils; flowers dioecious; disk large; flowers 5-merous; calyx 5-fid, lobes with a distinct midrib; calyx valvate; lobes triangular; stamens 5; anthers roundish, lengthwise dehiscent; seeds oblong, + without endosperm; cotyledons flat.

The differences can be tabulated as follows:

<u>Gouania</u>	<u>Lophopyxis</u>
Petals hood-shaped concealing the epipetalous stamens	Petals flat, triangular, alternating with the stamens
Disk lobes thin, episepalous	Disk of 5 thick, epipetalous lobes
Ovary inferior, cells 3 episepalous	Ovary superior, cells 5 epipetalous
Ovule 1, basal	Ovules 2, apical, hanging
Style 3-fid	Styles almost sessile, free, 5
Fruit with 3 wings, a cremocarp, parts pendent from a columella consisting of each 2 fibres	Fruit with 5 wings, obviously not dehiscent
Cotyledons roundish, flat	Cotyledons large, thin, membranous

By the structure of the ovary and position of the stamens Lophopyxis would represent certainly an aberrant member of the Rhamnaceae, and if it should be placed in the Rhamnaceae, it should come near Gouania, which it so much resembles. Superficially it also resembles Flacourtiaceae (notably Homalium) but its celled ovary is a definite obstruction to refer

it to Flacourtiaceae. We believe it best to let it provisionally in Euphorbiaceae, as Hallier f. discussed (in Meded. Rijksherb. 1, 1910, 9-10) and regard its resemblance to Gouania as a remarkable convergence.

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VARIA

Lightning caused a number of tree casualties at the Singapore Botanic Gardens. The whole crown of a 120 feet high *Anisoptera magistocarpa* was blown off, the main trunk being shattered at about 80 feet high from the ground by one direct strike on 16 August 1965.

A large tembusu, *Fagraea fragrans*, was also struck and the trunk split. All the leaves dropped from it in three days, but another tembusu, which had been similarly struck in 1963, lingered with curious results. Bifurcate from about 15 feet height with two main trunks, the one trunk that was struck had a narrow strip of bark seared off along its length. There was no apparent ill effect for over 12 months, then the twigs of the damaged trunk began to show die back while the twigs of the undamaged trunk remained healthy. This continued till 30 months after being struck the damaged trunk had less than a quarter of the density of canopy that was on the other trunk. As branches were then becoming dead, the tree was removed.

From the Director's Report over 1965.