

**ANATOMI PEPAGAN PULAI DAN BEBERAPA JENIS
SEKERABAT
Bark Anatomy of Pulai and Several Related Species**

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ABSTRACT

Bark anatomy of white pulai (*Alstonia scholaris* R.Br.), black pulai (*Alstonia angustiloba* Miq.) and bintaro (*Cerbera manghas* L.) were observed and described for identification purposes. These plants have been used as sources of traditional medicine in South East Asia. Bark of these trees exudes white gum when it was cut; the inner parts are white. The outer surfaces of *A. scholaris* and *C. manghas* are gray and usually lenticellate; the outer surface of *A. angustiloba* contains no lenticel, and the colour is dark brown, with narrow and shallow longitudinal fissures. The main components of bark are phloem, parenchyma, ray, fibre, sclereid and periderm. Fibres are tangentially arranged near the cambium of juvenile stem of all species, then pushed outward by cambium activity as the age of the plant increased. Sclereids were few and thin walled while the plants were young and then increased in quantity and in cell wall thickness as the plants become mature. The main anatomical differences between bark of these plants were in the morphology of the sclereids. Sclereids of *A. scholaris* are short and chubby, sclereid of *A. angustiloba* are long and stout while those of *C. manghas* are long and slender. A tentative identification key is presented.

Keywords: *Alstonia scholaris*, *Alstonia angustiloba*, *Cerbera manghas*, bark anatomy.

ABSTRAK

Karakteristik anatomi pepagan pulai putih (*Alstonia scholaris* R.Br.), pulai hitam (*Alstonia angustiloba* Miq.) dan bintaro (*Cerbera manghas* L.) sudah diamati dan dipertelakan guna keperluan identifikasi jenis. Ketiganya diketahui telah lama digunakan sebagai sumber bahan baku obat tradisional di Asia Tenggara. Pepagan ketiga jenis pohon tersebut mengeluarkan getah berwarna putih pada waktu ditetak; bagian dalam pepagan semuanya berwarna putih; permukaan luar pepagan *Alstonia scholaris* dan *Cerbera manghas* berwarna kelabu dan biasanya mengandung lentisel; permukaan luar pepagan *Alstonia angustiloba* tanpa lentisel, berwarna coklat gelap, dan mengandung alur-alur longitudinal yang sempit dan dangkal. Komponen utama pepagan terdiri dari floem, parenkim, jari-jari, serat, sklereid dan periderm. Serat dijumpai berderet tangensial dekat kambium pada pepagan batang belia semua jenis kemudian terdorong keluar oleh aktivitas kambium dan terpecah sejalan dengan meningkatnya usia pohon. Sklereid jarang dan berdinding tipis tatkala pohon masih muda lalu bertambah banyak dan menebal dindingnya sejalan dengan bertambahnya usia pohon. Selanjutnya, beda utama struktur anatomi pepagan ketiga jenis pohon tersebut adalah pada morfologi sklereid. Sklereid *A. scholaris* berbentuk gemuk pendek, sklereid *A. angustiloba* berbentuk panjang gemuk, sedangkan sklereid *Cerbera manghas* berbentuk panjang langsing. Kunci identifikasi sementara disajikan.

Kata kunci: *Alstonia scholaris*, *Alstonia angustiloba*, *Cerbera manghas*, anatomi pepagan.