Eucalyptus globulus (leaf)

From AHPA Botanical Identity References Compendium

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Nomenclature

Eucalyptus globulus Labill.MyrtaceaeStandardized common name (English): eucalyptus

Botanical Voucher Specimen



Organoleptic Characteristics

[The leaves] odor slightly aromatic; taste aromatic, bitter, and cooling.

Source: United States Dispensatory (1918)^[4]

Macroscopic Characteristics

The genus *Eucalyptus* was named in allusion to the operculum or lid which covers the calyx until the stamens are fully formed.

The plants are evergreen and vary from shrubs to trees of enormous height, some of them probably being the highest trees known. Kerner gives the height as 140 to 152 meters.

The leaves frequently vary in shape and in position on both young and mature trees; they are fixed vertically, and not horizontally as the leaves of our trees, the petiole being twisted. The leaves furthermore contain large oil-secreting reservoirs. The flowers are arranged in cymes or axillary umbels and are devoid of petals; the usually whitish stamens are inflexed in the bud and expand when the operculum is removed, giving the name as already stated to the genus. The fruit is a 3- to 6-celled truncated capsule, or pyxis. The seeds are small and very numerous, the sterile ones predominating.

Eucalyptus globulus is one of the largest known trees, attaining sometimes a height of 300 or even 350 feet, with a smooth, ash-colored bark. The leaves attain a foot in length, and vary, according to age, from a glaucous white to a bluish-green color. The flowers are large, pinkish-white, axillary, occurring singly, or in clusters. Although its wood is very resinous, hard, and durable, the tree is remarkable for the rapidity of its growth, reaching, under favorable circumstances, fifty feet of height in five or six years.

The leaves are described as follows:

Laminas lanceolately scythe-shaped, from 8 to 30 cm. in length and from 2 to 7.5 cm. in breadth; summits when present acute or acuminate; bases unequal, obtuse or more or less rounded and connected with a twisted petiole from 5 to 35 mm. in length; margins slightly uneven, revolute; coriaceous; both surfaces varying from pale yellowish-green to grayish-green and more or less glaucous, glabrous, glandular-punctate and with numerous small, circular, brown dots of cork; veins of the first order anastomosing with each other and forming a line nearly parallel with the margin.

Source: United States Dispensatory (1918)^[5]





Microscopic Characteristics

Under the microscope sections of Eucalyptus show the upper and lower surfaces with nearly similar cells, the outer walls being strongly cuticularized; stomata occur on both surfaces, a region of palisade cells made up of from 3 to 4 rows of cells occurring beneath each surface; among the palisade cells occur large oil-secretion reservoirs, with a yellowish or orange colored oily content; calcium oxalate crystals in cells of the loose mesophyll in the form of rosette aggregates or monoclinic prisms varying from 0.015 to 0.025 mm. in diameter. At the periphery of the fibro-vascular bundles of the midrib and petiole occurs a more or less interrupted circle of small groups of slightly lignified bast-fibers.

Source: United States Dispensatory (1918)^[8]





High Performance Thin Layer Chromatographic Identification

Supplementary Information

Sources

- 1. ↑ MOBOT, Tropicos.org http://www.tropicos.org/Image/70801
- 2. ↑ MOBOT, Tropicos.org http://www.tropicos.org/Image/100000837
- 3. ↑ Royal Botanic Gardens, Kew. http://specimens.kew.org/herbarium/K000279753
- 4. ↑ United States Dispensatory (1918)
- 5. ↑ United States Dispensatory (1918)
- 6. ↑ PlantaPhile http://plantaphile.com/
- 7. ↑ PlantaPhile http://plantaphile.com/
- 8. ↑ United States Dispensatory (1918)
- $9.\uparrow Elan\ M.\ Sudberg,\ Alkemist\ Laboratories\ http://www.alkemist.com$
- 10. [↑] Elan M. Sudberg, Alkemist Laboratories http://www.alkemist.com

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