



fruit (open, empty)



images above from  
Brownsberg  
Nature Park Tree Atlas of  
Stinasu.  
images below  
by Bart de Dijn.  
tree trunk



papery bark



# Guyabakwari

## NAME

Botanical name: *Qualea dinizii* Ducke [family: Vochysiaceae]

Common trade names: **mandioqueira**, mandio, gronfoeloe

Common local name: **guyabakwari** (also known by forest inventory code GWK)

## BOTANICAL CHARACTERISTICS

Large tree (to 40 m height; DBH up to 80 cm), typically with straight bole, low buttresses (to 1 m), and rounded crown. The bark is smooth, orange-brown, and peels off spontaneously in papery fragments. The leaves are simple, with a smooth margin; they are attached to terminal branchlets as well-spaced 'opposite' pairs, meaning that each paired leaf is positioned at 180 degrees of the other half of the pair. The flowers are about 2 cm large, purplish blue, and have a short but distinct 'spur', meaning a downward tubular extension of the flower base that holds nectar. The flowers are arranged in a plume. The fruit is an elongate capsule; when mature it is grey-brown, about the size of a small chicken egg, and splits open longitudinally to release several elongate, flat seeds that resemble those of maple.

## DISTRIBUTION

Widely distributed and common, in dryland rainforest and dry forest ('savanna forest') throughout Suriname; also occurs throughout much of the Guiana Shield, and possibly also in parts of Amazonia.

## WOOD CHARACTERISTICS

The wood is heavy, somewhat heavier than that of other *Qualea* spp., which are known in Suriname as gronfolo, and are also traded under the names mandioqueira, mandio and gronfoeloe. The wood also differs from that of other *Qualea* spp. in that it is typically much more gray than it is brown or yellow.

Flat sawn: view of  
tangential plane



cross  
cut



Quarter sawn: view of  
radial plane



cross  
cut



## PROCESSING

Amongst the Surinamese kwari species, guyabakwari has the heaviest wood; it has fairly good workability. In general it is easy to saw and machine, but requires sharp tools to prevent 'woolly' surfaces. Drying should be done with care and not too fast. Nailing, screwing and gluing are recorded to be easy.

## DURABILITY

Resistance against attack by fungi and termites is moderate to poor; there is no data available on the durability under marine conditions.

## AVAILABILITY

Over the last years (2010 - 2013), the harvested and locally processed volumes are limited to 1,700 - 4,000 m<sup>3</sup> per year. There are no data on the overall available volume of the species.

## KNOWN USES

Interior carpentry, furniture, crates and boxes, plywood.

NAME	
Botanical name	<i>Qualea dinizii</i>
Trade name	Mandioqueira
Local name	Gujabakwari (GWK)
THE WOOD	
• Color	Sapwood: not very distinct, pale grayish brown Heartwood: grayish brown
• Color	straight to interlocked
• Texture	medium
• Green density (kg/m <sup>3</sup> )	no data available
• Specific gravity (at 12% MC)	740
• Volumetric shrinkage (from green to moisture content of 12%)	5.8 % (TS 9.7% / RS 5.8%)
MECHANICAL PROPERTIES (at a moisture content of 12%)	
• Static bending (N/mm <sup>2</sup> )	MOE: 19400 MOR: 103
• Compression strength (N/mm <sup>2</sup> )	69
• Janka - Hardness (N)	no data available
PROCESSING PROPERTIES	
• Processing	Sawing: blunting effect fairly high, stellite tipped recomm. Machining: no information available
• Drying	normal, but high risk of distortion
• Nailing	good
• Gluing	good
• Finishing	good
NATURAL DURABILITY	
	Fungi: moderate Termites: poor to moderate Marine borers: no information available
KNOWN USES	
	flooring, heavy carpentry, exterior paneling, ship building, sliced veneer

<b>Synonyms</b>	none that are commonly used
<b>Information sources used</b>	<p>Comvallus, L.B. 2010. Surinamese Timber Species: Characteristics and Utilization (2nd Ed.). Comvallus, Paramaribo, Suriname.</p> <p>Funk, V., T. Hollowell, P. Berry, C. Kelloff, and S.N. Alexander. 2007. Checklist of the Plants of the Guiana Shield (Venezuela: Amazonas, Bolívar, Delta Amacuro; Guyana, Surinam, French Guiana). Contributions from the United States National Herbarium 55: 1-584.</p> <p>Gentry, A.H. 1993. A Field Guide to the Families and Genera of Woody Plants of Northwest South America (Colombia, Ecuador, Peru) with supplementary notes on herbaceous taxa. The University of Chicago Press, Chicago, USA, and London, UK, xxiii + 895 pp.</p> <p>Harripersaud, P., and H. ter Steege. 2004. Virtual Tree Guide of the Guianas. National herbarium Netherlands, Utrecht Branch, Utrecht, The Netherlands. Published on the Internet: <a href="http://web.sceince.uu.nl/Amazon/VTGG/Main.htm">http://web.sceince.uu.nl/Amazon/VTGG/Main.htm</a></p> <p>Leupen, S, and D. Yoder. 2003. Brownsberg Nature Park Tree Atlas. Unpublished digital manuscript, Stinasu, Paramaribo, Suriname.</p> <p>Lindeman, J.C., and A.M.W. Mennega. 1963. Bomenboek voor Suriname. 'S Lands Bosbeheer, Paramaribo, Suriname, 312 pp. + 96 plates.</p> <p>Office National des Forêts. 2004. Guide de reconnaissance des arbres de Guyane – 120 essences décrites (2nd. Ed.). ONF, Cayenne, Guyane, France, 374 pp.</p> <p>The Plant List (2013), Version 1.1. Published on the internet: <a href="http://www.theplantlist.org">http://www.theplantlist.org</a></p> <p>Tropicos, botanical information system at the Missouri Botanical Garden. Consulted Sep. 2014 on the internet: <a href="http://www.tropicos.org">http://www.tropicos.org</a></p> <p>Tropix (2013), The main technological characteristics of 245 tropical wood species, Version 7. Species data sheets published on the Internet: <a href="http://tropix.cirad.fr">http://tropix.cirad.fr</a></p> <p>van Roosmalen, M.G.M. 1985. Fruits of the Guianan Flora. Institute Systematic Botany, Utrecht University, Utrecht, The Netherlands, xli + 483 pp.</p>