



**Avicenniaspp.**

**Family: Avicenniaceae (Verbenaceae)**

**Black Mangrove**

The genus *Avicennia* contains about 15 species which grow along tropical and subtropical shores. It is commonly included with the family Verbenaceae. The genus *Avicennia* was dedicated in honor of Abu Sina, Latinized as *Avicennia* (980–1036 AD), of Bokhara, Arab physician and philosopher.

*Avicennia alba*-baen

*Avicennia germinans*-black mangrove, black-tree, blackwood, honey mangrove, mangle blanco, saltbush

*Avicennia marina*-blackwood, mangle nero, mangle prieto, manglecito, parwa

**Distribution**

This genus grows in pure, dense stands on mud flats along the coast and estuaries, in brackish coastal swamps, and on river banks along lower brackish parts.

**The Tree**

The tree sometimes reaches a height of 75 ft (23 m), although normally only 25 ft (8 m), with a 2-ft (0.6-m) diameter. Towards the northern end of its limit (Dog Island, Florida) it is shrubby. Black mangroves have long heavy roots which grow extensions (pneumatophores) that aid in gas exchange and coincidentally trap silt to extend the shoreline. Seeds mature and germinate on the tree and then fall to the mud.

**The Wood**

**General**

The sapwood of mangrove is wide, yellow–gray to brown–yellow. The heartwood is dark yellow–brown to very dark brown with an oily appearance. The luster is low and the wood has no distinct odor or taste. The grain is irregular and interlocked, and the texture is coarse and uneven. The wood may contain a yellow powdery substance called lapachol. The bole is 20 to 40 ft (6 to 12 m) long and unbuttressed, but it is swollen due to numerous pneumatophores (aerial roots). The woods of all species are practically identical, with concentric, anastomosing layers of secondary phloem (bast).

**Mechanical Properties (2-inch standard)**

	Specific gravity	MOE x10 <sup>6</sup> lbf/in <sup>2</sup>	MOR lbf/in <sup>2</sup>	Compression		WML <sup>a</sup> in-lbf/in <sup>3</sup>	Hardness lbf	Shear lbf/in <sup>2</sup>
				Parallel lbf/in <sup>2</sup>	Perpendicular lbf/in <sup>2</sup>			
Green	0.83	1.55	11,100	4,940	1,870	12.3	1,700	1,370
Dry	0.83	2.09	16,400	8,340	2,360	17.9	–	–

<sup>a</sup>WML = Work to maximum load.  
Reference (59).

## Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	9.7	–	–
Radial	6.2	–	–
Volumetric	15.6	–	–

<sup>a</sup>The wood air-dries well; kiln drying requires a slow schedule to prevent warping.  
<sup>b</sup>Reference (59).

**Kiln Drying Schedule:** No information available at this time.

**Working Properties:** The wood saws well, but it is not easy to work with because of the interlocked grain. It glues well, but nail holes must be prebored to prevent splitting.

**Durability:** Very susceptible to termite and marine borer attack. Resistance to impregnation variable.

**Preservation:** No information available at this time.

**Uses:** Used in the round (poles and posts for netting), underground foundations (pilings), pulp (soda process), fuel, charcoal, tannin from bark.

**Toxicity:** No information available at this time.

**Additional Reading and References Cited (in parentheses)** 4, 14, 29, 45, 55, 68, 74, 80, 101.

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