Ramin (Gonystylus Forbesii)

Botanical Name:	Gonystylus forbesii
Other Common Names:	Ramin, Melawis
Common Uses:	Railroad ties, Furniture , Interior trim, Handles, Paneling , Turnery, Veneer, Flooring, Carvings, Broom handles, Building materials, Chairs, Chests, Concealed parts (Furniture), Core Stock, Crossties, Decorative veneer, Desks, Dining-room furniture, Domestic flooring, Dowell pins, Dowells, Drawer sides, Factory flooring, Figured veneer, Fine furniture, Floor lamps, Furniture components, Furniture squares or stock, Hatracks, Interior construction, Kitchen cabinets, Living-room suites, Millwork, Moldings, Office furniture, Parquet flooring, Plain veneer, Radio, stereo, TV cabinets, Rustic furniture, Shafts/Handles, Stools, Sub-flooring, Tables , Tool handles, Trimming, Utility furniture, Wainscotting, Wardrobes, Woodwork
Region:	Oceania and S.E. Asia
Country:	Australia, Indonesia, Malaysia, Philippines
Distribution:	The genus Gonystylus is reported to consist of small to large trees that are distributed in peat swamp forests in Malaysia, parts of Sumatra, the west coast of Borneo, and the Philippines.

Numerical Values for: Gonystylus forbesii

Category	**Green**	Dry	Unit
Bending Strength	9902	17368	psi
Max. Crushing Strength	5620	9575	psi
Stiffness	1470	2100	1000 psi
Hardness		1300	lbs
Toughness		193	in-lbs
Specific Gravity	0.54	0.65	

Weight	50	40	lbs/cu.ft.
Density (Air-dry)		43	lbs/cu.ft.
Radial Shrinkage (G->OD)		4	%
Tangential Shrink. (G->OD		9	%
Volumetric Shrink. (G->OD		13	%

Tree & Wood Descriptions for: Gonystylus forbesii

Product Sources	It is not known at present whether timber from this species is obtainable from sustainably managed or other environmentally responsible sources.
Tree Data	Melawi trees are reported to develop boles that are clear of branches to 50 to 60 feet (15 to 18 m) and are straight and well-formed. Trunk diameters above occasional fluted bases are reported to be commonly 24 inches (60 cm), but may sometimes reach 42 inches (110 cm).
Heartwood Color	The color of the wood is described as pale straw to creamy white. There is no clear demarcation between sapwood and heartwood.
Grain	Grain is usually straight or shallowly interlocked. Wood surfaces are often reported to have no outstanding features.
Texture	Texture is described as moderately fine , and even.
Luster	Planed surfaces are reported to be rather lusterless.
Odor	Green or wet wood may have a strong unpleasant odor. The odor disappears after the wood is dried but may reappear if the material is rewetted. No distinctive taste.
Crystal Deposits	Crystals are reported to be abundant.
Movement in Service	The timber is reported to have very poor dimensional stability, and tends to exhibit rather large movement after manufacture.
Natural Durability	The heartwood is reported to have very little natural resistance to decay and should not be used in exterior applications without treatment. Logs should be extracted from the forest rapidly after felling since they are prone to blue stain and pinhole borer attack. Sapwood is vulnerable to attack by powder-post beetle,

	and the heartwood is susceptible to marine borer and termite attack. Resistance to Impregnation Both heartwood and sapwood are reported to be easily treated with preservatives.
Toxic Constituents	Skin irritation has been reported in some individuals handling logs. The irritation is believed to be caused by skin penetration by long pointed bark fibers on logs. Washing the hands with soap and water is reported to be an effective remedy.
Abnormal Wood Tissue	Bands of tension wood may be present, and large trees are reported to often have a central core of abnormal wood tissue. The tissue is described as grey-green or yellowish-green in color, up to 6 inches (15 cm) in diameter, and is full of galleries from borer attack.

Working Properties for: Gonystylus forbesii

Cutting Resistance	Green material is reported to saw well, but surfaces may be woolly because of tension wood or bands of reverse grain. Cutting edges should be kept very sharp. Seasoned wood is reported to saw easily to produce average quality boards.
Planing	Woodworking properties are reported to be generally good. The material requires sharp cutting edges to work, but it planes, turns, bores, moulds, and recesses to yield clean surfaces. It works readily with both hand and machine tools in all operations.
Gluing	The wood is reported to have good gluing characteristics.
Nailing	Pre-boring is recommended in nailing since the timber has a strong tendency to split.
Sanding	The wood sands to yield clean surfaces.
Polishing	The material is reported to have good polishing properties.
Staining	Staining properties are reported to be good.
Steam Bending	Solid Melawi timber is reported to be unsuitable for steam bending, but it can be bent after conversion into laminates.

Response to Hand Tools	The timber is reported to work well with most hand tools, but cutters should be kept very sharp.

Drying for: Gonystylus forbesii

Ease of Drying	The timber is reported to season readily with little degrade, but stock in thicker dimensions tend to be more difficult to dry. The wood may give off a strong unpleasant odor during drying. The timber is reported to turn almost white upon drying.
Drying Defects	Thicker stock is reported to be especially prone to surface-checking and end-splitting during drying.
Kiln Schedules	T3 - C2 (4/4); T2 - C1 (8/4) US Schedule C - United Kingdom A relative humidity that is 10% higher than that suggested in the Schedule should be maintained during the initial stages of drying 1.5 inch (30 mm) thick stock. In certain cases a high temperature, high humidity treatment may be necessary to prevent discoloration from mold growth.

Credits for information:
Woodworkersource.com