Pisonia grandis R.Br.

Nyctaginaceae

LOCAL NAMES
English (pisonia,Moluccan cabbage,lettuce tree,cabbage tree); Javanese (kol bandang); Thai (saeng chan)

BOTANIC DESCRIPTION
Pisonia grandis is a medium to large, soft-wooded, irregularly branched tree, up to 30 m tall and trunk up to 70 cm in diameter, smooth twigs; bark white-gray, with conspicuous furrows and large leaf-scars; puberulous to nearly glabrous, lenticels conspicuous; branches unarmed.

Leaves opposite, thin, light green, elliptical, oblong or ovate, 7-25 cm long, papery or membranous, puberulous or glabrescent, base acute to cordate, apex acute or acuminate, veins red or dark coloured, petiole 1-8 cm long;

Flower bisexual, many, small, fragrant, white to greenish yellow in cymose clusters; cymes terminal, with light brown hairs.

Fruits narrow, cylindrical, 15-25 mm in length, glandular and sticky.

BIOLOGY
The sticky seeds are spread over long distances by getting attached to the feathers of seabirds; it rarely flowers in many areas.

Flowers at Lisianski, Hawaii (Forest & Kim Starr)

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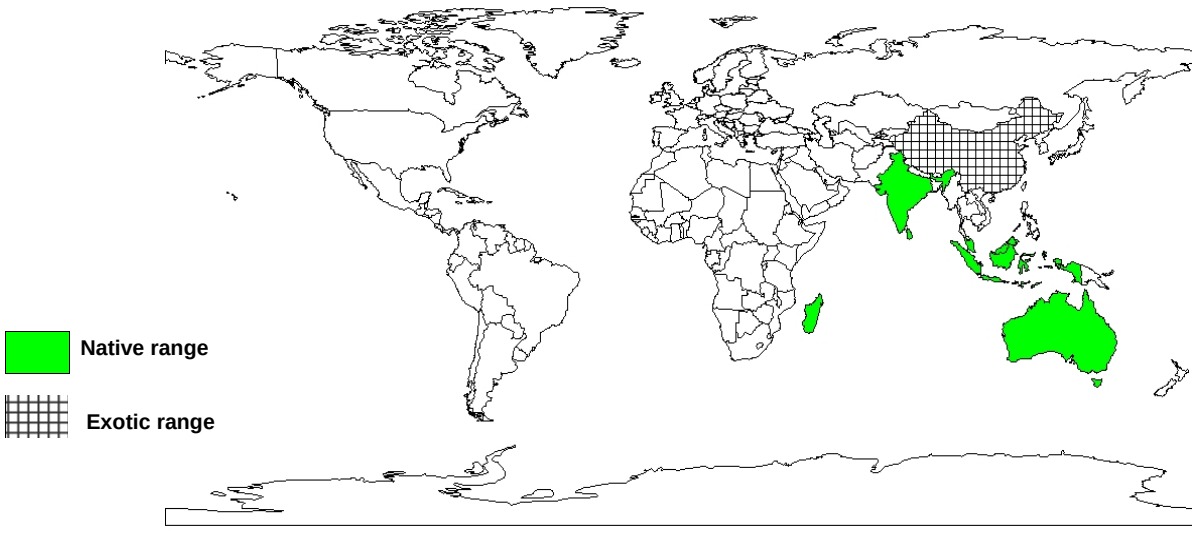
ECOLOGY
Pisonia grandis occurs in coastal forests, in open, dry to semi-dry localities often on sandy shores, limestone or rocky coasts on coral islands, common in solid groves or thickets, often dominant on atolls and other small islands. It does not tolerate shade and competition; and can form dominant pioneer groves on bird-inhabited islands. It can also form pure-stand forests, with very little or no undergrowth. P. grandis is a characteristic component of the Barringtonia formation, a vegetation type on small coral islands.

Associated species include Pandanus tectorius, Pipturus argenteus, Sesbania coccinea, Cordia subcordata, Morinda citrifolia, and Calophyllum inophyllum

BIOPHYSICAL LIMITS
Altitude: 0-1200 m
Temperature: 21-31° C,
Rainfall: 100-2 850 mm.
Soil type: coral gravel or coral sand or limestone, volcanic rock outcrops on the steep slopes of high islands, ferralitic soils evolved on high islands; pH 4-6.

DOCUMENTED SPECIES DISTRIBUTION

Native: Australia, India, Indonesia, Kiribati, Madagascar, Malaysia, Maldives, Marshall Islands, Sri Lanka, Taiwan, Province of China
Exotic: China



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Food: Young leaves are a popular vegetable, rich in calcium and vitamins. In Vanuatu the leaves are eaten with fish and taro.

Medicine: Bark and leaves used medicinally in New Caledonia, Polynesia, and Micronesia. The leaves are crushed or heated and applied to swellings or open ulcers, corns, calluses, or applied for oedema of the legs. In Rotuma, the leaves are used for dysentery and diarrhea. Leaves and bark are used for baby medicine, as a purgative, and to treat headaches.

Fodder: leaves a common pig feed in Polynesia and Micronesia.

Fuel: occasionally used for firewood and to make fire by friction.

Timber: soft and weak, occasionally used for light construction, fence posts, outhouse flooring, canoes, canoe outriggers, floats and bailers.

SERVICES
Shade or shelter: The tree serves as a roosting and nesting site for many species of seabirds, including the black noddy; occasionally planted as a living bathhouse to provide shade and privacy and as a living pig pen Tonga

Soil improver: Leaves are used as mulching and green manure in Micronesia and Tokelau; a sterile cultivar with edible leaves, P. alba, is the lettuce tree of Indonesia.
The guano from these birds is an important source of fertilizer for atoll soils.

TREE MANAGEMENT
To maintain continuous supply of young leaves P. grandis needs regular pruning.

PESTS AND DISEASES
Dramatic tree mortality due to outbreaks of a scale, Pulvinaria urbicola, and an association of mutualistic ant species have been experienced in P. grandis dominated forests in the Indian and Pacific Ocean islands.

FURTHER READNG

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SUGGESTED CITATION

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