Andira inermis

(Sw.) Kunth ex DC

Fabaceae - Papilionoideae

LOCAL NAMES
English (river almond,partridge wood,cabbage tree,cabbage bark,cabbage angelin,brown heart); Spanish (moca blanca,guacamayo,carne asada,almendro macho,almendro de río)

BOTANIC DESCRIPTION
Andira inermis is a deciduous tree up to 15(-35) m tall, bole usually short, straight and cylindrical, up to 50(-100) cm in diameter. Crown columnar or pyramidal to spreading; bark fissured and scaly, with an unpleasant cabbage-like smell. Trunk frequently forms buttresses up to 3 m tall.

Leaves alternate, imparipinnate, 15-40 cm long, with 7-17 leaflets, bright tan when young and shiny green when mature, margins entire.

Flowers in much-branched panicles of 16-60 cm long; calyx bell-shaped, 3-5 mm long, purplish, with 5 small teeth; corolla 12-15 mm long, deep pink to purplish-red.

Fruit a pod, 1-seed, fleshy outside, hard within, 4-8 cm x 3-5 cm.

BIOLOGY
This is a deciduous tree which continually replaces its foliage throughout the year especially before flowering. In Puerto Rico, 2 flowering seasons are observed, between January and February and between May and September. In Panama, trees may flower for 9 months under suitable moist conditions, trees growing in urban areas in El Salvador flower between December and July. Bees, birds, and butterflies visit flowers that are self-incompatible and outcrossers. Bats eat the fruits and are the main seed dispersers.

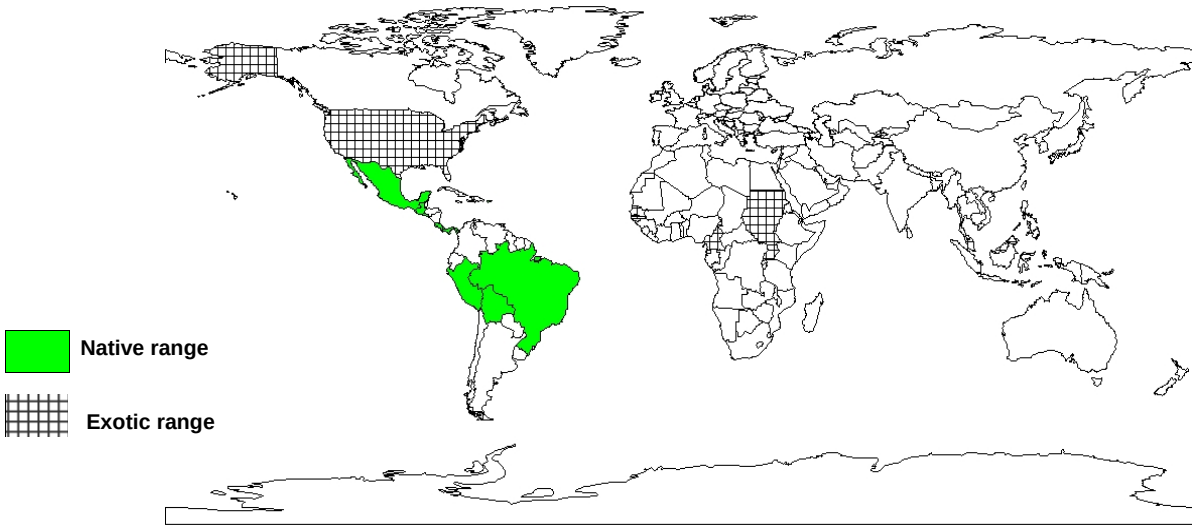
Andira inermis slash (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

ECOLOGY
A. inermis grows in a wide range of habitats from evergreen tropical rain forest to dry savanna vegetation, on well-drained sandy soils as well as on poorly drained clay soils, in plains and on hill slopes. It is found in riparian zones, along rivers and in areas with a high water table. It grows in alluvial forests in Central America but may be found in drier areas. It is found along roadsides, riverbanks, woodlands and pastures, from sea level to 900 m above sea level.

BIOPHYSICAL LIMITS
Altitude: 0-900 m
Soil type: The tree thrives on well-drained sandy soils as well as on poorly drained clay soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Bolivia, Brazil, Costa Rica, El Salvador, Guatemala, Mexico, Panama, Peru, Puerto Rico
Exotic: Cameroon, Malaysia, Senegal, Singapore, Sudan, Uganda, US



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: In Africa, a decoction of the leaves is used as beverage and the fruits are eaten

Fodder: Preliminary studies at the University of El Salvador have shown that the foliage is edible and palatable for ruminants.

Apiculture: The tree is regarded as a good source of nectar.

Fuel: Prunings from shade trees in coffee plantations are used as firewood.

Timber: The wood is very hard, heavy (0.77g/cm^3), and very resistant to attack by fungi and termites. Andira inermis lumber has been used for bridges, railroad tracks and waterfront docks and also to make poles, furniture, billiard-cues, umbrella handles and boats.

Poison: Bark and seeds are reported to be poisonous. A. inermis is a tree traditionally providing insecticide and piscicide.

Medicine: The bark is used as a vermifuge, seeds are purgative and have narcotic properties. A leaf decoction is used for washing in Africa.

Other products: In the wild, this tree offers a suitable environment for some plant epiphytes like orchids, bromeliads, mosses and ferns. A. inermis yields the alkaloids berberine and angelin. Constituents isolated from its bark are beta-sitosterol, stigmasterol, formononetin, pseudobaptigenin, genistein, 3'-methoxydaidzein, daidzein and taxifolin.

SERVICES
Erosion control: In conservation programmes, it has been used to restore degraded watersheds where moist conditions are prevalent.

Shade or shelter: It is used as a shade tree in coffee plantations because it has a spreading crown and responds well to pruning. It has also been suggested as a windbreak in Malaysia due to its low branching.

Nitrogen fixing: The tree is nitrogen fixing.

Ornamental: Planted in parks and yards, Andira inermis is a very attractive tree with a dense, spreading crown, showy pink flowers and bright colored leaves.

TREE MANAGEMENT
It requires low light for establishment and more light for development. In the field, little or no management is necessary. Occasionally lower branches are pruned to induce faster growth and a straight trunk. In landscaping, top branches are pruned to control height growth.

GERMPLASM MANAGEMENT
Mature fruits are collected and kept under cool conditions. The hard seeds need to be scarified before planting, making a cut on the hard fruit endocarp with a file and then planting them in seed beds or plastic bags is recommended. Seeds start to germinate at week 5 and maximum germination is observed at week 16. Germination rate is 43%-56%.

PESTS AND DISEASES
Borer insects' attack processed wood when used under saltwater. Fruits are attacked by the weevil, Cleogonis sp. which causes seed mortality.

FURTHER READNG

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SUGGESTED CITATION

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