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Bridelia micrantha (Hochst.) Baill.

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Bridelia micrantha (Hochst.) Baill.

Taxonomy and nomenclature

Family: Euphorbiaceae

Synonym: *Candelabria micrantha* Hochst.

Vernacular / common names: Bridelia, coast gold-leaf (English); mkarakala, mkarati, mtutu, mwiza (Swahili); munyansa, munyanya, mushiwe (Tongan); mle-bezi, mnazi, msongamino (Nyanja).

Distribution and habitat

B. micrantha is reported native to most of sub-Saharan Africa except South Africa and Namibia. Natural distribution includes Angola, Burundi, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Kenya, Liberia, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Zambia, Zanzibar, Zimbabwe.

B. micrantha occurs in savannah and secondary forest, in swamp forest, along forest edges, in riverine woodland and in gallery forest. It does well in a wide variety of climates. Altitude range 300-2200 m.; mean annual temperature: 18-28 °C, 800-2500 mm annual rainfall. The species grows on a variety of soils, from sandy to regular clay loams. It can withstand light frost but is not drought resistant.

Uses

The species has a durable, termite resistant wood that is in high demand for poles, tool handles, bows, and timber for interior carpentry. It is regarded as one of the best fuel-wood trees and is used for both firewood and charcoal. The species has several applications in traditional medicine: the roots are crushed and used for treating stomach aches, tapeworms, diarrhoea, headaches, and sore joints. The leaf sap is used for sore eyes. The fruits are sweet, tasting like currants and are readily eaten by children. The species has wide applications in agroforestry especially for erosion control. The roots are effective soil binders. It is used in various types of intercropping as a shade tree e.g. in combination with banana and coffee.

Botanical description

Bridelia micrantha is a semi-deciduous to deciduous tree up to 20 m tall with a dense rounded crown and tall, bare stem; bark on young branches grey-brown and smooth, on older branches and stems dark brown and rough, cracking into squares; branches often spiny;

slash thin, fibrous, brown to dark red. Leaves alternate, simple; sub-coriaceous, deep glossy green above, paler and minutely appressed-puberulous beneath (hairs sometimes visible only with a lens); stipulate, stipules lanceolate-acuminate, 5-7 mm long; blade elliptic, oblong-elliptic or obovate, 4.5-18 x 1.5-7 cm, apex sub-obtuse to acuminate; base generally rounded; margins entire or slightly wavy; lateral nerves in 8-14 pairs, barely visible and reaching the margins without branching; petiole 3-10 mm long. Inflorescence with flowers in axillary clusters containing male and female flowers; male flowers on pedicles 1-2 mm long; sepals yellow-green, triangular, 1.5-2 mm long; petals obovate, shorter than the sepals; stamens 5; female flowers sessile, disk enveloping the ovary; styles 2, forked.



Leaves, male and female flowers of *B. micrantha* (source untraceable)

Fruit and Seed description

Fruit: Fruit black, subglobose to ellipsoid drupe about 8 mm long, 5-8 mm in diameter, each with 1 seed.

Seed: Seeds are very small with 19 000-19 500 seeds/kg.

Flowering and fruiting habit

Male and female flowers are separate but on same tree (monoecious). In southern Africa, flowering occurs from September to December and fruiting from January to April. Fruit and seed production is usually very high. The seeds are spread by birds, which feed on them and distribute them in their faeces.

Harvest

Seeds are harvested from the trees by shaking or cutting off seed bearing branches and collecting on a tarpaulin under the tree.

Processing and handling

Fruits should be processed as soon as possible after collection because seeds have short viability. The fruit pulp contains a growth inhibitor that must be removed, e.g. by rubbing on a wire mesh under running water.

Storage and viability

The seed has short viability (oily seed); do not store the seeds at all.

Dormancy and pretreatment

Pulp with germination inhibitor is removed in connection with seed processing. Germination can be accelerated by soaking the seeds in cold water for 24 hours after removing the fruit pulp.

Sowing and germination

Seeds are sown directly in polythene tubes or in seed beds for later transplanting. Germination is epigeal.



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Vegetative propagation

There is not much experience with vegetative propagation but the trees produce root suckers and coppice well after injury which indicates that there may be a potential for vegetative propagation.

Selected readings

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