

# Sclerocarya birrea

**FAMILY** : Anacardiaceae

**LATIN NAME** : *Sclerocarya birrea* (A.Rich.) Hochst.

**SYNONYM(S)** : *Spondias birrea* A.Rich, *Poupartia birrea* (A.Rich) Aubrev.

**ENGLISH** :

**FRENCH** :

## DESCRIPTION.



Particularities for easier identification: The scaly patchwork bark, stout twigs and bluish-green leaves serve to aid in the identification of this species.

Habit: A deciduous, dioecious tree reaching 10-15m with a diameter to 50cm.

Bark & Branches: The bark is grey with a red/black tinge, slash orange pink with green edges; it flakes off in scales to reveal an orange-pink colour underneath, giving a patchwork appearance from far off. Twigs are stout, white and scarred.

Leaves: tend to be crowded towards the ends of the branches alternately or in rosettes. They are imparipinnate, 10-15cm long, and bear 5-10 pairs of opposite leaflets that are very variable in shape (orbicular, ovate, obovate, elliptic) but are always mucronate with the exception of the terminal odd leaflet. They are reddish when young, turning blue green when older. Leaflets from roots suckers, young plants or recently felled stumps are often serrated, otherwise they are entire.

Inflorescences: arise as terminal spikes of 5-8cm in clusters of 1-4.

Flowers: individual flowers are red-purple; female flowers arise on a puberulous peduncle and consist of 5 triangular flat topped purple sepals (c.5x3mm), 5 oblong concave petals (c.6x3mm) alternate to the sepals and 1-2 styles with a flat topped stigma (can be surrounded by 15-25 sterile stamens) on a shiny purple ovary. Male flowers are about 5mm across and consist of (4(5) purple sepals (c.1x1mm) alternate to the petals, 4 ovate concave purple tipped petals (c.3x3mm) and c. 15 stamens (c.3mm).

Fruits: are globose (drupes), 3-4cm diameter, yellow, and contain 1 stone which is surrounded by an edible, slimy, slightly acidic flesh.

Flowers January to March; fruits April to July

## DISTRIBUTION.

A pan African species, subsp. *birrea* is widespread in the Sahel. It is gradually replaced by subsp. *caffra* (Sond.)

Kokwaro south of the Sahel. It is most commonly found in areas with rainfalls over 600mm.

#### **PREFERRED USES.**

Browse	Medicine	Hedging	Timber	Fodder	Fruit
--------	----------	---------	--------	--------	-------

The wood of this species is a dirty white colour, rather soft, has low strength properties and tends to warp and distort when drying out. However, if well seasoned then it is durable and it is frequently used for constructing drinking troughs, mortars, bowls, axe handles, furniture, saddles, flooring and veneer, and for carvings, and other joinery work. The bark is used for making ropes, gum for inks and ash for dyes and for de-hairing goatskins. The leaves may be slightly toxic, but trees are lopped for fodder, particularly in times of scarcity. The gum dissolved in water and mixed with soot is used to make ink. The fruit is edible and rich in vitamin C (about 4 times as much as oranges). It is eaten fresh or dried for later use and is consumed as an additive for cooking/porridges or fermented into a drink (Kunandji: local beer made by Bambarra women in Mali). Jams and jellies can also be made from it. If eaten in large quantities it may act as a laxative and a slight intoxicant. Fruit kernels are eaten by children (especially in South Africa: *Sclerocarya caffra*). They are difficult to extract but are delicious and very nutritious (60% oil, 22% protein and high magnesium and phosphorus contents). In South Africa hunter-gatherers largely subsist on the kernels in winter that they often mix with other food. The oil from the seeds can be expressed by squeezing, and the Venda Tribe (South Africa) uses it to preserve meat. The meat is steamed over water and gradually moistened with oil. When stored in a cool place it can be kept for up to a year. It is estimated that about 17kg of fruits are required for 1 litre of oil.

Reported human medicinal uses for this species are as follows. The bark is used in many countries for a variety of complaints. It is said to cure dysentery, labour pains, stomach-ache, constipation, snakebite, toothache, rheumatism and skin diseases. The roots are pounded in water and drunk for schistosomiasis and for washing scabies

#### **TREE REQUIREMENTS.**

**Rainfall** : 500+mm (As low as 250mm recorded).

**Soil Type** : Sandy or alluvial soils. Tolerates a wide range of soils except areas subject to flooding and water-logging.

**Altitude** : A low altitude species.

**Temperature** : Reported mean min. and max. monthly temperatures are as follows: 11 and 38°C. Tolerates fairly high temperatures.

**Propagation** : Propagation is with seeds or cuttings. Seeds are large with approx. 400 stones/kg; they are obtained by removing the fleshy (edible) outer coat, and can be stored for about 1 year. Germination is about 40% after 5 weeks. They should be soaked in water for 12 hours before sowing. Cuttings take fairly easily even truncheons. Direct sowing is possible and often even advisable if the seedling can be protected.

**After Care** : Trees should be protected from browsing animals when young. Young trees coppice very easily.

#### **OTHER POINTS.**

A useful species that yields a valuable fruit. It should be tried in areas where rainfall is adequate (500+mm). It is unfortunately ineffective as a shade tree as it loses its leaves in the dry season.

#### **References**

Burkhill (vol 1 1985), Mbuya et Al. 1994, GTZ/ICRAF 1990, Vivien et al 1996, Vogt 1995 + [Hamza (1990), IBPGR (1984), Sahni (1968), Thirakul (1984), Von Maydell (1986), Wickens (1980),]

July 29, 2008