

## Polyscias fulva

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### **Species identity**

#### **Taxonomy**

Current name: Polyscias fulva  
Authority: (Hiern) Harms  
Family: Araliaceae

#### **Synonym(s)**

Panax ferruginea Hiern.  
Panax fulvum Hutchingson and Dalziel  
Polyscias ferruginea (Hiern) Harms  
Polyscias fulvum Hiern

#### **Common names**

(Amharic) : kariu, yezinjero wonber  
(English) : parasol tree  
(Luganda) : setala  
(Trade name) : mutati

#### **Botanic description**

Polyscias fulva grows to 25-30 m, with a regular branching pattern and a clear, straight bole with branches developing high up, forming a narrow crown and resembling the spokes of a parasol or an umbrella; no thorns or buttresses; bark is smooth and grey in colour; bole is branched, and young stems are marked with prominent leaf scars. Leaves long, strong smelling, alternate, not deciduous, compound, once-pinnate, very large-up to 1 m or more in length, with 8-14 pairs plus a terminal leaflet; leaflets ovate, opposite, sometimes narrowly so, 9-16 x 4.5-8 cm, leathery, dark green, without hairs on the top side, underside surface densely velvety with stellate hairs; apex tapering, often attenuate; base lobed and clasping the rachis, underside coated with soft golden hairs; margin entire; petiolules very short, thickset, almost obscured by lobed base of leaflets, petiolate. Flowers small, greenish-yellow to cream, honey scented, in loose axillary heads or panicles. Branching of the inflorescence is entirely racemose and in a symmetric manner, up to 36 x 12 cm, bisexual, all floral parts pentamerous; disc nearly flat; calyx densely hairy; ovary 2 chambered. Fruit an ovoid to spherical drupe, green when young, purple-black when mature, 3-6 x 3-5 mm, often ribbed, crowned with 2 persistent styles, closely clustered along the sides of branches of the main head; each small fruit contains 2 small, light seeds. The generic name is derived from poly-'many'; scias-'shade', referring to the abundant foliage of members of this genus.

### **Ecology and distribution**

#### **Natural Habitat**

P. fulva is distributed in the highland forests into the bamboo zone. It grows in afro-montane forests and undifferentiated afro-montane forests (broad-leaved forest, Podocarpus forest), often in clearings and regrowth. It also occurs in rainforests, lowland forests, riverine forests and mountain grasslands. It is frequently left standing when forest is cleared for cultivation. It requires light and may be abundant at forest edges. In Uganda it grows in woodland, semi-humid and humid highland forests with Aningera, Apodytes, Cordia, Olea and Syzigium. In Kenya the species grows around Elburgon, north of Mt Elgon, west of Mt Kenya and north of the Nandi forests. It is usually found in wetter highland areas like Kakamega Forest in Kenya, often occurring in tea-growing districts. A few remnant trees can be found in the Nairobi area. It grows as far south as South Africa.

#### **Geographic distribution**

Native : Angola, Botswana, Burundi, Cameroon, Central African Republic, Democratic Republic of Congo, Ethiopia, Ghana, Guinea, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe

#### **Biophysical limits**

Altitude: 1 180-2 500 m Mean annual rainfall: 1 500-200 mm

#### **Reproductive Biology**

In some ripening years, crops show a high percentage of hollow seeds, probably due to poor pollination. Flowers are bisexual.

## **Propagation and management**

### ***Propagation methods***

The species is more commonly regenerated in the nursery from wildings rather than from seed. Presowing treatment is not necessary, but soaking the seeds in water may hasten germination. Under ideal conditions, seeds germinate within 35-45 days with an expected germination rate of 75%. The plant needs about 6 months in the nursery if grown from seed.

### ***Tree Management***

*P. fulva* is a fast-growing species.

### ***Germplasm Management***

Seed storage behaviour is orthodox, and viability can be maintained for several years in hermetic storage at 3 deg. C with 7-10% mc. On average there are about 310 000 seeds/kg.

## **Functional uses**

### ***Products***

Fuel: The firewood of *Polyscias* species is of poor quality. Timber: Wood is soft, white, odourless and not durable; used to make food containers, tea chests, veneers, plywood, beehives, utensils, musical instruments and mole traps. Medicine: Leaves have useful medicinal properties.

### ***Services***

Soil improver: Leaf fall provides good mulch, with soil under the tree being quite fertile. Ornamental: The decorative tree can be grown in amenity areas. Intercropping: The high crown lets in sunlight, making the tree suitable for intercropping with crops such as banana, coffee or cocoa.

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