# Bischofia javanica Bishop wood

#### Introduction

The genus Bischofia is a small member of the family Euphorbiaceae; and contains only two species distributed from southern and southeastern Asia to Australia and Polynesia. They also occur in southwestern, central, eastern, and southern China[87].

### Species of Bischofia in China

Scientific Name

B. javanica Bl.

B. polycarpa (Lévl.) Airy Shaw

### **Taxonomy**

Family: Euphorbiaceae Genus: Bischofia Bl.

B. javanica may be synonymous with B. polycarpa (Lévl.) Airy Shaw in many Chinese plant publications. Wherever bishop wood is mentioned, it may be followed by either Bischofia javanica Bl. or B. polycarpa (Lévl.) Airy Shaw.

#### Description

B. javanica is an evergreen or semievergreen woody tree with a maximum height of 40 m and diameter of 2.3 m. The relatively short trunk is erect, but



Leaves of Bischofia javanica.

branches low. Though coarse at maturity, the bark is nearly smooth, grayish brown to brown, and 1 cm thick, and contains a red milky sap that becomes a resinous semi-solid when dried. Leaves are trifoliate, rarely palmate, with petiole 8-20 cm in length. Each papery leaflet may be ovate, elliptic, subovate, or elliptic-ovate, 7-15 cm long and 4-8 cm wide, acute or caudate-acuminate apically and broadly cuneate to obtuse at base, with two to three denticles per centimeter along the serrated margin. The petiole of the terminal leaflet is 2-5 cm in length, while that of lateral leaflet is 5-20 mm. A stipule is present, also papery, 8 mm long; and it falls off early. Small axillary flowers are borne on dioecious panicles in April to May.

The male inflorescence is 8-13 cm long and pubescent to glabrous, while the female inflorescence is 15-17 cm long and pendant. Appearing in August to October, berry-like fruits are light brown, globular or subglobular, 6-13 mm in diameter, containing oblong seeds 5 mm in length<sup>[87]</sup>.

#### Habitat

B. javanica occurs in humid valley forests. It is cultivated in plains, especially along stream banks, avenues, and in gardens, at elevations of less than 800 m. The young tree is shade-resistant and prefers moist conditions, growing well in sandy soil that is thick and fertile<sup>[87]</sup>.

#### Distribution

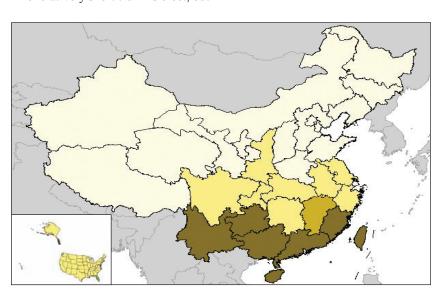
B. javanica occurs in Fujian, Guangdong, Guangxi, Guizhou, Hainan, Taiwan, Yunnan, and possibly Jiangxi [87][25][30][81][153]

#### **Related Species**

Chinese bishop wood, B.polycarpa, is a popular deciduous tree common in central China occurring in forests at elevations less than 1,000 m. It is also cultivated in plains areas as an ornamental<sup>[87]</sup>.

#### **Economic Importance**

The wood of *B. javanica* is red, heavy, hard, and fine grained, making it useful



material for building. The fruits are used in winemaking. Containing 30-54 percent oil, the edible seeds are used as a source of lubricant. The bark is a source of red dye. The roots are used medicinally [87].

#### Natural Enemies of Bischofia

In China, at least five fungi and six arthropods have been reported associated with members of genus *Bischofia*. Among them, three fungi and one arthropod can attack bishop wood. It should be noted that *Pseudocercospora* 

bischofiae (Yamam.) Deighton, which is host-specific to bishop wood, appears to be a candidate agent of biological control for *B. javanica*.

## **Fungi**

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Capnodiaceae	Aithaloderma clavatisporum Syd. & P. Syd.	р	23 <sup>†</sup>
	Erysiphaceae	Uncinula bischofiae C.T. Wei	О	22
			mo	23
		Phellinus williamsii (Murrill) Pat.	ро	23
Anamorphic Mycosphaerella		Pseudocercospora bischofiae (W. Yamam.)	m	23 <sup>‡</sup>
		Deighton	m	110
Anamorphic Pestalosphaeria		Pestalotiopsis adusta (Ellis & Everh.) Steyaert	mo	23

<sup>†</sup>Recorded as Aithaloderma clavatispora Syd.

## **Arthropods**

Order	Family	Species	H. R.	Ref.
Homoptera	Aphididae	Toxoptera odinae (van der Goot)	p	100
			p	189
	Cicadellidae	Erythroneura subrufa (Motschulsky)	po	48
Lepidoptera	Lymantriidae	Dasychira conjuncta Wileman	po	65
		Teia parallela (Gaede)	po	199
	Psychidae	Chalia larminati Heylaerts	po	141
		Clania variegata Snellen	po	141*

<sup>\*</sup> Recorded as Eumeta variegata Snellen

<sup>‡</sup>Recorded as Cercospora bischofiae Yamam