# Cotoneaster spp. Cotoneaster

#### Introduction

Cotoneaster, a medium-sized genus of the Rosaceae, consists of 90 species, distributed in temperate regions of Europe, North Africa, and most areas of Asia (except Japan). In China, 58 species occur mainly in the south and southwest area of the country<sup>[184]</sup>.

# Species of *Cotoneaster* in China



Leaves and colorful fruits of Cotoneaster microphyllus.

Scientific Name  C. acuminatus Lindl. C. mongolicus Pojark. C. acutifolius Turcz. C. morrisonensis Hayata C. adpressus Bois C. affinis Lindl. C. affinis Lindl. C. amltiflorus Bge. C. ambiguus Rehd. et Wils. C. apiculatus Rehd. et Wils. C. apiculatus Rehd. et Wils. C. pittidus Jacq. C. buxifolius Lindl. C. cobscurus Rehd. et Wils. C. chengkangensis Yü C. cliganthus Pojark. C. coriaceus Franch. C. dammerii Schneid. C. dielsianus Pritz. C. divaricatus Rehd. et Wils. C. changianus Yü C. rotundifolius Wall. ex Lindl. C. fangianus Yü C. rotundifolius Wall. ex Lindl. C. franchetii Bois C. sanguineus Yü C. schantungensis Klotz C. glaucophyllus Franch. C. glaucophyllus Franch. C. glaucophyllus Franch. C. subsadpressus Yü C. harrovianus Wils. C. subadpressus Yü C. harrovianus Wils. C. submultiflorus Popov C. gracilis Rehd. et Wils. C. submultiflorus Popov C. harrysmithii Flinck et Hylmö C. tenuipes Rehd. et Wils. C. horizontalis Dene. C. langei Klotz C. melanocarpus Lodd. C. microphyllus Wall. ex Lindl. C. zabelii Schneid. C. zabelii Schneid. C. microphyllus Wall. ex Lindl. C. cabelii Schneid. C. microphyllus Wall. ex Lindl. C. cabelii Schneid.		Leav
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C. microphyllus Wall. ex Lindl. C. zabelii Schneid.	C. melanocarpus Lodd.	C. wardii W. W. Smith
	C. microphyllus Wall. ex Lindl.	C. zabelii Schneid.

## I. Cotoneaster microphyllus

Small leaf cotoneaster, rock spray cotoneaster.

#### **Taxonomy**

Family: Rosaceae

Genus: Cotoneaster B. Ehrhart

#### Description

Cotoneaster microphyllus is a dwarf evergreen shrub that can grow to 1 m tall. The nearly cylindrical, spreading branches are reddish brown or darker, yellow-pubescent, and gradually glabrous. Slightly rolled downward in the margin, the thick leaves are leathery, obovate to oblong-obovate, 4-10 mm long and 2.5-7 mm wide, with apex being obtuse, rarely retuse or acute, and base broadly cuneate. Upper surface of the leaves is glabrous or sparsely pubescent; the lower surface is pale and pubescent. Appearing from May to June, the terminal inflorescence is 1 cm in diameter, usually solitary, or occasionally in groups of three, with bell-shaped hypanthium that is sparsely pubescent outside and glabrous inside. Sepals are ovate-triangular and apically obtuse. White petals are spreading, suborbicular, about 4 mm in length and width. The fruit, a red, globose, drupe-like pome, 5-6 mm in diameter and often containing two pyrenes, appears in August to September<sup>[184]</sup>.

#### Habitat

Cotoneaster microphyllus occurs on rocky mountain slopes, in thickets, and in river valleys, at elevations of 2,000–4,200 m [184].

#### **Distribution**

Cotoneaster microphyllus occurs in Sichuan, Tibet, and Yunnan provinces [184]

#### **Economic Importance**

Cotoneaster microphyllus is well suited for use as an ornamental because of its graceful white flowers in spring and brilliant red fruit in autumn<sup>[184]</sup>.

#### **Related Species**

There are 4 varieties within the species:

- 1) Cotoneaster microphyllus var. conspicuus Messel has a wider growth form and broader leaves and fruits, and occurs at elevations of 2,700–3,300 m in the Brahmaputra River valley, Tibet. The fruit has important ornamental value due to its persistent brilliant color.
- 2) Cotoneaster microphyllus var. glacialis Hook. f. occurs in rocky mountainous areas at elevations of 3,900-4,200 m in southeastern Tibet.
- 3) Cotoneaster microphyllus var. cochleatus (Franch.) Rehd. et Wils., with revolute leaves, and occurs in Yunnan and Sichuan.
- 4) Cotoneaster microphyllus var. thymifolius (Baker) Koehne has relatively narrow, revolute leaves and bright red fruit, occurs at elevations of 3,000-4,000 m, in northwestern Yunnan, and southeastern Tibet<sup>[184]</sup>.

#### II. Cotoneaster pannosus

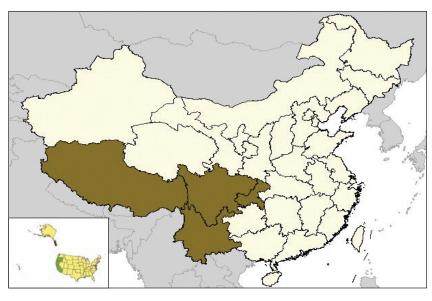
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Genus: Cotoneaster B. Ehrhart

#### **Description**

Cotoneaster pannosus is a semievergreen shrub up to 2 m in diameter with arch-like branches. Branchlets are thin, dark brown, and initially covered with short, dense hairs that are shed as it matures. Leaves are elliptic or ovate, 1-2.5 cm long and 0.8-1.5 cm wide, obtuse or acute apically and



broadly cuneate at the base, with midrib impressed on the glabrous or sparsely pubescent upper surface and raised on the densely tomentose lower surface. Generally consisting of less than ten flowers (21 at the maximum), corymbs are 1-3 cm in diameter and 1.5-2.5 cm in length, with dense hair-covered pedicel and rachis. Bracts are linear and caducous. Flowers are 8 mm in diameter, with bell-shaped calyx and triangular, apically short acuminate or acute sepals; both are glabrous inside and densely hairy outside. Petals are white, broadly ovate or subglobose, 3-3.5 mm in length with an obtuse apex and a short claw-bearing base. Fruits are red, globose or ovate, 7-8 mm in diameter, enclosing two pyrenes.

Flowers appear in June to July and fruits in October<sup>[184]</sup>.

#### Habitat

Cotoneaster pannosus occurs in mountainous scrub land, rocky areas, or wastelands at elevations of 1,100-3,200 m [184].

#### **Distribution**

*Cotoneaster pannosus* is native to Sichuan and Yunnan<sup>[184]</sup>.

#### **Related Species**

One variety, *C. pannosus* var. *robustior*, has narrowly elliptic leaf blades, and occurs in northwestern Sichuan. Another two cotoneasters are apparently similar to *C. pannosus*. *C. franchetii* 



Cotoneaster pannosus invading mountainous scrubland.

Bois is distinguished by the densely pubescent upper leaf surface, shorter petioles, erect petals, and orange fruits containing three pyrenes; *C. silvestrii* Pamp. has thinner leaves, which are sparsely hairy on the underside, and yellow stamens. The fruits contain a single pyrene.<sup>[184]</sup>.

# Natural Enemies of Cotoneaster

Eight fungi and three arthropods are reported to attack members of the genus *Cotoneaster*.



### **Fungi**

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Erysiphaceae	Phyllactinia pyri (Castagne) Homma	po	22
Basidiomycota		Aecidium cunninghamianum Barclay	mo	23
		Coleopuccinia kunmingensis F.L. Tai	0	23
	Incertae sedis	Roestelia nanwutaiana (T.L. Tai & C.C. Cheo) Jørst.	00	23
		Roestelia sikangensis (Petr.) Jørst.	00	23
	Pucciniaceae	Gymnosporangium clavariiforme (Jacq.) DC.	po	23
		Gymnosporangium confusum Plowr.	00	23
Anamorphic Myco	sphaerella	Pseudocercospora cotoneastri (Katsuki & Ts. Kobay.) Deighton	00	110 <sup>†</sup>

<sup>†</sup>Recorded as *Pseudocercospora cotoneasteris* (Kats. et Kobayashi) Deighton

### **Arthropods**

Order	Family	Species	H. R.	Ref.
Colomboro	Calcutidas	Cookstug ah ganaig Taoi at Vin	mo	140
Coleoptera Scolytidae	Scolytus abaensis Tsai et Yin	00	182	
Homoptera	Pseudococcidae	Pseudococcus comstocki (Kuwana)	po	150
Lepidoptera Arctiidae	Anadia Amia (Francis)	00	40‡	
	Aiculuae	Arctia flavia (Fueszly)	00	41

<sup>\*</sup> Recorded as *Phragmatobia flavia* (Fuessly)